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Environmental Enforceability

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ENVIRONMENTAL ENFORCEABILITY

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ABSTRACT

There are great expectations for a resurgence in federal environmental enforcement in a Biden-led federal government. Indeed, federal environmental enforcement suffered serious blows during the Trump Administration, particularly at the Environmental Protection Agency (EPA), including large cuts in the budget for enforcement and reversals of key enforcement policies. Yet, while important to repair the damage, truly strengthening federal environmental enforcement will require more. This Article highlights the need for greater attention to the multiple hurdles that plague environmental enforcement. In doing so it makes three contributions to the literature. First, it asserts that even though environmental statutes, regulations, and guidance documents often contain "enforceable" as an explicit term, in practice the term lacks scope and definition, making the actual enforceability of regulations dubious. Second, it demonstrates the difficulties with actual enforceability by examining key hurdles that become legal defenses for corporate and government defendants in environmental enforcement matters regarding regulatory exceptions, evidentiary standards, and the preemption and preclusion doctrines. Third, it recommends that drafters of environmental laws and regulations consider actual enforceability by considering, within the documents they are drafting, the likely hurdles for enforcers after the law or regulation becomes effective. Although hurdles in environmental enforcement are important for regulatory flexibility, judicial expediency, and other normative values, they often result in a tradeoff for achieving enforceability of environmental laws and regulations. Grappling with such tradeoffs, within the law or regulation itself, is essential for meeting the expectations for enforcement held by regulated entities, researchers, environmental advocates, and most of all, local communities. After all, as noted in a March 2021 Grist *news article, "laws are only as good as their enforcement."*[2]

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[2] Naveena Sadasivam, *Inside Biden's Uphill Battle to Restore the EPA After Trump*, THE GRIST (Mar. 1, 2021), https://grist.org/politics/epa-joe-biden-environmental-law-enforcement-trump/.

INTRODUCTION

The Biden Administration has put environmental justice and climate change at center stage of the federal government's regulatory and policy agenda.[3] In particular, the Biden Administration has signaled a desire to tackle environmental issues not only by enacting new regulatory programs, but also by improving environmental enforcement. Within its first 100 days, the Biden Administration issued an Executive Order specifically directing the U.S. Department of Justice (DOJ) "to develop a comprehensive environmental justice *enforcement* strategy" (emphasis added) and EPA to

[3] *The Biden-Harris Administration Immediate Priorities*, THE WHITE HOUSE, https://www.whitehouse.gov/priorities/ (last visited Sept. 16, 2021).

"strengthen *enforcement* of environmental violations" (emphasis added).[4] The stated goal of such an enforcement strategy is to "provide timely remedies for systemic environmental violations and contaminations, and injury to natural resources."[5] The question, of course, is how the federal government will actually achieve such a worthy goal, particularly when previous federal administrations have issued very similar Executive Orders and still struggled to improve the connection between enforcement and long term solutions for environmental justice.[6]

This article is one of three by this author that explores challenges with environmental enforcement.[7] The first article, published in 2020, focuses on the final stage of environmental enforcement—remedies.[8] It considers the many questions that arise when formulating remedies in environmental enforcement cases, including the purpose of the remedy, legal authority of the enforcer to get the remedy, and who benefits from the remedy. The second article, published in 2020, focuses on the beginning stage of environmental enforcement—how to find potential violations.[9] It examines government agencies' use of information gathering authority, including their ability to require monitoring and reporting, to deter and detect potential cheating on environmental regulations. This article focuses on the middle stage of environmental enforcement—getting from detection to remedy. It argues that environmental violations are difficult to prove once identified, particularly when regulated entities can use multiple arguments that the environmental legal and regulatory system provides, as defenses.

In noting wide-ranging problems with environmental noncompliance by a variety of regulated entities, legal scholars, practitioners, and journalists have tried to understand the gaps in enforcement. Indeed, as many note,

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[4] Tackling the Climate Crisis at Home and Abroad, Exec. Order No. 14,033, 86 Fed. Reg. 7619, Sec. 222 (Jan. 27, 2021).

[5] *Id.*

[6] President Clinton signed Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, on February 11, 1994. Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994). The Order instructs each Federal agency to "make achieving environmental justice part of its mission" with specific attention to enforcement for DOJ and EPA.

[7] The author acknowledges that many aspects of environmental enforcement discussed in the three articles, also apply to other areas of public sector oriented enforcement such as in consumer protection, market manipulation, or civil rights. This series of articles however, focuses on environmental enforcement issues, particularly government agency and citizen suit enforcement under major federal environmental laws dealing with pollution, natural resources, and energy delivery/efficiency.

[8] Seema Kakade, *Remedial Payments in Agency Enforcement*, 44 HARV. ENVTL. L. REV. 117 (2020).

[9] Seema Kakade & Matt Haber, *Detecting Corporate Environmental Cheating*, 47 ECOLOGY L.Q. 772 (2020).

significant reasons for the challenges in environmental enforcement are lack of government agency resources and political pressures.[10] At the detection stage alone, enforcement agencies need resources to conduct inspections at specific facilities, buy expensive equipment to measure potential violations at inspections, and review massive amounts of self-reported data from regulated entities.[11] Enforcement agencies also need resources, like advanced computer technology, to identify complex violations, patterns of non-compliance across industries, or attempts by regulated entities to outright cheat on environmental regulations. Moreover, enforcement agencies can face serious political challenges, particularly in pursuing remedies for enforcement violations. The Trump Administration, for example, issued multiple policies limiting agency authority to seek penalties and injunctive relief in enforcement actions.[12]

Yet continued focus on resource and political hurdles alone shortchanges discussion about the steeper challenges with environmental enforcement that relate to the legal and regulatory system itself.[13] While environmental regulatory design may offer compliance flexibility to regulated entities, such flexibility often manifests in extensive exceptions and forgiving pollution limits, creating obstacles for actual enforcement.[14] While environmental statutes may provide enforcement authority for federal agencies, state agencies, and citizen groups, in reality the preemption and preclusion doctrines often impede actual enforcement.[15] Regulatory and legal

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[10] Naveena Sadasivam, *Inside Biden's Uphill Battle to Restore the EPA After Trump*, THE GRIST (Mar. 1, 2021), https://grist.org/politics/epa-joe-biden-environmental-law-enforcement-trump/ (discussing long term decline in funding and shifting political priorities for environmental enforcement since the 1990s).

[11] Indeed, in a May 4, 2021 internal EPA memo, the EPA Acting Assistant Administrator for Enforcement told federal enforcement staff to increase its inspections and take action where state enforcement officials are not acting fast enough. *See* Kelsey Brugger, *Internal EPA Memo Urges Agents to Up Inspections*, E&E NEWS (May 4, 2021), https://www.eenews.net/greenwire/2021/05/04/stories/1063731691 ("[I]f there is a situation where a community's health may be impacted by noncompliance and our co-regulator is not taking timely or appropriate action, we should not hesitate to step in and take necessary action," the memo reads.).

[12] David J. Hayes, *The Vanishing Federal Role in Enforcing our Environmental Laws*, THE REG REVIEW (Oct. 12, 2020), https://www.theregreview.org/2020/10/12/hayes-vanishing-federal-role-enforcing-environmental-laws/.

[13] Cynthia Giles, *Next Generation Compliance Environmental Regulation for the Modern Era*, HARV. L. SCH. ENV'T & ENERGY L. PROGRAM 3 (2020), http://eelp.law.harvard.edu/wp-content/uploads/Cynthia-Giles-Intro-FINAL.pdf (introducing series of white papers on why the answer to enforcement challenges is in effective design of regulations).

[14] Marshal J. Bregar, *Regulatory Flexibility and the Administrative State*, 32 TULSA L.J. 325 (1996).

[15] *See, e.g.*, Sierra Club v. Two Elk Generation Partners, 646 F.3d 1258 (10th Cir. 2011);

hurdles impede environmental enforcement just as much as resource and political hurdles. Moreover, as this article discusses, resource and political hurdles are often intertwined with regulatory and legal hurdles.

Despite these difficulties surrounding enforcement, several environmental statutes, regulations, and guidance documents explicitly include the concept of "enforceability." Such inclusion demonstrates an intent by drafters to create environmental laws that can actually be enforced. For example, environmental statues like the Clean Air Act (CAA) and the Clean Water Act (CWA) require states to have plans for implementation of pollution programs that are "enforceable."[16] Guidance implementing the National Environmental Policy Act (NEPA) refers to "enforceable" mitigation measures during the environmental review process for major federal actions.[17] Further, pollution-trading programs, such as in greenhouse gas regulation, require that credits be quantifiable, verifiable, permanent, and "enforceable."[18] As this article describes, such term "enforceable" has limited meaning without recognition of the hurdles in the way to actual enforcement.

The point of this article is not to suggest that there should be no hurdles to environmental enforcement. Indeed, there are good reasons that regulatory flexibility, evidentiary standards, and the preemption and preclusion doctrines exist.[19] It is important, however, to acknowledge that such hurdles exist and manifest as powerful defenses for regulated entities that become defendants in enforcement matters.[20] Without an acknowledgment of real hurdles in enforcement, broader conversations around strengthening environmental enforcement cannot go beyond (albeit important) resource concerns. The defense, for example, of "the environmental regulation allows me to pollute" is a tough one for any enforcement agency to manage, even with all the resources and political

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Empire Pipeline v. Town of Pendleton, 472 F. Supp. 3d 25 (W.D.N.Y. 2020).

[16] 42 U.S.C. § 7410(a)-(k).

[17] Memorandum from Nancy H. Sutley, Chair of the CEQ, to Heads of Federal Departments and Agencies 7 n.18 (Jan. 14, 2011), https://www.energy.gov/sites/prod/files/2017/06/f35/NEPA-CEQ_Mitigation_and_Monitoring_Guidance_14Jan2011.pdf ("This guidance approves of the use of the 'mitigated FONSI' when the NEPA process results in enforceable mitigation measures.").

[18] *See, e.g.*, Rule 250-301 Sacramento Carbon Exchange Program (adopted Mar. 25, 2010), http://www.airquality.org/ProgramCoordination/Documents/rule250.pdf ("To be certified as carbon credits, the emission reductions shall meet the requirements of an approved protocol for a specific project type and consider any Sacramento specific conditions or requirements to be real, additional, quantifiable, verifiable, permanent, and enforceable.").

[19] *See* Section II, *infra*.

[20] *See* Section II, *infra*.

support in the world.[21] Furthermore, without acknowledging such a barrier, local communities have difficulty grasping the reasons behind why environmental enforcement fails to meet their hopes and expectations.

This article proceeds in four parts. Part I provides background on environmental regulations, compliance, noncompliance, and enforcement as related but distinct topics. Part II describes the resource, regulatory, and legal hurdles that enforcers face in pursuing environmental violations, particularly as related to pollution (and pollution abatement) standards. Part III demonstrates how enforcement hurdles manifest in one case study of significant environmental noncompliance: tampering with air emissions controls on cars and trucks. Part IV identifies the term "enforceable" and its usage in key federal environmental statutes and argues for a consistent and deliberate use of the term in a way that reflects an understanding of the hurdles that arise as defenses in later enforcement cases. The article then concludes with remarks on the broader applicability of environmental enforceability in the international context.

I. BACKGROUND

It is impossible to talk about environmental enforcement without first understanding a bit about the historical and current context of environmental regulation and compliance with such regulation. Enforcement only exists if a there is a law or regulation to enforce in the first place. Enforcement also only exists if there is noncompliance, but as this section describes, identifying and proving noncompliance is often complicated. Such an understanding is important for ultimately addressing enforcement hurdles.

A. Law and Regulation

In the United States, the current model of environmental regulation focuses heavily on reducing costs for industry. As scholars have noted, all social and economic regulation began to receive significant pushback in the twentieth century in response to the expansion of regulation that occurred during the New Deal and postwar periods.[22] Presidents Ford and Carter made inroads in the 1970's to advance environmental protection through new laws

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[21] Stuart Parker, *EPA Faults Texas Air Permits Amid Looming Fights Over Trump-Era Policy*, INSIDEEPA (Aug. 9, 2021) (EPA Administrator Michael Regan in recent decisions has twice faulted Texas air regulators for their failure to ensure state-issued air quality permits are fully enforceable but the instant disputes did not present an opportunity for the agency to address environmentalists' broader calls to reverse a Trump-era policy of deferring to state permit decisions.").

[22] Jodi L. Short, *The Paranoid Style in Regulatory Reform*, 63 HASTINGS L.J. 633, 639–40 (2012).

and regulations. However, President Reagan pursued a comprehensive policy of regulatory pushback by consolidating regulatory oversight in the Office of Management and Budget (OMB) and requiring agencies to justify proposed rules on the basis of the relative costs and benefits they were expected to generate.[23] To this day, cost-benefit analysis has shaped a federal environmental regulatory system that is complex and varied in its requirements.[24] As described in Table 1 below, federal environmental regulations involve a mix of different kinds of regulated entities and government agencies. An environmental regulation may issue from a federal agency across any number of subject specific executive branch mission areas, including environment, securities, consumer protection, zoning, and energy. An environmental regulation may target an industry entity as the regulated entity, but also might target a government agency entity.[25] An environmental regulation may include substantial requirements for regulated entities, such as mandating significant capital expenditures for pollution control equipment, or may merely include recordkeeping requirements.[26] Further complicating Table 1 is the fact that the listed types of environmental regulations are not mutually exclusive, but rather overlap and intertwine.

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[23] *Id.* at 639–40; Helen G. Boutrous, *Regulatory Review in the Obama Administration: Cost-Benefit Analysis for Everyone*, 62 ADMIN. L. REV. 243, 255–56 (2010); Daniel A. Farber, *Regulatory Review in Anti-Regulatory Times*, 94 CHI.-KENT L. REV. 383 (2019).

[24] Table 1 largely adapts from a 1995 document assessing mechanism for how government encourages or forces facilities to achieve society's environmental goals. *See Environmental Policy Tools: A User's Guide*, U.S. CONGRESS OFFICE OF TECHNOLOGY ASSESSMENT (1995), https://ota.fas.org/reports/9517.pdf.

[25] G. Nelson Smith, III, *Lawmaker as Lawbreaker: Enforcement Actions Against Municipalities for Failure to Comply with the Clean Air Act*, 41 CLEV. ST. L. REV. 685, 712 (1993).

[26] *See, e.g.*, *Prevention of Significant Deterioration Basic Information*, US EPA, https://www.epa.gov/nsr/prevention-significant-deterioration-basic-information (last visited Sept. 16, 2021) (discussing regulatory requirements that require installation of pollution controls); *Recordkeeping and Reporting Requirements for Stationary Refrigeration*, US EPA, https://www.epa.gov/section608/recordkeeping-and-reporting-requirements-stationary-refrigeration (last visited Sept. 16, 2021) (discussing regulations that require recordkeeping and reporting).

Table 1: Common Types of Federal Environmental Regulations

Type	**Description**
Performance-Based	Describe required end results, leaving regulated entities free to choose compliance methods.
Design	Describe required emissions limits based on what a model technology might achieve; regulated entities use the model technology or demonstrate that another approach achieves equivalent results.
Technology	Specify the technology or technique a regulated entity must use to control its pollution.
Integrated Permitting	Incorporate multiple requirements into a single permit rather than having a permit for each individual emissions source at a facility.
Trackable Emissions	Allow regulated entities to trade emission control responsibilities among themselves, provided the aggregate regulatory cap on emissions is met.
Challenge Regulations	Give target group of sources responsibility for designing and implementing a program to achieve a target goal, with a government-imposed program or sanction if goal is unmet by the deadline.
Pollution Charges	Require regulated entity to pay fixed dollar amount for each unit of pollution emitted or disposed; no ceiling on emissions.
Liability	Require entities causing pollution that adversely affects others to compensate those harmed to the extent of the damage.
Pollution Information Reporting	Require entities to report (either publicly or in response to government subpoena) emissions, discharge, or product information.
Bans	Ban or restrict manufacture, distribution, use, or disposal of products that present unreasonable risks.
Environmental Review	Require government agencies (or indirectly, industry project applicants) to assess the environmental impact of a proposed project that receives government funding.
Corporate Disclosure	Require certain private corporate entities to disclose risks to shareholders and securities filings.
Environmental Advertising	Require truth in advertising regarding environmental attributes of products.

B. Noncompliance

The complexity of environmental regulations makes for an even more complex picture of noncompliance with those regulations. There is simply no easy way to assess broad-level noncompliance rates because doing so is always dependent upon so many factors.[27] Certainly, some legal scholars have opined that particular types of environmental regulations may allow for higher rates of noncompliance than other types of regulation.[28] However, in general, compliance with both paperwork (e.g. recordkeeping and reporting) and physical (e.g. disposal and discharge) regulations are difficult to assess and to achieve.[29] Moreover, the many kinds of noncompliance that exist, from mistakes to outright cheating, mean that noncompliance data alone does not always give a complete picture.

First, noncompliance rates depend on information.[30] For environmental statutes and regulations that require self-monitoring and self-reporting of violations, determining compliance rates is much easier than those that do not.[31] Indeed, Cynthia Giles, the former head of compliance and enforcement at EPA in the Obama Administration, has stressed in her research and writing the importance of established and reliable measurement

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[27] CYNTHIA GILES, PART 2: NONCOMPLIANCE WITH ENVIRONMENTAL RULES IS WORSE THAN YOU THINK 5 (Apr. 14, 2020), http://eelp.law.harvard.edu/wp-content/uploads/Cynthia-Giles-Part-2-FINAL.pdf.

[28] Cary Coglianese, *The Limits of Performance Based Regulation*, 50 U. MICH. J.L. REFORM 525 (2017) (performance based measures depend on the ability of government agencies to specify, measure, and monitor performance, and reliable and appropriate information about performance may sometimes be difficult or impossible to obtain); Lesley K. McAllister, *Putting Persuasion Back in the Equation: Compliance in Cap and Trade Programs*, 24 PACE ENVTL. L. REV. 299, 309 (2007) ("Compliance under the Clean Air Act was more difficult to assess than under other traditional technology-based regulation such as the Clean Water Act, in part because permits were not required for individual sources[.]").

[29] J.B. Ruhl et al., *Environmental Compliance: Another Integrity Crisis or Too Many Rules?*, 17 NAT. RESOURCES & ENV'T 24–26 (2002).

[30] Michael E. Wall, *Is There a Proper Level of Compliance with Environmental Law?*, 39 ABA TRENDS, Jan./Feb. 2008, at 13.

[31] *See* EPA OFFICE OF INSPECTOR GENERAL, REP. NO. 16-P-0164, CLEAN AIR ACT FACILITY EVALUATIONS ARE CONDUCTED, BUT INACCURATE DATA HINDER EPA OVERSIGHT AND PUBLIC AWARENESS (May 3, 2016) (noting how insufficient or absent data frustrates EPA's ability to effectively evaluate compliance); In a 2007 report, EPA OIG recognized that the lack of mandatory reporting of compliance data collected by the States inhibited EPA's ability to create nationwide compliance statistics. EPA OFFICE OF INSPECTOR GENERAL, REP. NO. 2007-P-0027, OVERCOMING OBSTACLES TO MEASURING COMPLIANCE: PRACTICES IN SELECTED FEDERAL AGENCIES (2007); D.R. van der Vaart & John C. Evans, *Compliance Under Title V: Yes, No, or I Don't Know?*, 12 VA. ENVTL. L.J. 22–24 (2002) (describing data reporting in demonstrating compliance under Title V of CAA).

systems in ensuring compliance with environmental regulations.[32] Scholars that discuss enforcement have also typically focused on monitoring tools for agency enforcers to achieve goals, emphasizing tools such as electronic reporting and third-party verification.[33] For example, publicly available monitoring and reporting of water discharges for a variety of pollutants has generated robust noncompliance data in the context of CWA violations.[34] In contrast, because monitoring and reporting is state specific under the CAA, there is not a readily available way to identify the extent of a regulated entity's compliance and noncompliance with respect to air permits.[35] Much of the data on noncompliance too is anecdotal from inspectors and news stories.[36]

Second, because environmental regulations allow significant latitude on what qualifies as a "requirement" to begin with, noncompliance is tough to assess. When an environmental regulation undergoes a cost-benefit analysis, the costs to the regulated entities must be evaluated. Accordingly, a key goal of the regulation becomes finding ways to make compliance easier for those entities.[37] Simply put, compliance with environmental regulations is expensive and providing flexibility for regulated entities on how, when, and where to comply eases the expense.[38] As a result, some environmental regulations impose voluntary standards instead of actual requirements or

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[32] Cynthia Giles, *Next Generation Compliance Environmental Regulation for the Modern Era,* HARV. L. SCH. ENV'T & ENERGY L. PROGRAM 3 (2020), http://eelp.law.harvard.edu/wp-content/uploads/Cynthia-Giles-Intro-FINAL.pdf.

[33] David L. Markell et al., *Dynamic Governance in Theory and Practice, Part* I, 58 ARIZ. L. REV. 563, 569–70 (2016).

[34] *See, e.g.*, JAY SHIMSHACK, MONITORING, ENFORCEMENT, & ENVIRONMENTAL COMPLIANCE: UNDERSTANDING SPECIFIC & GENERAL DETERRENCE (June 2009), https://archive.epa.gov/compliance/resources/reports/compliance/research/web/pdf/meec-whitepaper-task6.pdf; Clifford Rechtschaffen, *Enforcing the Clean Water Act in the Twenty-First Century: Harnessing the Power of the Public Spotlight*, 55 ALA. L. REV. 775, 802–05 (2004) (discussing efficacy of EPA ECHO's online reporting site in assessing noncompliance).

[35] Adam Babich, *The Unfilled Promise of Effective Air Quality and Emissions Monitoring*, 30 GEO. ENVTL. L. REV. 569, 590 (2018); but note that facilities subject to Title V of the CAA require compliance certifications and reporting of deviations, *see* 40 C.F.R. § 70.6.

[36] Sharon Buccino & Steve Jones, *Controlling Water Pollution from Coalbed Methane Drilling: An Analysis of Discharge Requirements*, 4 WYO. L. REV. 559, 576 (2004) (citing to news article discussing how inspector could perform a compliance inspection on each coalbed methane site only once during the five-year lifetime of the relevant water permit).

[37] David M. Driesen, *Distributing the Costs of Environmental, Health, and Safety Protection*, 32 B.C. ENVTL. AFFS. L. REV. 1, 12 (2005).

[38] *See, e.g.*, Caroline Cecot, *Regulatory Fracture Plugging: Managing Risks to Water from Shale Development*, 6 TEX. A&M L. REV. 29, 44 (2008) (recommending that State regulators use cost-benefit analysis to create flexible standards for the natural gas industry).

allow regulated entities to pay to pollute. Even where there are requirements, some environmental regulations provide freedom of choice for regulated entities on how to comply with the requirements or how to demonstrate compliance.[39] Some environmental permits explicitly exclude certain emissions from the limit or make the permit conditions broad to cover any flexibility that a regulated facility might argue it needs.[40]

Third, part of the complication in assessing noncompliance with environmental regulations is that the compliance metric often does not always relate directly to actual pollution.[41] Noncompliance with an information disclosure regulation means that a regulated entity failed to report data. [42] Noncompliance with a recordkeeping regulation means that a regulated entity failed to properly keep or show specific documentation.[43] Noncompliance with an agency environmental review regulation means that the agency did not conduct an adequate analysis.[44] Thus, even though the term noncompliance or "violation" conjures terrible images of excess pollution, particularly when discussing pollution and exposure for communities, such is not always the case.

Fourth, society places varying values on different kinds of noncompliance, further complicating noncompliance assessments. Indeed, some law-and-economics scholarship suggest that certain laws (e.g. non-criminal laws) are mere costs of doing business, meaning a certain amount of deliberate noncompliance should be encouraged when it satisfies a corporation's fiduciary responsibility to maximize profitability.[45] Willful

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[39] Dalia Patino-Echeverri, *Feasibility of Flexible Technology Standards for Existing Coal Fired Power Plants and their Implications for New Technology Development*, 61 UCLA L. REV. 1896, 1920 (2014) (discussing e.g. the concept of alternative compliance payments in CAA regulation).

[40] *See* Dietrich Earnhart et al., *Discretionary Exemptions from Environmental Regulation: Flexibility for Good or for Ill* (Resources for the Future Working Paper No. 19-20, Aug. 2019), https://www.rff.org/publications/working-papers/discretionary-exemptions-environmental-regulation-flexibility-good-or-ill/.

[41] J.B. Ruhl et al., *Environmental Compliance: Another Integrity Crisis or Too Many Rules?*, 17 NAT. RES. & ENV'T 24–26 (2002).

[42] *See, e.g.*, Press Release, U.S. Dep't of Justice, Toyota Motor Company to Pay $180 Million in Settlement for Decade Long Noncompliance with CAA Reporting Requirements (Jan. 14, 2021), https://www.justice.gov/opa/pr/toyota-motor-company-pay-180-million-settlement-decade-long-noncompliance-clean-air-act.

[43] *See, e.g.*, News Release, U.S. EPA, Corporate Wide Settlement with Lowe's (Apr. 17, 2014), https://www.epa.gov/enforcement/reference-news-release-corporate-wide-settlement-lowes-protects-public-lead-pollution.

[44] Dep't of Transp. v. Pub. Citizen, 541 U.S. 752, 756–57 (2004) (quoting Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989) (NEPA imposes no duty for federal agencies to *use* an environmental review, it only imposes procedural requirements on federal agencies).

[45] Judd F. Sneirson, *Shareholder Primacy and Corporate Compliance*, 26 FORDHAM

noncompliance or fraud by regulated entities may foster a different societal sentiment than failure to comply by those entities that simply cannot afford to do so.[46] Moreover, certain noncompliance that is longer in time, greater in amount, or more acute or toxic may be more concerning than other kinds of noncompliance.[47] Thus, while noncompliance is a single term, it hardly denotes a single idea.

C. Enforcement

When regulated entities fail to comply, or worse, cheat or commit fraud, enforcement needs to step in.[48] Widespread noncompliance threatens achievement of the underlying public health and natural resource benefits that the regulation hopes to achieve.[49] For example, when multiple countries adopted strict fuel standards for oceangoing vessels, many worried that the health benefits anticipated by the standards would never come to fruition because of rampant expected noncompliance.[50] In addition, while some may

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ENVTL. L. REV. 450 (2015).

[46] KRISTI PULLEN FEDINICK ET AL., NATURAL RESOURCE DEFENSE COUNCIL, WATERED DOWN JUSTICE 33 (2019), https://www.nrdc.org/sites/default/files/watered-down-justice-report.pdf (noting difference between willful non-compliance by water utilities versus those that want to comply but have financial inability to do so and thus need grant funding); *see also* Judd F. Sneirson, *Shareholder Primacy and Corporate Compliance*, 26 FORDHAM ENVTL. L. REV. 450 (2015) ("And to the extent firms find themselves out of compliance, it seems to be more a function of not understanding often-complex laws than a conscious choice to flout the law in order to maximize profits.").

[47] FEDINICK ET AL., *supra* note 46, at 6 (between 2016-2019, 40 percent of Americans obtained their water from drinking water systems that were in violation of the Safe Drinking Water Act and the percentage of water systems in chronic noncompliance was 40 percent higher in counties with the highest racial, ethnic, and language vulnerability compared to counties with the lowest racial, ethnic, and language vulnerability); *see also* Manju Menon & Kanchi Kohli, *Regulatory Reforms to Address Non-Compliance*, CENTER FOR POLICY RESEARCH (June 7, 2019), https://cprindia.org/policy-challenge/7857/climate-energy-and-the-environment (discussing large-scale legal violations in specific sectors such as mining).

[48] Markell et al., *supra* note 33, at 581 (pointing to example of enforcement working in discussing Norway study that found that parties audited by regulators were 37% less likely to be in noncompliance the following year).

[49] Cynthia Giles, *Next Generation Compliance Environmental Regulation for the Modern Era*, HARV. L. SCH. ENV'T & ENERGY L. PROGRAM 3 (2020), http://eelp.law.harvard.edu/wp-content/uploads/Cynthia-Giles-Intro-FINAL.pdf.

[50] *See* JACK JORDAN ET AL., TACKLING 2020: THE IMPACT OF THE IMO AND HOW SHIPOWNERS CAN DEAL WITH TIGHTER SULFUR LIMITS 8 (May 2017), https://www.spglobal.com/platts/plattscontent/_assets/_files/en/specialreports/shipping/sr-tackling-2020-imo-impact-shipowners-tighter-sulfur-limits.pdf (describing that at an industry conference, more than 30% of respondents to a poll said there would be some degree of non-compliance in emission control areas in 2020).

assume that regulated entities relish the opportunity to avoid compliance (and some likely do), a lack of enforcement also creates uncertainty in the overall marketplace, which ultimately hurts regulated entities.[51] For example, as EPA's Deputy Inspector General noted in May 2021, a decline in environmental enforcement actions means that violators get "an unfair competitive advantage over other regulated entities that comply with environmental regulations."[52] Thus, some enforcement regime must exist to keep noncompliance in check.[53]

Indeed, most federal statutes with a regulatory focus provide certain "enforcers" with legal authority to bring environmental enforcement actions. Federal statutes certainly provide federal and state government enforcers with authority to bring enforcement actions against regulated entities in order to obtain injunctive relief and penalties.[54] Federal statutes also allow private individuals to step into the shoes of government enforcers via citizen suits by bringing enforcement actions against regulated entities in order to obtain injunctive relief and penalties.[55] In addition, federal statutes authorize administrative enforcement actions through, for example, administrative hearing officers and administrative law judges.[56] Such administrative environmental enforcement occurs in a variety of administrative court functions, in front of zoning boards, pollution control boards, water boards, and others.[57] There is indeed plenty of enforcement authority available.

Yet, despite the availability of enforcement authority, it is strikingly lacking as a tool to deal with noncompliance. For years, the Office of Inspector General (OIG) has discussed concerns over underperformance of environmental enforcement in the face of significant noncompliance.[58] In

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[51] *See, e.g.*, *Emissions Monitoring: Maintaining a Level Playing Field Post-2020*, RIVERIA NEWSLETTERS (Sept. 17, 2018), https://www.rivieramm.com/opinion/opinion/emissions-monitoring-maintaining-a-level-playing-field-post-2020-23341 ("Compliance with the sulphur cap with be challenging enough in itself, but a further concern involves the competitive advantage gained from illegal non-compliance").

[52] Kelsey Brugger, *Watchdog: Enforcement Inspections, Monitoring Plummeted*, E&E NEWS (May 13, 2021).

[53] David L. Markell & Robert L. Glicksman, *A Holistic Look at Agency Enforcement*, 93 N.C. L. REV. 1, 11–12 (2014).

[54] *See, e.g.*, 42 U.S.C. § 7413 (CAA federal enforcement); 33 U.S.C. § 1319 (CWA federal enforcement); 42 U.S.C. § 6928 (RCRA federal enforcement).

[55] The "private attorney general" where such individual simulates an attorney general, acting as the advocate for a group, but solely for a group of private persons.

[56] Joseph J. Lisa, *EPA Enforcement Actions: An Introduction to the Consolidated Rules of Practice*, 24 TEMP. J. SCI. TECH. & ENVTL. L. 1 (2005).

[57] *See, e.g.*, Joseph F. Guida & Jean M. Flores, *From Here to a Penalty: Anatomy of EPA Civil Administrative Enforcement*, 43 TEX. ENVTL. L.J. 129 (2013).

[58] David L. Markell & Robert L. Glicksman, *Dynamic Governance in Theory and Application: Part I*, 58 ARIZ. L. REV. 563, 590-91 (2016).

2016, the OIG specifically noted that "[s]tate enforcement programs are underperforming: EPA data indicate that noncompliance is high and the level of enforcement is low."[59] The most recent report by EPA's Inspector General in May 2021 found that from 2006 to 2018, EPA's enforcement office reported a decline in enforcement activities.[60] The questions for this article are why enforcement is deficient and how to strengthen enforcement in the long-term.

II. HURDLES TO ENFORCEABILITY

This section focuses on existing hurdles in environmental enforcement. In particular it discusses resource and political, regulatory, and legal difficulties, as distinct, and also intertwined hurdles to enforceability of environmental law. The purpose in describing these hurdles is to provide an overview of the quantity and complexity of issues that must be addressed in order to achieve long-term and real enforcement.

A. Resource and Political Hurdles

As this article and many others have noted, a very real reason for enforcement's lackluster performance is due to resource hurdles.[61] For example, in a specific study on the CAA, Professor Victor Flatt looked at self-reported compliance data from regulated entities in the early 2000s to show that state spending per capita directly affects the length of time a regulated facility is in violation of the CAA.[62] In essence, the environmental enforcement system simply has far too much on its plate to keep up. As noted by Cynthia Giles, the head of EPA's enforcement office in the Obama Administration, "a handful of enforcers will never be able to ensure general compliance at millions of facilities."[63] As noted by Joel Mintz, a legal scholar on environmental enforcement, at a 2017 symposium, EPA and the states are now responsible for regulating a much larger universe of pollution sources

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[59] *Id.* at 591.

[60] Kelsey Brugger, *Watchdog: Enforcement Inspections, Monitoring Plummeted*, E&E NEWS (May 13, 2021).

[61] Jonathan Remy Nash et al., *The Production Function of the Regulatory State, How Much do Agency Budgets Matter?*, 102 MINN. L. REV. 695, 709 (2017) (noting that decreased even though decreases in budgets may not affect environmental quality, they certainly affect enforcement.

[62] Victor B. Flatt & Paul M. Collins, Jr., *Environmental Enforcement in Dire Straits: There Is No Protection for Nothing and No Data for Free*, 85 NOTRE DAME L. REV. 55, 82 (2009) (looking at).

[63] Cynthia Giles, *Next Generation Compliance Environmental Regulation for the Modern Era Part I*, HARV. L. SCH. ENV'T & ENERGY L. PROGRAM 3 (2020), http://eelp.law.harvard.edu/wp-content/uploads/Cynthia-Giles-Part-1-FINAL.pdf.

than was true in previous years, and in a wider array of new program areas.[64] Core functions of enforcement like sending subpoenas, records review, and inspection, are simply expensive to undertake consistently and comprehensively.[65]

Indeed, there are plans for an increased enforcement budget in the Biden Administration. EPA's proposed $11.2 billion budget request for fiscal year 2022, for example, includes plans to "hold bad actors accountable for their violations, with a particular focus in communities with multiple pollution sources."[66] Yet EPA, even with increased budgets, relies heavily on state enforcement activities, and state enforcement budgets have also seen a significant decline in recent years.[67] As described in one study, states bring about ninety percent of environmental enforcement actions each year, and yet only eight states had satisfied an EPA goal that all major air pollution emitters be inspected every two years and only two states had satisfied an EPA goal that all large-quantity generators of hazardous waste be inspected every five years.[68] Further, given history as a guide, budgets are likely to change again in the future, meaning that resources will continue to remain a significant hurdle for effective environmental enforcement.[69]

Moreover, political hurdles also undoubtedly impede environmental enforcement policy.[70] In the context of enforcement provisions in environmental permits, EPA has either allowed federal objections to state permits or disallowed any federal "second-guessing" of state permit terms, depending on the political administration in power.[71] For example, under the

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[64] DOJ Symposium, *The Future of Environmental Enforcement*, 47 ENVTL. L. REP. NEWS & ANALYSIS 10,206, 10,209-10 (2017) (remarks by Joel Mintz).

[65] Lucas Satterlee, *Climate Drones: A New Tool for Oil and Gas Air Emission Monitoring*, 46 ENVTL. L. REP. NEWS & ANALYSIS 11,069 (2016) (discussing drones for use in enforcement inspections to check compliance with the CAA in the oil and gas sector).

[66] FY 2022 EPA BUDGET IN BRIEF 11 (2021), https://www.epa.gov/sites/production/files/2021-05/documents/fy-2022-epa-bib.pdf

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[68] INSTITUTE FOR POLICY INTEGRITY-NYU SCHOOL OF LAW, IRREPLACEABLE: WHY STATES CAN'T AND WON'T MAKE UP FOR INADEQUATE ENFORCEMENT OF ENVIRONMENTAL LAWS 1–2 (2017), https://policyintegrity.org/files/media/EPA_Enforcement_June2017.pdf.

[69] Professor Joel Mintz has also stated "to pursue civil environmental enforcement in an effective fashion, EPA needs generally adequate budgetary resources and a sufficient number of qualified enforcement personnel." DOJ Symposium, *supra* note 64, at 10,209.

[70] *See, e.g.*, ENVIRONMENTAL INTEGRITY PROJECT, PAYING LESS TO POLLUTE: A YEAR OF ENVIRONMENTAL ENFORCEMENT UNDER TRUMP (2018), https://www.environmentalintegrity.org/wp-content/uploads/2017/02/Enforcement-Report.pdf (discussing changes in environmental enforcement across multiple federal Administrations).

[71] Stuart Parker, *EPA Faults Texas Air Permits Amid Looming Fight Over Trump Era Policy*, INSIDEEPA (Aug. 9, 2021), https://insideepa.com/daily-news/epa-faults-texas-air-permits-amid-looming-fight-over-trump-era-policy.

Obama Administration, EPA's practice had been to allow objections to state issued permits, including where the permits had weak enforcement provisions, such as monitoring and recordkeeping requirements.[72] Yet, under the Trump Administration, EPA established a policy that EPA cannot "second guess" states' permitting decisions.[73] EPA has also changed its position across differing federal administrations with regards to remedies available in enforcement matters, specifically supplemental environmental projects and mitigation. [74] Other enforcement policies that have changed over political administrations involve limiting non-criminal enforcement actions to cases that involve intentional wrongdoing, encouraging restraint in pursuing criminal charges, and preventing the pursuit of civil penalties in cases where states had already acted.[75]

Legal scholarship has certainly acknowledged political hurdles in environmental enforcement. Professor Mintz has discussed that even though environmental enforcement should be a professional activity, partisan politics plays a significant role.[76] Professor Cecot has noted that a federal administration's particular stance on enforcement, particularly involving statements of nonenforcement, changes the perceived threat of federal enforcement thereby impacting state enforcement.[77] Professors Outka and Warner have described the changes in federal initiation of new enforcement actions, under Presidents Bush, Obama, and Trump.[78] Yet, as Professor Jodi Short notes, the role of politics features much more prominently in regulatory scholarship on agenda setting, rulemaking, policy adoption, policy diffusion, and institutional design, rather than in the area of enforcement and compliance.[79]

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[72] Stuart Parker, *Environmentalists Urge EPA to 'Disavow' Trump Title V Air Permit Policy*, INSIDE EPA (Mar. 15, 2021), https://insideepa.com/daily-news/environmentalists-urge-epa-disavow-trump-title-v-air-permit-policy (discussing Texas state permits that have repeatedly come under attack by environmental groups for failing to include stringent terms, including enforcement related terms).

[73] *Id.*

[74] Akin Gump Enforcement Alert, Tearing Down Trump's Environmental Wall: Justice Department Ditches Impediments to Effective Enforcement (Feb. 12, 2021), https://www.akingump.com/en/news-insights/tearing-down-trumps-enforcement-wall-justice-department-ditches-trump-policies-seen-as-impediments-to-enforcement.html.

[75] *Id.*

[76] DOJ Symposium, *supra* note 64, at 10,209 (remarks of Joel Mintz).

[77] Caroline Cecot, *Filling the Federal Enforcement Gap*, 33 NAT. RES. & ENVT. 36 (2019).

[78] Uma Outka & Elizabeth Kronk Warner, *Reversing Course on Environmental Justice Under the Trump Administration*, 54 WAKE FOREST L. REV. 393, 406 (2019).

[79] Jodi L. Short, *The Politics of Regulatory Enforcement and Compliance: Theorizing and Operationalizing Political Influences*, 15 REGUL. & GOVERNANCE 653 (2021).

B. Regulatory Design Hurdles

There has been even less attention to the way in which regulatory hurdles impact environmental enforcement, Yet, environmental enforcers also struggle with regulatory hurdles that stem from "flexibility" for regulated entities. Such flexibility can come in multiple forms, including via providing exceptions for specific classes of regulated entities and setting pollution standards that are voluntary rather than numeric.[80] Providing flexibility is a key way in which executive branch agencies reduce the cost for regulated entities to comply with new environmental regulations.[81] Yet, as this section describes, flexibility in regulatory design hinders enforcement efforts by requiring enforcers to overcome affirmative defenses raised by regulated entities early on in litigation proceedings. Thus, while some may focus on the need for greater resources in order to improve the state of environmental enforcement, resources alone will not improve the number or value of remedies actually achieved in enforcement cases. Clear and easy regulatory defenses simply stand too tall in the enforcer's path.

As scholars and researchers of administrative law have noted, exceptions are not really exceptions but instead quite prevalent in regulatory design.[82] For example, the CWA and implementing regulations allow variances for wastewater dischargers from water quality limits when compliance might cause "substantial and widespread economic and social impacts" in communities.[83] Additionally, the CAA and its implementing regulations allow permit exemptions for regulated facilities that may promise to keep emissions below certain threshold levels.[84] At state and local levels, exemptions are replete in areas of pollution control, particularly as related to variances from zoning requirements.[85]

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[80] Marshal J. Bregar, *Regulatory Flexibility and the Administrative State*, 32 TULSA L.J. 325 (1996).

[81] GAO FAQs, https://www.gao.gov/legal/other-legal-work/congressional-review-act (last visited Sept. 16, 2021) (Under the Congressional Review Act (CRA), agencies must also submit final rules and supporting analyses to the Government Accountability Office (GAO) for congressional review prior to promulgation. This submission must indicate whether the rule is "major" as defined under the CRA (5 USC §804(2)), which in general, involves rules with a $100 million or more impact on the economy).

[82] Cary Coglianese et al., *Unrules*, 73 STAN. L. REV. 883 (2021); *see also* David Markell & Robert L. Glicksman, *A Holistic Look at Agency Enforcement*, 93 N.C. L. REV. 1, 15 (2014) (noting RCRA as an example, where regulatory standards are different between hazardous waste standard generators and de minims generators).

[83] Clean Water Act, 40 C.F.R § 131.14.

[84] *See, e.g.*, Wis. Dep't of Natural Resources. Some facilities or construction projects at existing facilities may have a low enough environmental impact that they are exempt from obtaining air pollution permits.

[85] Earnhart et al., *supra* note 40, at 5.

Exceptions translate into clear affirmative defenses in enforcement cases. For example, EPA, states, and citizen enforcers grappled with multiple exceptions in the 2002 new source review regulations that changed permitting requirements for new and modified large sources of air pollution.[86] In enforcement cases alleging violations of the 2002 regulations, defendants made regular and far-reaching arguments that modifications made to facilities fit within the routine exception and hence did not need a permit.[87] In one enforcement case, a coal fired power plant defendant argued that life-extension modifications that cost millions of dollars were "routine" and hence justified to fall under the exception.[88] In another enforcement case alleging violations of the 2002 regulations, a coal-fired power plant defendant argued that all modifications fell within an exception. [89]

Moreover, exceptions can embed in compliance determinations, making it easy for defendants to escape liability. For example, air permits that set limits for emissions coming from facilities will often exclude emissions that the facility generates during startup, shutdown, and malfunction periods of facility operation.[90] Such startup, shutdown, and malfunction emissions can be significant, and simply go unmeasured and unaccounted for in the permit. In other situations, the way in which facilities measure compliance can allow for excusable exceedances. A permit may allow a facility that meets an emission limit ninety five percent of its operating time to be considered "in compliance."[91] During the other five percent of the time, the facility can exclude emissions when monitors might be in testing or failure, if there is a facility upset condition, or the pollution control equipment is going through cleaning.[92] While such "excused" emissions may seem reasonable when drafting a permit, they often become easy defenses for defendants in enforcement cases later that allege noncompliance.[93]

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[86] 67 Fed. Reg. 80,185 (Dec. 31, 2002).

[87] For excellent student note on the routine exception's implications in enforcement cases, see Graham Zorn, *Prevention of Significant Deterioration and Its Routine Maintenance Exception*, 33 VT. L. REV. 783 (2009).

[88] Wis. Elec. Power Co. v. Reilly, 893 F.2d 901, 906 (7th Cir. 1990).

[89] United States v. DTE Energy Co., 711 F.3d 643 (6th Cir. 2013).

[90] Nat. Res. Def. Council v. Ill. Power Res., LLC, 202 F. Supp. 3d 859, 883–84 (C.D. Ill. 2016) (pointing out that defendants argued that the vast majority of the exceedances at issue are excusable under the Illinois SIP because they occurred during periods of malfunction and breakdown, and noting several other states with similar provisions, including Georgia and Texas).

[91] United States v. Louisiana Pacific Corp., 908 F. Supp. 835 (D. Colo. 1995).

[92] *Id.*

[93] Sierra Club v. Georgia Power, 365 F. Supp. 2d 1297 (11th Cir. 2006) (regulated entity argued that provision of its air pollution permit acknowledging state's enforcement discretion regarding excess emissions during startup, shutdown, or malfunction was an affirmative defense available to the plant operator in a citizen suit under Clean Air Act (CAA)).

Moreover, under certain federal environmental laws, once a permit is issued with or without its flexibilities, a "shield" protects the permit holder from strict liability for unauthorized discharges. [94] The idea behind a permit shield is to relieve permit holders of having to litigate in an enforcement action the question of whether their permits are sufficiently strict.[95] The permit shield defense applies "as long as (1) the permit holder complies with the express terms of the permit and with the Clean Water Act's disclosure requirements and (2) the permit holder does not make a discharge of pollutants that was not within the reasonable contemplation of the permitting authority at the time the permit was granted."[96] Thus, if the permit is based upon accurate information, it is valid. Only if the defendant withheld relevant information in the permit process would the permit not be valid.[97]

The permit shield has been a common defense in water permits involving national water quality standards. For example, in a 2015 district court case in Georgia, the court ruled that Georgia's narrative water quality standards were not incorporated into the Georgia National Pollutant Discharge Elimination System (NPDES) permit issued to a pulp mill for wastewater discharges.[98] Plaintiff environmental group argued that the mill's discharge had a negative impact on the river, and that the discharge violated the state's water quality standards pertaining to color, odor and turbidity.[99] The pulp mill's defense was that the permit did not incorporate water quality standards, and thus the CWA's "permit shield" provisions shielded it from liability under the CWA.[100] The court agreed with the pulp mill, granting its

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[94] NRDC v. Cnty. of Los Angeles, 725 F.3d 1194, 1204 (9th Cir. 2013) (if a polluter holds a water permit, then compliance with the terms of the permit satisfies its obligations and it cannot be liable for discharges in accordance with the permit); *see also* CWA 33 U.S.C. § 1342(k) (compliance with a permit issued shall be deemed compliance for purposes of any citizen suit or government enforcement action). Note, the CAA also includes permit shields for permittees. *See* MINN. POLLUTION CONTROL AGENCY, FACTS ABOUT APPLICATION AND PERMIT SHIELDS (Mar. 1998), https://www.pca.state.mn.us/sites/default/files/2-04.pdf.

[95] Wis. Res. Protection Council v. Flambeau Mining Co., 727 F.3d 700 (N.D. Ill. 2017).

[96] Piney Run Preservation Ass'n v. County Commissioners of Carroll County, 268 F.3d 255, 259 (4th Cir. 2001); *see also* NRDC v. County of Los Angeles, 725 F.3d 1194, 1204 (9th Cir.2013).

[97] 42 U.S.C. § 7661c(f) ("Compliance with a permit issued in accordance with this subchapter shall be deemed compliance."); see also example of state permit shield, WIS. STAT. § 285.62(10)(b) ("compliance with all emission limitations included in an operation permit is considered to be compliance with all emission limitations.").

[98] Altamaha Riverkeeper, Inc. v. Rayonier Performance Fibers, LLC et al., 2018 WL 2947915, Case No. A18A0594 (Ga. App. June 13, 2018).

[99] *Pulp Mill's Pollution Discharge Permit Falls Short of Georgia Water Quality Standards*, SOUTHERN ENVIRONMENTAL LAW CENTER (Jan. 28, 2016), https://www.southernenvironment.org/news-and-press/news-feed/pulp-mill-pollution-discharge-permit-falls-short-of-georgia-water-quality-s.

[100] Altamaha Riverkeeper, Inc. v. Rayonier Performance Fibers, LLC et al., 2018 WL

motion for summary judgment on the CWA claims.[101] Similarly, in a Sixth Circuit case in Kentucky, the court found that a permit shield for a mining company protected the company from liability associated with discharges of selenium.[102] The permit did not specify effluent limitations for selenium and the discharge resulted in levels exceeding the threshold in the state's water quality.[103] Plaintiffs, a citizen group, argued that the permit shield did not apply because the discharge of selenium was not expressly authorized by the permit nor reasonably contemplated by the state agency when it issued the permit.[104] The Sixth Circuit disagreed however, shielding the mining company from liability.[105]

Environmental regulations also exempt regulated facilities from needing permits if the facility only emits "minor" sources of pollution. In CAA permitting for example, to stay classified as a minor versus major source a regulated entity only needs to promise to keep the facility's pollution under minor source pollution thresholds.[106] While it may make sense from a regulatory perspective to ease permitting burdens for only minor sources of pollution, it can be difficult for enforcers to monitor whether a facility actually stays below minor source thresholds.[107] In *Wild Earth Guardians v. Extraction Oil and Gas Inc.*, for example, monitoring and recordkeeping became a hot issue in litigation where defendants argued that the plaintiff citizen group enforcers could not demonstrate that the facility had exceeded

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2947915, Case No. A18A0594 (Ga. App. June 13, 2018).

[101] *Id.*

[102] Sierra Club v. ICG Hazard, LLC, 781 F.3d 281 (6th Cir. 2015).

[103] *Id.*

[104] *Id.*

[105] Sierra Club v. ICG Hazard, LLC, 781 F.3d 281 (6th Cir. 2015); *see also* Atl. States Legal Foundation v. Eastman Kodak Co., 12 F.3d 353 (2d Cir. 1993) (finding the pollutant at issue, though not limited by any permit condition, was disclosed and contemplated within the permitting process, thus implicitly within the permit and thus regulated entity shielded from liability.); *but see* Northwest Envtl. Advocates v. City of Portland, 56 F.3d 979, 990 (9th Cir. 1995) (rejecting the argument that water quality standards must be translated into specific effluent limitations in order to constitute an enforceable requirement of the permit).

[106] NPCA v. N.D. Dep't of Envtl Quality, 945 N.W.2d 318 (N.D. 2020) (court upheld the state agency's issuance of a permit to a refinery even though it did not include a numeric cap on hazardous air pollutants because the facility's potential levels of hazardous air pollution were below major source thresholds); *see also* Voigt v. Coyote Creek Mining Co., *LLC*, No. 1:15-CV-00109, 2016 WL 3920045, at *34 (D.N.D. July 15, 2016) (rejecting argument that a numeric cap was required when determining a source's potential to emit in the PSD context).

[107] *See, e.g.*, Guidance on Limiting Potential to Emit in New Source Permitting, US EPA, 5–7 (June 13, 1989), https://www3.epa.gov/ttn/atw/pte/june13_89.pdf (discussing enforceability concerns associated with keeping track of minor source thresholds in air permitting).

air emission limits without specific monitoring.[108] At the same time, regulated facilities often push back on monitoring requirements as permit conditions.[109]

At a broader level, the federal government grapples with concerns from states that struggle with how to develop enforceable policies and mechanisms.[110] Under the CAA, the federal government sets the standards and states are required to draft a state implementation plan ("SIP") for EPA approval that sets specific measures to achieve the standards, including through issuance of source-specific permits.[111] Similarly, under the CWA, every state must promulgate water quality standards for EPA approval that require individual sources to obtain permits.[112] State selected implementation measures, through permits or other specific pollution reducing programs, must be "enforceable" under both the CAA and CWA.[113] Yet courts have grappled with deciding whether a state pollution reducing measure is enforceable when relied upon in a state plan to implement a national pollution standard, particularly if the standard is voluntary.[114] For example, in *Bayview Hunters Point Community Advocates v. Metropolitan Transportation Commission*, several environmental groups challenged the inclusion of a voluntary implementation mechanism in the California SIP for lack of enforceability as required by the CAA.[115] The plan included, as a mechanism to meet overall air quality standards in the San Francisco area, the anticipated reductions in emissions resulting from a 15% "target" public transportation

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[108] WildEarth Guardians v. Extraction Oil and Gas Inc., 457 F. Supp. 3d 936, 961–62 (D. Colo. 2020).

[109] *In re* Limetree Bay Refining and Limetree Bay Terminals (2021 case pending with Environmental Appeals Board involving oil refiner challenge to EPA's issuance of an air permit that requires general air monitoring to ensure compliance with national ambient air quality standards).

[110] Memorandum from Peyton Robertson, Water Quality Specialist, NOAA, to State Coastal Nonpoint Program Coordinators, Enforceable Policies and Mechanisms for State Coastal Nonpoint Source Programs (Jan. 23, 2001), https://coast.noaa.gov/data/czm/pollutioncontrol/media/epmmemo.pdf (noting desire to work with states in proving flexibility for voluntary programs to qualify as enforceable).

[111] 42 U.S.C. § 7410(a)-(k).

[112] 33 U.S.C. § 1313(a).

[113] *See, e.g.*, 33 U.S.C. § 1319(d).

[114] Kenneth J. Adler et al., *Using an Emissions Banking and Trading Program to Reduce Diesel Emissions*, 49 TEX. ENVTL. L.J. 183 (2019) (noting that mobile sources have not typically been included in state NOx emissions trading programs (like Texas Commission for Environmental Quality's (TCEQ) Emissions Banking and Trading (EBT) program) because of the difficulty in tracking their location and accurately quantifying potential emission reductions).

[115] Bayview Hunters Point Community Advocates v. Metropolitan Transportation Commission, 366 F. 3d 692 (9th Cir. 2004).

ridership increase.[116] The Ninth Circuit found that nothing in the transportation control measure's language actually required a ridership increase by any amount, and that instead the expected ridership increase was simply a target, not a promise to attain a ridership increase.[117] The ridership target relied on "hoped-for increases in productivity" to boost public transit use, but because predicting public behavior is unreliable, the Court found that the measure was unenforceable and therefore did not comply with the CAA.[118] By contrast, other cases have found that similar voluntary measures in a SIP do meet the CAA's requirement of enforceability. In *BCCA Appeal Group v. U.S. EPA*, the Fifth Circuit found that a SIP that simply promised to make real reductions in the future, without actually specifying particular control measures, was good enough to qualify as enforceable and therefore did not violate the CAA's requirements.[119] The Fifth Circuit looked to EPA's own interpretation of the CAA allowing *limited* use of other "means" and "techniques," like future promises, so long as the entire package of measures and rules provides for attainment of air quality standards, and the state is *capable* of fulfilling its promise.[120] Similarly, in *Committee for a Better Arvin, et al., v. U.S. EPA*, the Ninth Circuit found that California's SIP, relying on a promise by the state to achieve certain emission reductions in the future, was enough to meet enforceability requirements.[121] The Ninth Circuit distinguished *Committee for a Better Arvin* from *Bayview Hunters Point Community Advocates*, finding that because state commitments to propose and adopt emission control measures required government agency action rather than action by the public, the measures were enforceable.[122]

Moreover, even when pollution standards are required, sometimes they are simply too vague for enforcers. Under the CAA, for a permit condition to be considered "enforceable as a practical matter," it must include specific criteria such as "applicability, compliance date, specificity of conduct, any incorporation by reference, recordkeeping requirements, and

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[116] *Id.*

[117] *Id.*

[118] *Bayview*, 366 F.3d at 698.

[119] BCCA Appeal Group v. U.S. EPA, 355 F.3d 817 (5th Cir. 2003).

[120] *Id.* (citing to EPA Final Rule Approving Texas SIP, 66 Fed. Reg. 57,160, 57,177 (Nov. 14, 2001)). The court referred to EPA's three factor test in determining whether to approve a SIP's enforceable commitment: (1) whether the commitment addresses a limited portion of the SIP; (2) whether the state generally considers is capable of fulfilling its commitment; and (3) whether the commitment is for a reasonable and appropriate period of time.

[121] Comm. for a Better Arvin v. U.S. EPA, 786 F.3d 1169 (9th Cir. 2014), a group of environmental and community groups brought a challenge against the State of California for relying on unenforceable measures to meet air quality standards for the San Joaquin valley, an area with some of the worst air quality in the country.

[122] *Id.* at 1180.

exemptions and exceptions."[123] In cases brought by EPA to enforce air permit limits, regulated entities have argued as a defense that the limit is not enforceable as a practical matter because it is too vague.[124] In *NPCA v. NDEQ*, however, the state Supreme Court of North Dakota held that an emission limit for a refinery did not need to be numeric in order to still be enforceable.[125] The court based its reasoning on the fact that nothing in applicable state or federal law required the state to specify a numeric cap for a limit.[126] Similarly, under the CWA, water quality standards can be either *narrative* or *numeric*.[127] Indeed, some scholars have argued for the adoption of numeric water quality criteria as preferable to narrative criteria, which are vaguer and less susceptible to enforcement.[128]

Moreover, new environmental regulations can face opposition at the outset due to concerns that such new regulations will require more resources to enforce. This issue arose in arguments made by the state of Colorado in a 2020 case before the Tenth Circuit regarding EPA's Navigable Waters Protection regulation.[129] In its request that the court enjoin EPA from implementing the new regulation, the state of Colorado presented increased *enforcement* burden as evidence of harm. In particular, the state's clean water program manager asserted that implementation of the regulation would require Colorado to eventually take enforcement action, and because the state lacked dedicated funding to undertake such an enforcement effort, the state would have to divert resources from other clean water programs to the detriment of those programs.[130] While the court found the testimony by the program manager to be lacking in specificity, and as a result, found insufficient evidence for the state to demonstrate harm, it is indicative of the very real need for consideration of the availability of state enforcement budgets and resources in new federal regulations.[131] In another example, multiple state agencies fought against the 2002 CAA new source review proposed regulation, arguing in part that the regulation's weak recordkeeping requirements for regulated entities would hinder enforcement efforts by increasing the burden on states.[132]

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[123] 54 Fed. Reg. 27,274, 27,283 (June 26, 1989).

[124] United States v. EKPC, 498 F. Supp. 2d 995, 1003 (E.D. Ky. 2007).

[125] NPCA v. N.D. Dep't of Envtl Quality, 945 N.W.2d 318 (N.D. 2020).

[126] *Id.* at 27, 30.

[127] 40 C.F.R. § 131.3(b) (2002).

[128] Julie Furr Youngman, *Water, Water, Anywhere?: Protecting Water Quantity in State Water Quality Standards*, 94 IND. L.J. 1613 (2019).

[129] State v. U.S. EPA, 2021 WL 790999 (10th Cir. 2021).

[130] *Id.* at *7.

[131] *Id.* at *8 (to constitute irreparable harm, an injury must be imminent, certain, actual and not speculative).

[132] New Jersey v. EPA, 989 F.3d 1038 (2021).

C. Legal Hurdles

In addition to regulatory hurdles, certain legal arguments also present difficulties for environmental enforcers. In particular, the doctrines of preclusion and preemption pose significant legal hurdles for environmental enforcers. Defendants typically raise both of these arguments as affirmative defenses in environmental enforcement litigations.[133] First, defendants will argue that preclusion prevents enforcers from bringing an enforcement action because of a prior resolved enforcement case involving the same issue. Second, defendants will argue that preemption prevents enforcers from bringing an enforcement case because a higher authority of law exists that conflicts with the enforcement action, thereby displacing the action.

Preclusion arguments can be raised in a number of contexts. Several environmental statutes preclude citizen enforcement actions when a state has commenced and is diligently prosecuting an action under a comparable state law in court.[134] Some federal statutes also provide that prior state administrative enforcement actions can bar the filing of a citizen suit addressing the same violations. Preclusion arguments most commonly arise with citizen suit enforcers.[135] However, government enforcers can also face preclusion defenses[136] For example, under the Resource Conservation and Recovery Act (RCRA), federal enforcers have faced preclusion issues when a state has reached agreement on its own enforcement action.[137] In *Harmon Industries*, the Eighth Circuit found that the plain language of the RCRA showed a congressional intent for an authorized state program to supplant the

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[133] An affirmative defense to a civil lawsuit or criminal charge is a fact or set of facts other than those alleged by the plaintiff, which, if proven by the defendant, defeats or mitigates the legal consequences of the defendant's otherwise unlawful conduct.

[134] In general, citizens are precluded from filing a suit if the EPA or State has commenced and is diligently prosecuting a civil or criminal action in a court of the United States a pollution standard at issue in the citizen suit. *See* 33 U.S.C. § 1365(b)(1)(B); 42 U.S.C. § 300j-8(b)(1)(B) (Safe Drinking Water Act); 42 U.S.C. § 9659(d)(2) (CERCLA); 42 U.S.C. § 7604(b)(1)(B) (Clean Air Act); 15 U.S.C. § 2619(b)(1)(B) (TSCA); 42 U.S.C. § 11046(e), (h)(2) (Emergency Planning and Community Right-to-Know Act).

[135] *See, e.g.*, Sierra Club v. Two Elk Generation Partners, 646 F.3d 1258 (10th Cir. 2011) (finding a CAA citizen suit action precluded under the common law doctrine of issue preclusion); Friends of Milwaukee's Rivers v. Milwaukee Metro. Sewerage Dist., 382 F.3d 743 (7th Cir. 2004) (considering the doctrine of claim preclusion in a CWA citizen suit action)

[136] *See generally* William Daniel Benton, *Application of Res Judicata and Collateral Estoppel to EPA Overfiling*, 16 B.C. ENVTL. AFFS. L. REV. 199 (1988) (discussing preclusion in government enforcement cases in RCRA and other federal environmental statutes).

[137] *See, e.g.*, Harmon Industries, Inc. v. Browner, 191 F.3d 894, 899 (8th Cir.1999).

federal hazardous waste program in all respects, including enforcement.[138] The defendant in that case challenged EPA's claims by arguing that EPA was barred from suing because the state had begun its own action against the defendant.[139] The defendant had already reached a settlement agreement, later approved by a state court, under which the defendant would clean up the relevant disposal area and pay no fine.[140] While it was implementing the cleanup, EPA initiated an enforcement action against it under the RCRA, seeking over $2 million in penalties.[141] After litigating EPA's claim through an administrative law judge and federal district court, the Eighth Circuit affirmed the district court's decision, holding that EPA was barred from initiating an independent action against an alleged violator of RCRA that had been the subject of a state enforcement action.[142]

Enforcers, particularly at the state and local level, also grapple with preemption arguments when pursuing environmental enforcement actions.[143] In recent years, preemption has been particularly difficult for state and local government enforcers when attempting to enforce environmental regulations on natural gas pipelines.[144] In one federal district court case, a natural gas company sought declaratory judgment and an injunction against a town's enforcement of its zoning ordinance through denial of a building permit.[145] The company argued that without a permit, the town could issue a stop work order with potential penalties and jail time for violating the zoning ordinance.[146] The court agreed, finding that the town's zoning regulations conflicted with the determination approved by the Federal Energy Regulatory Commission (FERC).[147] In another similar federal district court case, a natural gas company sought a declaratory judgment and an injunction against

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[138] Harmon Industries, Inc. v. Browner, 191 F.3d 894, 899 (8th Cir.1999).

[139] *Id.*

[140] The facts of *Harmon Industries, Inc. v. Browner*, 191 F.3d 894, 899 (8th Cir.1999) involved maintenance workers discarding solvent residue outside one of the plaintiff's plants for many years.

[141] *Id.*

[142] *Id.*

[143] In general, the Supremacy Clause of the U.S. Constitution gives Congress the power to preempt state law and an agency's preemption regulations, have the same preemptive effect as statutes. *See* Choate v. Champion Home Builders, Co., 222 F.3d 788, 791–92 (10th Cir. 2000). Federal preemption occurs where Congress defines explicitly the extent to which its enactment preempts state laws, when state law "regulates conduct in a field that Congress intended the Federal Government to occupy exclusively, and when it is impossible for a private party to comply with both state and federal requirements. *See also* English v. General Elec. Co., 496 U.S. 72, 79 (1990).

[144] *See, e.g.*, Empire Pipeline v. Town of Pendleton, 472 F. Supp. 3d 25 (W.D.N.Y. 2020); Islander Pipeline Co. LLC v. Blumenthal, 478 F. Supp. 2d 289 (D. Conn. 2007).

[145] Empire Pipeline v. Town of Pendleton, 472 F. Supp. 3d 25 (W.D.N.Y. 2020).

[146] *Id.*

[147] *Id.*

the state of Connecticut to obtain relief from the requirement that it obtain a state permit under the state's Structures, Dredging and Fill Act for construction activities related to an interstate natural gas pipeline.[148] The court held that allowing the state of Connecticut to enforce a sediment-sampling requirement for construction activities, and then potentially deny the company's permit application, would pose a significant obstacle to the pipeline project, thereby colliding with the Natural Gas Act.[149] Other federal court cases are contending with the ability of a state government to enforce state water permits given the Natural Gas Act's carve out for the rights of states to administer CWA water certification programs for discharges into navigable waters.[150]

In addition to natural gas pipelines, railway expansion is another area with significant pollution consequences that is prone to preemption of local government environmental enforcement.[151] For example, in *Grafton & Upton RR Co. v. Town of Milford*, a local government dealt with a challenge to its efforts to enforce zoning restrictions on preemption grounds. [152] In that case, the local government informed a railroad company that it intended to file a petition with the Surface Transportation Board (STB) seeking a declaratory order that the railroad company's proposed development of an old rail yard was prohibited by the town's zoning law.[153] The railroad company filed an action in federal court to enjoin the local government from taking any action to enforce its zoning law, arguing that federal interstate commerce law preempted any state or municipal statute, ordinance, or regulation supporting a delay or prohibition on the railroad's proposed development.[154] The town tried to argue that the proposed development was not for transportation purposes, but rather only for related train functions more akin to those of a trucking company, thereby eliminating any conflict between the federal law and the state zoning law.[155] However, the court found that the relevant federal statute, the Interstate Commerce Commission Termination Act, indicates an express intent on the part of Congress to preempt the entire field of railroad

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[148] Islander Pipeline Co. LLC v. Blumenthal, 478 F. Supp. 2d 289 (D. Conn. 2007).

[149] *Id.* at 294.

[150] *See generally* Millennium Pipeline Co. LLC, v. Seggos, 288 F. Supp. 3d 530 (N.D.N.Y. 2017).

[151] *See, e.g.*, Ass'n of American Railroads v. South Coast Air Quality Mgmt. Dist., 622 F.3d 1094 (9th Cir. 2010) (local government regulation limiting permissible amount of emissions from idling trains, imposing reporting requirements, backed by threat of penalties, on railyard operators, preempted by federal Interstate Commerce Commission Termination Act).

[152] Grafton & Upton RR Co. v. Town of Milford, 337 F. Supp. 2d 233 (D. Mass. 2014).

[153] *Id.*

[154] *Id.*

[155] *Id.*

regulation, including activities related to but not directly involving railroad transportation.[156] Thus, the court held that the local government's enforcement of its zoning regulations would interfere with the proposed interstate rail operations.[157]

Preemption hurdles arise in multiple other contexts for local government agencies trying to enforce existing pollution laws. In Texas, a court found that the state air and water pollution laws preempted a local government's ordinance, even though the local government enacted the ordinance because it felt that the state's enforcement of its pollution laws was too lax.[158] In a Nebraska case, a state court found a city's ordinance banning landfills within 5 miles of the city's drinking water supply unenforceable against a county government's solid waste disposal site because a state statute preempted the city's ordinance.[159] However, in New Hampshire, the state Supreme Court found that state solid waste statutes did not completely preempt the field of solid waste management and that a town's local ordinance regarding the location of a landfill was not preempted.[160]

Lastly, legal hurdles for enforcement can also arise from some of the resource hurdles discussed above. The unavailability of enforcement officials to find violations in a timely matter means cases may become stale or face statute of limitations defenses by regulated entities. In one CWA enforcement case, for example, government plaintiffs alleged over one hundred violations at one Texas aluminum plant based on self-reported discharge monitoring reports (DMR) from the defendant corporate owner.[161] The defendant raised a statute of limitations defense, arguing in part that the government plaintiffs should have known of the violations because EPA has the right to inspect permitted facilities. The court specifically noted that EPA region covering Texas and other neighboring states receives over 14,000 such similar DMR's each *month*, and has limited resources with which to perform inspections of permit holders' facilities. Thus, the court held that even though EPA had the right to inspect the aluminum plant at any time under the CWA, a belief that EPA should have done so did not "correspond with reality."[162]

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[156] *Id.*

[157] Boston & Maine Corp. v. Town of Ayer, 330 F.3d 12, 16 (1st Cir. 2003) (finding that "in order to be permissible under the ICCTA, state and local regulations applied to the development of an automobile unloading facility must not interfere with interstate rail operations).

[158] *See, e.g.*, BCCA Appeal Group, Inc. v. City of Houston, 496 S.W.3d 1 (Tex. 2016).

[159] Sarpy County v. City of Springfield, 492 N.W. 2d 566 (Neb. 1992).

[160] North Country Envt'l Services, Inc. v. Town of Bethlehem, 843 A.2d 949 (N.H. 2004).

[161] United States v. Aluminum Co. of Am., 824 F. Supp. 640, 646 (E.D. Tex. 1993).

[162] *Id.* at 647.

III. CASE STUDY: VEHICLE TAMPERING

This section uses enforcement of air pollution regulations that prohibit tampering with emission control devices on motor vehicles as a case study to demonstrate the ways in which legal hurdles in environmental enforcement manifest in one particular fact pattern. It highlights tampering in particular because of the plethora of enforcement activity happening currently, and in particular the issues pending related to preemption, exceptions, and resources.

A. Regulations and Compliance

EPA promulgates emissions standards for specific air pollutants emitted by vehicles and engines introduced into United States commerce. To ensure that every vehicle and engine introduced into commerce satisfies emissions standards, EPA administers a certification program.[163] Vehicle manufacturers apply for a certificate, and in these applications must describe specific elements of design to meet relevant emission standards.[164] Design features may include, for example, fueling strategies, ignition timing, exhaust gas recirculation systems, filters, and catalysts.[165] The CAA also explicitly prohibits any person from removing any device or element of design installed on or in a vehicle or engine prior to its sale *or* knowingly removing any such element of design after a sale.[166] Thus, the regulations employ, as this article describe in Table 1 above, features of what administrative law scholars would call both a design-based standard and a prohibition.

In order to demonstrate compliance with emission standards, vehicle and engine manufacturers must obtain a certificate from EPA for new fleets of vehicles coming into the market.[167] A certificate demonstrates that the respective engine or vehicle conforms to all of the applicable emission

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[163] Memorandum from Susan Bodine, Ass't Adm'r for Enforcement and Compliance Assurance, EPA Tampering Policy: The EPA Enforcement Policy on Vehicle and Engine Tampering and Aftermarket Defeat Devices under the Clean Air Act 3 (Nov. 23, 2020), https://www.epa.gov/sites/default/files/2020-12/documents/epatamperingpolicy-enforcementpolicyonvehicleandenginetampering.pdf.

[164] *Id.*

[165] Letter from Evan Belser, Dep. Dir. Air Enforcement Div. EPA to Jason E. Sloan, Exec. Dir. Ass'n of Air Pollution Control Agencies et al., Tampered Diesel Pickup Trucks: A Review of Aggregated Evidence from EPA Civil Enforcement Investigations (Nov. 20, 2020), https://www.epa.gov/sites/default/files/2021-01/documents/epaaedletterreportontampereddieselpickups.pdf.

[166] CAA § 203(a)(3)(A), 42 U.S.C. § 7522(a)(3)(A), 40 C.F.R. § 1068.101(b)(1).

[167] 42 U.S.C. § 7521 (EPA administers a certificate of conformity ("COCs") program to ensure that every new motor vehicle introduced into United States commerce satisfies applicable emission standards).

requirements.[168] An aftermarket part with a principal effect of bypassing, defeating, or rendering inoperative any aspect of these elements might be considered an illegal aftermarket defeat device.[169] To obtain a certificate, a manufacturer must submit an application to EPA for each model year and for each test group of new motor vehicles that it wants to be able to sell into commerce.[170] EPA regulations also require periodic "in-use" testing of vehicles, which requires manufacturers to periodically test a specified number of vehicles and report the results of those tests to EPA.[171] EPA uses such testing and reporting to watch for noncompliance.[172]

The CAA's prohibition on removing elements of design is trickier to monitor. Each certificate application from a manufacturer must include, among other things, a list of all auxiliary emission control device (AECDs) installed on the motor vehicles.[173] An AECD is an element of design that senses a parameter, like temperature or vehicle speed, and then changes part of the emission control system.[174] The tricky thing is that EPA regulations allow AECDs when there is a specific justification for its use. [175] It is only when an AECD specifically disables emissions controls under real-world driving conditions, even if the vehicle passes formal emissions certificate or in-use testing, that the law prohibits AECDs.[176] Such prohibited AECDs are defeat devices.[177] As Richard Epstein wrote in a *Forbes* article, enforcement

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[168] *Overview of Certification and Compliance*, US EPA, https://www.epa.gov/ve-certification/overview-certification-and-compliance-vehicles-and-engines (last visited Sept. 17, 2021) (The certificate represents engines and vehicles covered by a specific engine family or, in the case of light-duty vehicles, a specific test group for each manufacturer).

[169] Memorandum from Susan Bodine, *supra* note 163.

[170] *See* 40 C.F.R. §§ 86.1803-01, 86.1827-01 (A test group is comprised of motor vehicles with similar engine design and subject to the same emission standards for pollutants regulated under the Act).

[171] *EPA Requirements for In-Use Emissions Testing for Clean Diesel Technology*, U.S. EPA, https://www.epa.gov/verified-diesel-tech/requirements-use-emissions-testing-clean-diesel-technology (last visited Sept. 17, 2021).

[172] Memorandum from Susan Bodine, *supra* note 163.

[173] 40 C.F.R. § 86.1844-01(d)(11) (each as well as a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and a rationale for why it is not a defeat device).

[174] 40 C.F.R. § 86.1803-01.

[175] 40 C.F.R. § 86.1803-01 (A "defeat device" is an AECD that "reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicle.").

[176] 40 C.F.R. § 86.004-2.

[177] 42 U.S.C. § 7522(a)(1); 42 U.S.C. § 7522(a)(3)(A).

of unauthorized AECDs and defeat devices is hard because the regulatory system primarily looks at how vehicles are made and used, and as a result, responsibility involves multiple parties, including the automaker, the owner, third party drivers, dealers, and other parties.[178]

B. Noncompliance and Enforcement

Noncompliance with the CAA's defeat device regulations made national headlines in 2015 with the Volkswagen diesel emission scandal.[179] That infamous case involved a large original equipment manufacturer (OEM) installing defeat devices in the computer program of several classes of new vehicles.[180] The United States has also brought multiple other enforcement cases involving OEMs that installed defeat devices in a vehicle's computer system, including against Fiat-Chrystler, Daimler, and Mercedes-Benz.[181] There has been less public attention, however, towards aftermarket cases involving individuals, repair shops, and sellers of defeat devices tampering with emissions controls on existing vehicles. This type of tampering includes reprograming original engine software to override the diagnostic system so a tampered vehicle can run without diagnostic check, installing hardware designed to defeat emissions controls, or replacing original exhaust systems with hollow straight pipes.[182]

There are multiple reasons for tampering with emissions controls in the aftermarket context. Emissions control devices affect engine performance

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[178] Richard Epstein, *The Role of Defeat Devices in Environmental Protection: Beyond the VW Scandal*, Forbes (Sept. 27, 2017), https://www.forbes.com/sites/richardepstein/2017/09/27/the-role-of-defeat-devices-in-environmental-protection-beyond-the-vw-scandal/?sh=7a2a94ff52c1.

[179] Russell Hotten, *Volkswagen: The Scandal Explained*, BBC (Dec. 10, 2015), https://www.bbc.com/news/business-34324772. Also, note, the EPA has long taken enforcement cases against manufactures for installing defeat devices. *See, e.g.*, United States v. Caterpillar, Inc., 227 F. Supp. 2d 73 (D.D.C. 2002); EPA, *Clean Air Act Prohibits "Defeat Devices" in Vehicles, Engines*, ENFORCEMENT ALERT (Aug. 1998), https://www.epa.gov/sites/production/files/2014-06/documents/defeat.pdf (describing enforcement actions brought against Honda and Ford in 1996 and 1997 for equipping vehicles with defeat devices).

[180] *Learn About Volkswagen Violations*, US EPA, https://www.epa.gov/vw/learn-about-volkswagen-violations (last visited Sept. 17, 2021).

[181] *Daimler AG and Mercedes-Benz USA, LLC Clean Air Act Civil Settlement*, US EPA, https://www.epa.gov/enforcement/daimler-ag-and-mercedes-benz-usa-llc-clean-air-act-civil-settlement (last visited Sept. 17, 2021); *Fiat Chrysler Automobiles Clean Air Act Civil Settlement Information Sheet*, US EPA (Jan. 10, 2019), https://www.epa.gov/enforcement/fiat-chrysler-automobiles-clean-air-act-civil-settlement-information-sheet.

[182] Memorandum from Susan Bodine, *supra* note 163.

by increasing fuel consumption, thereby reducing fuel economy.[183] Tampering also avoids cost and time to maintain emissions controls.[184] Further, tampering allows vehicle owners to customize their cars.[185] Despite the relative lack of attention it receives, aftermarket noncompliance by existing vehicles is also a rampant problem in the United States.[186] Thus, EPA's enforcement office made aftermarket defeat devices a formal compliance priority initiative during the Trump Administration that continues today.[187] As one law firm blog notes, even during the pandemic, EPA resolved more than twenty aftermarket "defeat device" and tampering enforcement cases.[188]

Widespread tampering and noncompliance has significant implications for achievement of the expected benefit from environmental regulations. As stated by EPA, tampering disrupts engine calibration and balance, which increases emissions of harmful air pollutants.[189] Tampering with diesel-powered engines is particularly prevalent and problematic. EPA estimated in a 2020 report that prohibited tampering with emissions controls accounts for more than 570,000 excess tons of NO_x and 5,000 tons of PM, significantly contributing to the inability of many states to attain national air quality standards.[190] The report also found that fifteen percent of all diesel-fueled pickup trucks – about 550,000 – have been tampered with over the past decade, resulting in more than 570,000 tons of excess NO_x.[191] In the mid-Atlantic states, around 8.5% of all diesel vehicles registered in Mid Atlantic Regional Air Management Association (MARAMA) states have had their

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[183] NAT'L RENEWABLE ENERGY LABORATORY, U.S. DEP'T OF ENERGY, DIESEL EMISSIONS CONTROL—SULFUR EFFECTS PROJECT (2000-2001), https://www.nrel.gov/docs/fy02osti/31600.pdf.

[184] Letter from Evan Belser, *supra* note 165, at 4.

[185] *Id*. For more on customization of cars, see e.g. Hearst Autos Research, *Best Cars to Customize: Everything You Need to Know*, CAR AND DRIVER, https://www.caranddriver.com/research/a32811308/best-cars-to-customize/ (last visited Sept. 17, 2021).

[186] Memorandum from Susan Parker Bodine, Ass't Adm'r for Enforcement and Compliance, EPA, FY2020-FY2023 National Compliance Initiatives (June 7, 2019), https://www.epa.gov/sites/production/files/2019-06/documents/2020-2023ncimemo.pdf.

[187] *Id.*

[188] Arthur M. Forester, *EPA Updates Aftermarket Defeat Device Enforcement Policy*, LATHAM & WATKINS BLOG (Dec. 21, 2020), https://www.globalelr.com/2020/12/epa-updates-aftermarket-defeat-device-enforcement-policy/.

[189] Memorandum from Susan Bodine, *supra* note 163, at 3.

[190] Coral Davenport, *Illegal Tampering by Diesel Pickup Owners is Worsening Pollution, EPA Says*, N.Y. TIMES (Nov. 25, 2020), https://www.nytimes.com/2020/11/25/climate/diesel-trucks-air-pollution.html.

[191] Letter from Evan Belser, *supra* note 165.

emissions controls "deleted" between 2009-2019. That is the equivalent 60,000 tons of excess NO_x above expected levels.[192]

C. Resource, Regulatory, and Legal Hurdles

The multitude of both distinct and intertwined hurdles, as described in this article, present significant obstacles for aftermarket tampering enforcers. The federal government has made progress on improving enforcement, but it cannot do it all. State enforcement agencies are starting to increase activity to regulate aftermarket tampering as well.[193] Indeed, many states have laws prohibiting tampering with in-use vehicles,[194] and some states also prohibit dealers from selling tampered in-use vehicles.[195] However, various enforcement hurdles have limited the effectiveness of these recent efforts to address vehicle tampering.

Government bodies seeking to enforce vehicle tampering violations, particularly at the state level, face a number of resource hurdles. It is difficult for states to prioritize resources towards tampering enforcement when there is no "credit" available in EPA approval of SIPs.[196] In general, states have

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[192] Mid-Atlantic Regional Air Management Ass'n, Whitepaper on Tampering and After Market Defeat Devices: An Analysis of Mid-Atlantic State Compliance and Enforcement Options (2020), https://mde.maryland.gov/programs/Air/MobileSources/Documents/Anti-Tampering/TamperingWhitePaper.pdf.

[193] *See, e.g.*, *Enforcement Alert: Tampering of Emission Control Systems on Diesel and Gasoline Vehicles Is Prohibited*, N.J. DEP'T OF ENVTL PROTECTION (Nov. 15, 2017), https://www.nj.gov/dep/enforcement/advisories/2017-08.pdf.

[194] *See, e.g.*, UTAH ADMIN. CODE r.307-201-4 ("No person shall remove or make inoperable the [emissions control] system or device or any part thereof, except for the purpose of installing another system or device, or part thereof, which is equally or more effective in reducing emissions from the vehicle to the atmosphere."); N.J. ADMIN. CODE § 7:27-15.7 (prohibition of tampering with emission control apparatus); CAL. CODE REGS. tit. 13, § 2711(e) (No person shall alter, physically disable, disconnect, bypass, or tamper with an installed ARB verified diesel emission control strategy."); 326 IND. ADMIN. CODE § 13-2.1-3(a)(2) ("No person shall cause, suffer, allow, or permit the removal, dismantling, disconnection, disabling, or disrepair of any emission control system which has been installed on a motor vehicle by the manufacturer . . . .").

[195] *See, e.g.*, N.J. ADMIN. CODE § 7:27-15.7(a)(3–3) (prohibiting the "sale, lease, or offer for sale or lease" of tampered vehicles); OHIO REV. CODE ANN. § 3704.16(B)(1) ("No personal shall . . . sell, offer for sale, possess for sale, advertise, manufacture, install, or use any part or component intended for use with or as part of any motor vehicle when the primary effect is to bypass, defeat, or render inoperative, in whole or part, the emission control system . . . ."); 326 IND. ADMIN. CODE § 13-2.1-3(a)(1), (3) ("No person shall rent, lease, sell, offer for sale, or in any manner transfer ownership of a motor vehicle with knowledge that the vehicle has been subject to tampering. . . . No person shall sell, offer for sale, or advertise for sale any add-on part or modified part which inhibits the effectiveness or bypasses an emission control system. . . ."). *See also* Memorandum from Susan Bodine, *supra* note 163.

[196] Letter from David P. Howekamp, Dir., Air Division, EPA, to Richard Somerville,

not received credit for tampering enforcement matters because of concerns about whether such enforcement can provide real pollution reductions that help the state achieve national air quality standards.[197] Instead, EPA grants SIP credit for mobile emissions reductions on a case-by-case basis.[198] While EPA grants SIP credits to states for adopting specified inspection and maintenance program features (like taking a car in for regular emissions testing), EPA does not require states to incorporate anti-tampering laws into their SIPs.[199] Thus, the lack of credit in the SIP process for state tampering efforts impedes state enforcement activity.[200] Moreover, given federal enforcement measures to address such tampering, some states view state-specific tampering enforcement as unnecessary and redundant.[201]

Additionally, state enforcers have been confronted with a number of legal hurdles when addressing vehicle tampering. While the CAA prohibits states and localities from "adopting or attempting to enforce any standard relating to the control of emissions from new motor vehicles," it also reserves to states and localities the right to control, regulate, or restrict the use, operation, or movement of registered or licensed motor vehicles.[202] Such

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Air Pollution Control Officer, San Diego County, EPA Guidance Letter on Mobile Source Emission Reduction Credits 2 (Mar. 14, 2000), https://www.epa.gov/sites/production/files/2015-07/documents/otaymesa.pdf.

[197] Kenneth J. Adler et al., *Using an Emissions Banking and Trading Program to Reduce Diesel Emissions: A Case Study in Houston*, 49 TEX. ENVTL. L.J. 183 (2019) (describing that movement of the pollution source makes it difficult to track and enforce and hence programs to reduce diesel emissions from tug-boats have not received credit in SIP's and in similar credit banking programs in Houston Texas).

[198] Letter from David P. Howekamp, *supra* note 196, at 2.

[199] EPA's Menu of Control Measures does not include any specific mention of anti-tampering measures, beyond those incorporated into I/M programs. *See* EPA, Menu of Control Measures (updated Apr. 12, 2012), https://www.epa.gov/sites/production/files/2016-02/documents/menuofcontrolmeasures.pdf

[200] Arnold W. Reitze, Jr., *Control of Air Pollution from Motor Vehicle Transportation by the Federal and State Governments*, 2000A ROCKY MTN. MIN. L. INST. 11, at § 11-3 (2000) (Developing a Motor Vehicle Emissions Control Program As Part of a State Implementation Plan) (describing that states that need reduction measures to meet SIP revision requirements have a strong incentive to get the reductions).

[201] *See* Tex. Comm'n on Envtl. Quality, Interoffice Memorandum on SIP Revision to Remove Anti-tampering and EAC LIRAP Non-Rule Project No. 2018-006-SIP-NR, (2018), https://www.tceq.texas.gov/assets/public/implementation/air/sip/mobile/2018_AntiTampering_EAC-LIRAP/18006SIP_AntiTamperEACLIRAP_ado.pdf.

[202] CAA § 209, 42 U.S.C. § 7543. *See* Engine Mfrs. Ass'n v. South Coast Air Quality Mgmt. Ass'n, 541 U.S. 246 (2004) (explaining that "standard" under § 209 "relate[s] to the emission characteristics of a vehicle or engine" and finding state regulations equivalent to functionally enforcing a "standard" preempted); Jackson v. Gen. Motors Corp., 770 F. Supp. 2d 570, 576 (S.D.N.Y. 2011) ("[Section] 209(a)'s language unambiguously and expressly preempts state common law tort actions, provided that they 'relate to' the control of emissions."); Allway Taxi, Inc. v. City of New York, 340 F. Supp. 1120, 1124 (S.D.N.Y.

language in the statute has required states and local government enforcers to thread the needle in deciding which enforcement cases to pursue.[203]

Indeed, Volkswagen in January 2021 petitioned the Supreme Court to overturn a ruling by the Ninth Circuit that allowed counties to bring additional defeat device claims against the company after finding that the CAA did not preempt such claims.[204] In the aftermath of the Volkswagen diesel emission scandal, two local governments, one in Florida and another in Utah, brought enforcement cases against Volkswagen, alleging violation of state and local anti-tampering laws involving the installation of defeat devices.[205] While initially the claims focused on VW's pre-sale installation of defeat devices, after a district court decision found Wyoming's claim against VW preempted,[206] the local government plaintiffs from Florida and Utah amended their complaints to focus on aftermarket software updates.[207] Nonetheless, the Northern District of California dismissed the local government Florida and Utah enforcement cases.[208] On appeal, the Ninth Circuit reversed finding that state and county actions relating to Volkswagen's post-sale actions were neither expressly or impliedly preempted under the CAA.[209] In Volkswagen's petition for certiorari, it argued that state and local governments' attempts to enforce their own tampering regulations are preempted because those regulations relate back to

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April 10, 1972), *aff'd*, 468 F.2d 624 (2d Cir. 1972) ("The preemption sections, however, do not preclude a state or locality from imposing its own exhaust emission control standards upon the resale or reregistration of the automobile. Nor do they preclude a locality from setting its own standards for the licensing of vehicles for commercial use within that locality.").

[203] *See, e.g.*, *In re* Office of Attorney General of State of New York, 268 A.D. 2d 1, 11 (N.Y. App. Div. 2000) (In pursuing the common-law claims, the Attorney General is not, as he suggests, attempting to enforce an existing State standard or pursue a simple common-law claim but, rather, is seeking to use this State's common law to penalize the manufacturers for producing engines which failed to comply with the Federal standards promulgated pursuant to the CAA. In doing so, the Attorney General is attempting to enforce those standards, and we now find that he is expressly preempted from pursuing those claims.").

[204] Petition for Writ of Certiorari, Volkswagen Group of America et al., v. The Envt'l Protection Comm'n of Hillsborough County, Florida et al., No. 20-994 (S. Ct. Jan. 2021), https://www.supremecourt.gov/DocketPDF/20/20-994/166902/20210121145114485_Volkswagen%20Petition.pdf

[205] *See In re* Volkswagen "Clean Diesel" Mktg., Sales Practices, & Prods. Liab. Litig., 264 F. Supp. 3d 1040, 1052–57 (N.D. Cal. 2017). Note, both the Utah and Florida cases were consolidated with actions brought by a number of other states and counties, including Wyoming, in the Northern District of California.

[206] *See In re* Volkswagen "Clean Diesel" Mktg., Sales Practices, & Prods. Liab. Litig. 264 F. Supp. 3d 1040, 1052–57 (N.D. Cal. 2017).

[207] *See In Re* Volkswagen "Clean Diesel" Marketing, Sales Practices, and Prods. Liab. Litig., No. 18-15937, at 16–17 (9th Cir. 2020).

[208] *See id.*

[209] *See id.*

the original design of the engine by the original manufacturer.[210] Such a drawn-out saga regarding the preemption issue will likely have a chilling effect on state and local government enforcement related to defeat device cases in the aftermarket context as well.

Moreover, state and local government enforcement will be important to support federal enforcement efforts, particularly because citizen suit enforcement authority for defeat device cases is questionable. There have been some recent challenges calling into question the use of citizen suits to enforce Title II's anti-tampering provisions. Recently, in *Utah Physicians for a Healthy Environment v. TAP Worldwide*, defendant retailers of aftermarket automotive parts challenged whether the CAA's anti-tampering regulations are "emissions standards or limitations" under the Title II citizen suit provision.[211] By reading "emission standards or limitations" as separate and distinct from "prohibited acts," *TAP* alleged that Title II citizen suits can only concern violations of an "objective measurement of air pollution emissions."[212] Thus, *TAP* argued, any citizen suits concerning anti-tampering violations are beyond the scope of Title II's citizen suit provision.[213] Plaintiff, however, contended that since the purpose of in-use anti-tampering provisions is "to limit the quantity, rate, or concentration of emissions of air pollutants," such provisions function as "emission standards" in application.[214] Ultimately, a ruling in *TAP's* favor would dramatically narrow the scope of the citizen suit provision and further restrict efforts to enforce anti-tampering provisions.

Then there are exceptions that impede aftermarket tampering enforcement cases. EPA regulations include a "racecar exemption" under which vehicles whose engines are modified for solely for competitive use are exempted from anti-tampering prohibitions.[215] While vehicles modified for racing are lawful when used at the track, they are illegal when driven on public roads.[216] The exemption complicates tampering enforcement, as purchasers and sellers of defeat devices for on-road vehicles may circumvent

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[210] Petition for a Writ of Certiorari, *supra* note 204, at 25–26.

[211] *See* Defendant's Motion for Summary Judgement at 11, Utah Physicians for a Healthy Environment v. TAP Worldwide, No. 2:19-cv-00628 (D. Utah Jan. 1, 2020).

[212] *See* Defendant's Motion for Summary Judgement at 11, Utah Physicians for a Healthy Environment v. TAP Worldwide, No. 2:19-cv-00628 (D. Utah Jan. 1, 2020).

[213] *Id.*

[214] Plaintiff's Reply to Defendant's Motion for Summary Judgment at 11–12, Utah Physicians for a Healthy Environment v. TAP Worldwide, No. 2:19-cv-00628 (D. Utah Jan. 31, 2020)

[215] 40 C.F.R. § 1068.235(b).

[216] *Id.* ("This exemption applies only to the prohibitions in § 1068.101(b)(1) and (2) and are valid only as long as the engine/equipment is *used solely for competition*.") (emphasis added).

the tampering prohibition simply by claiming a tampered vehicle was modified for use on the track.[217] EPA attempted to address this anomaly in 2015 and sought to amend the racecar exemption to clarify that "nonroad engines and vehicles" are defined by the physical characteristics of the vehicle—those which make the vehicle suitable for racing—rather than by the vehicles *use* in racing.[218] In light of severe pushback from motorsports trade associations, EPA abandoned this effort in 2016, but since then has continued to assert that vehicles converted for use exclusively for competition are still subject to CAA enforcement.[219] A district court opinion in a 2021 EPA enforcement case exemplifies the role of the racing exception in enforcement, stating "much ink has been spilled already in this case regarding whether a motorsports exception, or exclusion, exists in the C.A.A."[220] Additionally, while not a formal exception, EPA's guidance has long stated that the agency would exercise enforcement discretion in the context of aftermarket part manufacture, sale, and installation where the individual has a "reasonable basis" that the conduct will not adversely affect emissions.[221] Such reasonable basis consideration is getting prime attention by regulated entities and law firm counsel for future defenses in enforcement cases.[222]

III. IDENTIFYING "ENFORCEABILITY"

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[217] Roy Furchgott, *Crackdown on Emissions Defeat Devices Has Amateur Racers Up in Arms*, N.Y. TIMES (May 13, 2021), https://www.nytimes.com/2021/05/13/business/defeat-devices-clean-air-act.html.

[218] EPA & NHTSA, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, 80 Fed. Reg. 40,138, 40,527 (proposed July 13, 2015).

[219] EPA & NHTSA, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, 80 Fed. Reg. 73478, 73,957 (Oct. 25 2016) ("EPA's focus is not . . . on vehicles built or used exclusively for racing, but on companies that violate the rules by making and selling products that disable pollution controls on motor vehicles and public roads. . . . Since our attempt to clarify led to confusion, EPA has decided to eliminate the proposed language from the final rule.").

[220] Furchgott, *supra* note 217.

[221] *See, e.g.*, Lisa Whitley Coleman, *EPA Issues Enforcement Alert on Emissions Tampering*, EHS DAILY ADVISOR (Mar. 2, 2021), https://ehsdailyadvisor.blr.com/2021/03/epa-issues-enforcement-alert-on-emissions-tampering/ (referring to "reasonable basis" as a defense); Peter A. Tomasi, *EPA Issues Revised Anti-Tampering Policy*, FOLEY LAW FIRM BLOG (Dec. 8, 2020), https://www.foley.com/en/insights/publications/2020/12/epa-revised-anti-tampering-enforcement-policy#:~:text=. EPA has stated that the Tampering Policy is used in exercising enforcement discretion in civil actions.

[222] *See, e.g.*, Coleman, *supra* note 221 (referring to "reasonable basis" as a defense); Tomasi, *supra* note 221.

This section suggests that despite the frequent use of the term "enforceable" in environmental regulation, the term ultimately lacks meaningful substance due to the numerous hurdles that chip away at the actual ability to enforce. It provides an overview of where and how the term comes up in environmental law. It then argues for a more consistent and clear use of the term that reflects the reality for enforcers.

A. Costs of Continued Failure to Recognize Hurdles

All hurdles to enforcement will not and should not go away. The preemption doctrine, rooted in the Supremacy Clause of the U.S. Constitution, promotes national uniformity in regulations.[223] The preclusion doctrine helps avoid jurisdictional strife and duplicative litigation.[224] Political hurdles allow duly elected Administrations to shape their own enforcement policy. Even resource hurdles have value in a world in which there is a need for government agencies and citizen environmental groups to make difficult spending choices across priority areas. Indeed, there are very good reasons that legal, regulatory, resource, and political hurdles exist.

Yet, enforcement cannot meet expectations for real results with hurdles in the way. Communities hope and expect that someone will enforce pollution permits and standards. There is clear frustration over the lack of enforcement in communities, especially environmental justice communities. Community groups in Chicago, Illinois, have vehemently objected to the lack of city and state government enforcement action to go beyond citations at an asphalt plant that has had a questionable history on accounting for all pollution sources in permit applications.[225] Communities in Camden, New Jersey, have dealt with situations where the state cited and fined a plant for 16 violations of state environmental regulations, but the plant never paid the fines, the odors did not cease, and the group discovered that the plant's odor control equipment was not sufficient to control the odors produced by its operations.[226] In listening sessions conducted by Pennsylvania Department of Environmental Protection in 2017, one commenter testified that there is really no information provided to the public about permit violations.[227] In listening

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[223] JAY B. SYKES & NICOLE VANATKO, CONG. RSCH. SERV., R45825, FEDERAL PREEMPTION: A LEGAL PRIMER 4 (2019), https://fas.org/sgp/crs/misc/R45825.pdf.

[224] Benton, *supra* note 136, at 200.

[225] *Stop MAT Asphalt!*, NEIGHBORS FOR ENVIRONMENTAL JUSTICE, https://n4ej.org/stop-mat-asphalt/ (last visited Sept. 17, 2021).

[226] Sheila R. Foster, *The Challenge of Environmental Justice*, 1 RUTGERS J. L. & URB. POL'Y 1, 5–6 (2004) (the citizens with the help of pro bono attorneys, filed a lawsuit demanding that the DEP bring the plant into compliance with environmental regulations. The lawsuit was eventually settled.)

[227] Pa. Dep't of Envtl. Protection, Office of Environmental Justice Listening Session

sessions conducted by the FERC in the spring of 2021, individuals from across the nation commented that the FERC certificate processes have favored corporate fossil fuel applicants in administrative hearings at the expense of actual people, particularly those in rural and low-income communities.[228]

Moreover, with hurdles in the way, enforcement cannot address the issues that researchers and auditors have found with fairness and process within environmental enforcement. As recently as July 2021, researchers studied administrative data from state implementation of the CWA and demographic information around large, regulated facilities and found that state regulators' inspection response time is slower toward noncompliant facilities located in communities that have higher percentages of poor and Hispanic citizens.[229] Other researchers have found disparities in other kinds of enforcement actions beyond inspection, including cleanup actions, formal notices of violation, informal citations, administrative orders, consent decrees, and civil penalties.[230] In addition, a state audit in New Orleans found that it could take as long as nine years from the time a company was cited for violating emission standards before it was ordered to pay a fine or had a settlement approved requiring the company to pay for a mitigation project.[231] Such findings in research and audits are likely to continue in a world of continued hurdles to actual enforceability of environmental laws and regulations.

Failure to recognize enforcement hurdles could lead to further unexpected consequences. Industry defendants might push for opportunities to use preclusion arguments by quickly settling with state enforcers, knowing that federal enforcers are more likely to require greater penalties and remedies for communities.[232] Regulation writers might assume that because

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Tour: Comment Document 9 cmt.22 (2017), https://www.dep.pa.gov/PublicParticipation/OfficeofEnvironmentalJustice/Pages/Listening-Sessions.aspx.

[228] FERC Office of Pub. Participation, Listening Sessions: Landowners and Communities Affected by Infrastructure Development**,** Docket No. AD21-9-000 (Mar. 17, 2021), https://www.ferc.gov/news-events/events/opp-listening-sessions-landowners-and-communities-affected-infrastructure.

[229] David M Konisky et al., *Environmental Injustice in Clean Water Act Enforcement: Racial and Income Disparities in Inspection Time*, 16 ENVTL. RSCH. LETTERS 084020 (2021), https://iopscience.iop.org/article/10.1088/1748-9326/ac1225/meta.

[230] Robert R. Kuehn, *Remedying the Unequal Enforcement of Environmental Laws*, 9 J. CIV. RTS. & ECON. DEV. 625 (1994).

[231] *See, e.g.*, *Audit: Louisiana Needs to Improve Emissions Enforcement*, AP NEWS (Jan. 26, 2021), https://apnews.com/article/technology-business-louisiana-5a7047ce2bc7eb6b45a2d87bb4883c1a (In New Orleans, a state audit).

[232] Ethan Ware, Williams Mullins Law Firm, *DOJ Defers to States for CWA Enforcement*, JD SUPRA (Jan. 12, 2021), https://www.jdsupra.com/legalnews/doj-defers-to-

many environmental laws operate under a cooperative federalism model, state and local preemption is not a significant concern in environmental law.[233] Scholars might think that citizen suit enforcement can gap-fill for low agency enforcement resources, when in reality, preclusion and preemption hurdles impede citizen suit enforcement too.[234] Environmental funders may put money towards enforcement efforts that are ultimately ineffective. At a minimum, an understanding of the impact of hurdles to enforceability is central to any environmental law or regulation's long-term compliance (and noncompliance) outlook.[235]

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B. Use of The Term "Enforceable"

Many of the nation's environmental statutes and regulations frequently use the term "enforceable" to refer to pollution and anti-pollution standards. The term appears in statutes so varied as to cover environmental mitigation, coastal pollution, point source water discharges, air emissions, and credit trading programs. In some statutes, as described below, the term appears prominently, while in other statutes the term is buried within the definition of a definition of another relevant term. It is important, nonetheless, to recognize the existence of the term and where and how it is used before attempting to understand and define it.

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states-for-cwa-enforcement-3382854/ ("The threat of EPA administrative action often drives industry to consider quick, administrative settlements with state or local environmental agencies for even the slightest environmental violations. Unless the Biden Administration changes course, industries can now do the same to avoid federal civil actions for Clean Water Act violations").

[233] *See, e.g.*, CLIFFORD RECHTSCHAFFEN & DAVID L. MARKELL, REINVENTING ENVIRONMENTAL ENFORCEMENT AND THE STATE/FEDERAL RELATIONSHIP 43 (2003), (describing that "preemption is unlikely to be a major doctrinal issue in the 'cooperative federalism' context" because states are allowed to set more stringent standards).

[234] David Adelman & Robert L. Glicksman, *Reevaluating Environmental Citizen Suits in Theory and Practice*, 91 U. COLO. L. REV. 385, 385 (2020) ("Citizen suits are frequently cited as an essential legal innovation by virtue of their capacity to provide a backstop to lax or ideologically antagonistic administrations.").

[235] Some state governments and the Biden administration are indeed starting to look at hurdles in enforcement. *See, e.g.*, Amanda K. Clark, *There's a Push to Increase Fines from Colorado Polluters and Directly Impact Local Communities*, THE COLORADO SUN (Feb. 21, 2020), https://coloradosun.com/2020/02/21/increased-penalties-pollution-environmental-justice/; Memorandum from Lawrence E. Starfield, EPA Acting Ass't Adm'r, to Sr. Managers and Special Agents, Office of Crim. Enforcement, Forensics and Training, and Regional Crim. Enforcement Counsels, Strengthening Environmental Justice Through Criminal Enforcement (June 21, 2021), https://www.epa.gov/system/files/documents/2021-07/strengtheningejthroughcriminal062121.pdf (stating that EPA will strive to ensure that prosecutions generate remedies that yield meaningful results and protections for communities that have been harmed, including restitution).

NEPA: Under NEPA, agencies must conduct some level of environmental review for any federal action that significantly affects the environment, including, for example, funding of large polluting infrastructure projects like pipelines, roads, and railways. [236] An agency may issue a Finding of No Significant Environmental Impact (FONSI) and skip the more detailed level of environmental review, so long as the agency commits to performing mitigation measures to avoid, rectify, or minimize the adverse environmental impact of the project.[237] This type of so-called "mitigated FONSI," however, requires that the mitigation measures are *enforceable*.[238] In addition, under California's NEPA equivalent, a public agency is required to mitigate or avoid significant environmental effects of a project if it is feasible to do so and such mitigation measures adopted by the agency must be fully *enforceable*.[239]

The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA): The CZARA refers to the term "enforceable" in its coastal nonpoint pollution control program, which was established under the National Oceanic and Atmospheric Administration (NOAA), sets management measures for states to use in controlling runoff from agriculture, forestry, urban areas, marinas, and hydromodification.[240] All coastal and Great Lakes states and territories that participate in the program are required to develop state coastal nonpoint pollution control programs.[241] Before approving a management program submitted by a coastal state, NOAA must find that the management program contains *enforceable* policies and mechanisms to implement the applicable requirements of the state's program.[242]

The CWA: The CWA also references the term "enforceable," particularly in its National Pollutant Discharge Elimination System (NPDES) permit system.[243] Under the CWA's NPDES permit system, the states are

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[236] Lanessa Chaplin, *For I-81 and Environmental Justice Details Matter More Than Words*, NYCLU (Feb. 26, 2021), https://www.nyclu.org/en/publications/i-81-and-environmental-justice-details-matter-more-words.

[237] Memorandum from Nancy H. Sutley, Chair of the Council on Envtl. Quality, to Heads of Federal Departments and Agencies, Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact 7 & n.18 (Jan. 14, 2011), https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf.

[238] *Id.*

[239] CEQA § 21081.6, subd. (b).

[240] Coastal Nonpoint Pollution Control Program, Office for Coastal Management, NOAA, https://coast.noaa.gov/czm/pollutioncontrol/ (last visited Sept. 17, 2021).

[241] *Id.*

[242] 16 U.S.C §§ 1455(d)(16).

[243] In general, the CWA prohibits the discharge of any pollutant by any person unless a statutory exception applies. The most prominent exception is for holders of a NPDES permit.

required to develop water quality standards.[244] To meet national water quality standards set by EPA, a polluter must comply with effluent limitations, as proscribed in a NPDES permit.[245] The CWA defines an effluent limitation as any restriction established for a pollutant discharged from the source, including schedules of compliance.[246] Further, the CWA defines "schedule of compliance" as "a schedule of remedial measures including an *enforceable* sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard."[247] The CWA also requires publicly owned treatment works (POTW) to develop a pretreatment program. EPA implementing regulations require that the state agency then reissue the POTW's NPDES permit to incorporate the approved pretreatment program as *enforceable* conditions of the NPDES permit.[248]

Underground Injection Control Regulations: The Safe Drinking Water Act (SDWA) and Resource Conservation and Recovery Act (RCRA) use the term "enforceable" for their underground injection control program in ways that are similar to the CWA.[249] Under the relevant regulations, underground injection activities, including construction of an injection well, are prohibited until the owner or operator is authorized by permit.[250] The regulations allow for permits to include a "schedule of compliance."[251] In addition, like the CWA, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) includes underground storage tank regulations that also define a schedule of compliance as remedial measures, including an *enforceable* sequence of interim requirements, such as, actions, operations, or milestone events.[252] Such remedial measures are important for communities, particularly given the kinds of substances regulated by underground injection control (UIC) permits, including gasoline, diesel, kerosene, and other highly polluting substances.[253]

The RCRA: Regulations under the RCRA require owners and operators who treat or store hazardous waste at a unit under a permit to

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33 U.S.C. §§ 1311(a), 1342.

[244] 33 U.S.C. § 1313(a).

[245] 33 U.S.C. § 1311(b)(1)(A).

[246] 33 U.S.C. § 1362(11).

[247] 33 U.S.C. § 1362(17).

[248] 40 C.F.R. § 403.8(c).

[249] 40 C.F.R. § 144.31.

[250] *Id.*

[251] 40 C.F.R. 147.2921.

[252] 40 C.F.R. 144.3.

[253] EPA, INTRODUCTION TO THE UNDERGROUND INJECTION CONTROL PROGRAM (2018), https://www.epa.gov/sites/production/files/2018-06/documents/introduction_to_training_course_and_uic_overview_2018_-_nathan_wiser.pdf.

demonstrate financial assurance for the closure and liability of such unit.[254] An owner or operator may meet the financial assurance requirements by obtaining a written guarantee from a specified kind of firm, including a firm with a "substantial business relationship" with the owner or operator.[255] In order to qualify as a "substantial business relationship," the relationship must be the kind of business relationship necessary under relevant state law to ensure that a guarantee contract issued in connection with that relationship is valid and *enforceable*.[256] The RCRA also requires that owners/operators must have permits, or another *enforceable* document, for the active life and post closure period of hazardous waste units.[257]

The CAA: Regulations implementing the CAA use the term "enforceable" extensively throughout the formulation and implementation of the National Ambient Air Quality Standards (NAAQS).[258] Pursuant to the CAA, EPA designates areas of the country as either in "attainment," "nonattainment," or "unclassifiable." Afterwards it is up to the states to draft a SIP for each pollutant (subject to EPA approval) that specifies how the state will achieve or maintain attainment status.[259] The CAA requires that a SIP include *enforceable* emission limitations and other control measures, means, or techniques.[260] Additionally, EPA regulations regarding SIPs specify that a regulatory limit is not *enforceable* if it is impractical to determine compliance with the published limit.[261] Further, EPA can only approve a re-designation for attainment status if, among other things, EPA determines that the improvement in air quality is due to permanent and *enforceable* reductions in emissions.[262]

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[254] 40 C.F.R. § 267.143.

[255] 40 C.F.R. § 267.143 (g)(1).

[256] 40 C.F.R. § 267.141 (h).

[257] 40 C.F.R. § 270.1(c).

[258] 42 U.S.C. §§ 7408–09 (The EPA, in setting the NAAQS for specific regions of the country, specifies the maximum permissible concentration of health based pollutants in the ambient air).

[259] 42 U.S.C. § 7410(a)-(k).

[260] 42 U.S.C. § 7410(a)(2). In addition, The EPA's guidance for a SIP's inclusion of energy efficiency measures from electricity generation emphasizes that emission reductions included in SIP's must be quantifiable, surplus, and *enforceable.* See Memorandum from Brian McLean, Dir. Office of Atmospheric Programs, & Steve Page, Dir. Office of Air Quality Planning and Standards, to Regional Air Div. Directors, Guidance on SIP Credits for Emission Reductions from Electric-Sector Energy Efficiency and Renewable Energy Measures, (Aug. 5, 2004), https://www.epa.gov/sites/production/files/2016-02/documents/guidance_on_sip_credits.pdf.

[261] State Implementation Plans, 57 Fed. Reg. 13,498, 13568 (proposed Apr. 16, 1992) (to be codified at 40 C.F.R. pt. 52) (One of these principles is enforceability which requires that SIPs . . . be "enforceable in practice.").

[262] 42 U.S.C. § 7407(d)(3)(E).

The CAA also requires that the SIPs for nonattainment areas provide for the implementation of all reasonably available control measures as expeditiously as practicable.[263] Such SIPs must also specifically include *enforceable* emission limitations, and such other control measures, means or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as may be necessary or appropriate to provide for attainment of such standard.[264] In a 1997 case, after EPA revised the NAAQS for ozone, several states, environmental groups, and trade associations challenged EPA's conclusion that states could satisfy the applicable reasonable available control technology (RACT) requirement by participating in two specific cap-and-trade programs.[265] The court found that the CAA authorizes EPA to approve market-based measures in addition to other enforceable controls.[266] The cap and trade program itself was not enough to meet the enforceable requirement.[267] Similarly, in a 2015 case, EPA determined that the Cincinnati–Hamilton metropolitan area had attained the NAAQS for particulate matter, in part due to regional cap-and-trade programs that reduced the flow of interstate pollution.[268] Pointing to the language of the CAA, plaintiff Sierra Club argued that Congress did not intend for reductions attributable to cap-and-trade programs to meet the "enforceable" requirement for re-designation.[269] The Court ultimately disagreed with Sierra Club, but struggled in its decision, specifically noting that the CAA does not define enforceable nor did the Sierra Club offer a definition.[270]

The term "enforceable" is also increasingly arising in laws and regulations involving greenhouse gas emissions. For example, EPA regulations under the CAA establish national standards of performance (NSPs) limiting greenhouse gas (GHG) emissions from certain designated power plants.[271] Standards of performance for designated facilities included under a state's plan must be demonstrated to be quantifiable, verifiable, permanent, and *enforceable* with respect to each designated power plant.[272] State market-based regulations, such as California's trading program for GHGs, also refer to the term "enforceable" in definitions of offsets. In order to qualify as an emission reduction, the offsets must be real, permanent,

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[263] 42 U.S.C. § 7502(c)(1).
[264] 42 U.S. § 7502 (c)(6).
[265] NRDC v. EPA, 571 F.3d 1245 (D.C. Cir. 2009).
[266] *Id.*
[267] *Id.*
[268] Club v. EPA, 793 F.3d 656, 678 (6th Cir. 2015).
[269] *Id.*
[270] *Id.*
[271] 40 C.F.R. § 60.5700a.
[272] 40 C.F.R. § 60.5755a(b).

quantifiable, verifiable, and *enforceable.*[273] Such language for GHG programs is the same as language from emission banking and offset programs for other pollutants in many states, such as Arizona's voluntary emissions banking system for NAAQS pollutants.[274]

C. Defining "Enforceable"

Widespread use of the term "enforceable" in environmental law certainly signals an intent by drafters to focus on actual implementation of environmental law. Yet, despite such widespread use of the term, there is no unified definition or understanding of the term. To be sure, there are scattered definitions in white papers, agency regulations, and guidance documents.[275] Yet, without a clear picture of what the term "enforceable" means in practice, it has little substantive effect when drafters use it in environmental law. Moreover, it sets up expectations, particularly for local communities most affected by environmental noncompliance, that ignore the realities of the hurdles that exist in actual enforceability.

Within regulations implementing the CAA alone, there are multiple definitions and interpretations of the term "enforceable." EPA's CAA regulations for air quality standards on tribal lands provide that "an emission limitation or other standard is legally enforceable if the reviewing authority has the right to enforce it."[276] The preamble to EPA's regulation for re-designation and SIPs, for example, states that:

> Measures are enforceable when they are duly adopted, and specify clear, unambiguous, and measurable requirements.[277] A legal means for

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[273] *See, e.g.*, The California Global Warming Solutions Act of 2006, CAL. HEALTH & SAF. CODE § 38562(d)(1) *et seq.* (Offsets are credits for emission reductions in uncovered sources and sectors to be used by covered entities to meet compliance obligations under the cap. Once accepted, offsets are treated as equivalent for compliance pursues, to other allowances).

[274] ARIZ. ADMIN. CODE § R18-2-1205.

[275] For example, the Environmental Law Institute defines an enforceable mechanism as a standard applicable to an identified entity or entities, a sanction such as a penalty, or loss of a license, and performance of required remedial action, and a process for applying the standard and imposing the sanction. ENVTL. LAW INST., ENFORCEABLE STATE MECHANISMS FOR THE CONTROL OF NONPOINT SOURCE WATER POLLUTION 1 (Oct. 1997), https://www.eli.org/sites/default/files/eli-pubs/d7.06.pdf.

[276] *See, e.g.*, 40 C.F.R. § 49.167.

[277] Before EPA may redesignate a nonattainment area, the CAA mandates, among other things, that it (1) determine that the area has attained the applicable NAAQS (*i.e.*, that ozone has decreased sufficiently) and (2) determine that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from the SIP and applicable

> ensuring that sources are in compliance with the control measure must also exist in order for a measure to be enforceable.[278]

The state of Arizona defines enforceable under its voluntary NAAQS pollutant banking system as requiring specific measures for assessing compliance with an emission limitation, control, or other requirement, in a manner that allows compliance to be readily determined by an inspection of records and reports.[279] EPA also has further CAA guidance that uses the phrase "*enforceable as a practical matter*" or "*practically enforceable*" to further qualify the term enforceable for air permits under the CAA.[280] In order for air permits to be "enforceable as a practical matter," they must include information on "applicability, compliance date, and specificity of conduct, any incorporation by reference, and exemptions and exceptions."[281]

Other environmental laws and regulations such as in agency specific NEPA regulations, use the term "feasible" to denote similar concepts as in use of the term "enforceable." For example, to comply with the California Environmental Quality Act (CEQA), an environmental impact report's mitigation measures must be enforceable and likely to be effective, so as to ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded.[282] CEQA regulations further define "feasible" as "capable of being accomplished in a successful manner within a reasonable period of

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federal air pollutant control regulations and other permanent and enforceable reductions. 42 U.S.C. § 7407(d)(3)(E). After Congress amended the CAA in 1990, EPA articulated its interpretation of this provision of the statute in "State Implementation Plans: General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990" ("General Preamble"). 57 Fed. Reg. 13,498, 13,561–64 (Apr. 16, 1992).

[278] Sierra Club v. EPA, 774 F.3d 383, 393 (7th Cir. 2014) (citing to "State Implementation Plans: General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990" ("General Preamble"). 57 Fed. Reg. 13,498, 13,561–64 (Apr. 16, 1992)).

[279] ARIZ. ADMIN. CODE § R18-2-1201.

[280] EPA generally interprets the term "federal enforceability" to require "practical enforceability." *See In re* Piedmont Green Power, LLC, Pet. No. IV-2015-2, 2016 WL 7489674, n. 4 (E.P.A. Dec. 13, 2016).

[281] *See, e.g.*, EPA, NEW SOURCE REVIEW WORKSHOP MANUAL, at H.6 (Oct. 1990), https://www.epa.gov/sites/default/files/2015-07/documents/1990wman.pdf; 40 C.F.R. § 49.152 (Practical enforceability for an emission limitation or for other standards (design standards, equipment standards, work practices, operational standards, pollution prevention techniques) in a permit for a source is achieved if the permit's provisions specify: (i) A limitation or standard. . . (ii) The time period for the limitation or standard. . . (iii) The method to determine compliance, including appropriate monitoring, recordkeeping, reporting and testing).

[282] CAL. PUB. RES. CODE § 21081.

time, taking into account economic, environmental, legal, social, and technological factors."[283] The U.S. Army's NEPA regulations also look at specific factors in deciding whether proposed mitigation measures are "practical," including "military mission, manpower restrictions, cost, institutional barriers, technical feasibility, and public acceptance."[284] Further, the U.S. Army NEPA regulations state that "practicality does not necessarily ensure resolution of conflicts among these items, rather it is the degree of conflict that determines practicality."[285]

Without more clarity on these terms like "enforceable," "feasible," and "practical," courts will continue to struggle as they already do. For example, courts currently diverge when it comes to evaluating the validity of FONSIs that rely on agreements by regulated entities to implement certain mitigation measures. In *Hillsdale*, the Tenth Circuit upheld a mitigation agreement between the project applicant and the state agency, despite plaintiff's concern over the agreement's enforceability.[286] In that case, the federal government, in issuing a FONSI for fugitive dust emissions associated with the project, also entered into a binding agreement with the state environmental agency to monitor dust emissions at the project site and adopt mitigation measures should emissions exceed specified levels.[287] If dust concentrations exceeded specified levels, the project applicant was required to work with KDHE to determine the cause of the elevated dust emissions and then take steps to reduce those emissions.[288] The plaintiffs in *Hillsdale* argued that there were no studies supporting the effectiveness of the mitigation options in the agreement, and that the monitoring period was too brief because it did not cover construction of the intermodal facility and would expire in two years.[289] The court, however, found that even in the absence of studies, the federal agency did not commit a clear error in judgment by basing its FONSI on the mitigation agreement, presuming that the state agency would later uphold its duty to protect air quality and either extend the mitigation agreement or continue independent monitoring, as

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[283] CAL. CODE REGS. tit. 14, § 15364.

[284] U.S. Dep't of Army regulations, 32 C.F.R. § 651.15(d).

[285] *Id.*

[286] Hillsdale Envtl. Loss Prevention, Inc. v. U.S. Army Corps of Engineers, 702 F.3d 115675 (10th Cir. 2012) (NEPA case involving new intermodal facility in the Kansas City area. The existing facility was inadequate to handle the current volume of freight shipped through Kansas City and lacked space to expand).

[287] *Id.*

[288] *Id.*

[289] *Id.* (plaintiffs specifically argued that business at the intermodal facility is projected to increase for at least twenty years, bringing with it the potential for increased dust emissions).

necessary.[290] By contrast, in other cases like *Davis*, the Tenth Circuit found insufficient a FONSI that relied on a mere list of potential noise abatement mitigation measures associated with a large road project without any supporting data or any basis for concluding the measures would actually occur.[291] The plan in that case made no firm commitment to any noise mitigation measures, and the environmental analysis leading up to the FONSI had actually rejected a number of the proposed mitigation measures as incompatible with the project's purpose.[292] Moreover, when agencies have not pursued a FONSI and instead completed a more detailed environmental review, courts have found that proposed mitigation measures "need *not be legally enforceable*, funded or even in final form to comply with NEPA's procedural requirements."[293] A more informed understanding of the term "enforceable" would help courts grapple with how to evaluate mitigation measures proposed in a NEPA FONSI court challenge.

Thus, as a starting point, the federal government, particularly the OMB, should issue guidance on the term "enforceable" (and related terms like feasible). Current OMB guidance on regulatory development simply states that agencies should consider the "best enforcement framework" including "on-site inspections, periodic reporting, and noncompliance penalties."[294] Such guidance on a whole, however, provides little instruction for a topic as fundamental as enforcement. An amendment to this current OMB guidance to more deeply consider the terms and phrases "enforceable," "enforceable as a practical matter," "practical," and "feasible," is warranted.

Indeed, the OMB should consider issuing an amended guidance document on environmental enforcement and the term "enforceable." In particular, such amended guidance should state that a pollution or anti-pollution standard is enforceable only if enforcers have the resource, regulatory, and legal ability to enforce against violations. [295] Under such a

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[290] *Id.* (court specifically cites to other cases where mitigation measures were found to be sufficiently supported when based on studies conducted by the agency . . . or when they are likely to be adequately policed. For example, another Tenth Circuit case where the court upheld a mitigation plan that merely called for monitoring eagle activity, it did not specify any required modifications to construction activities if the monitoring demonstrated that indeed the eagles were disturbed. Greater Yellowstone Coal. v. Flowers, 359 F.3d 1257, 1269 (10th Cir. 2004).

[291] Davis v. Mineta, 302 F.3d 1104, 1125 (10th Cir. 2002).

[292] *Id.*

[293] Nat'l Parks & Conservation Ass'n v. U.S. Dep't of Transp., 222 F.3d 677, 681 n.4 (9th Cir. 2000).

[294] OMB Circular A-4 (Sept. 17, 2003), https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/#c.

[295] Indeed, the relatively new (2017) performance standard regulation for greenhouse gases for electric generating units, includes a definition of "enforceable" that has some of the elements and scope to the suggested definition here in this article. Under such regulation, an

definition, the term "enforceable" would include agency consideration of the likelihood of funding for the anticipated enforcer.[296] Under such a definition, the term "enforceable" would include the likelihood of anticipated enforcers facing preclusion or preemption claims in an eventual enforcement action.[297] Under such a definition, the term "enforceable" would also include clear anticipation of defenses, including those based on exceptions, permit shields, and other parts of the underlying regulation itself. In essence, amended OMB guidance would require agencies to consider upfront, in drafting regulations and guidance, the realities enforcers are likely to face in the future, when inevitable non-compliance amongst regulated entities surfaces.

Further, such amended guidance should clarify that while establishing a regime for the *potential* ability to enforce against violations is important, it is not sufficient. Such a focus on a regime for potential enforcement is not without merit. Indeed, any enforcement regime must start with authority to enforce.[298] The dictionary defines "able" as having the power, skill, means, or opportunity to do something.[299] Thus, it makes sense that providing enforcers with the power, skill, means, or opportunity to enforce goes to the core of the term enforce-able. The problem of course is that in practice, merely establishing a regime for *potential* enforcement does not translate to *actual* enforcement. Indeed, the dictionary defines "feasible" as possible to do easily or conveniently, likely, or probable.[300] Thus, amended guidance

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emission standard is enforceable if it specifies a limitation and a time period for the limitation, compliance requirements are clearly defined, the facility responsible for compliance and liable for violations can be identified, each compliance activity or measure is enforceable as a practical matter, and the EPA, state, and third parties maintain the ability to enforce against violations. *See* 40 C.F.R. § 60.5755a (f).

[296] *See also* Memorandum from Richard D. Wilson, Acting Ass't Adm'r for Air and Radiation, to EPA Regional Adm'rs, Guidance on Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (Oct. 24, 1997), https://www.epa.gov/sites/default/files/2016-05/documents/vmep-gud.pdf ("states must be able to make a resource commitment to monitor, assess and report on emission reductions resulting from any voluntary measures.").

[297] Ass'n of Irritated Residents v. Kern Cnty. Bd. of Supervisors, 17 Cal. App. 5th 708, 752 (2017) (plaintiffs arguing, "federal preemption is a legal factor affecting feasibility.").

[298] For example, a study of several Asian countries found gaps in authority to enforce, particularly with respect to ability to require monitoring of pollution discharges, file criminal or civil cases, take emergency response actions (such as closing a facility), impose penalties, or order corrective measures. U.N. ENVIRONMENT, ENVIRONMENTAL RULE OF LAW: THE FIRST GLOBAL REPORT 67 (Jan. 24, 2019). Without first addressing such gaps in authority and ensuring that someone has the ability to hold regulated entities accountable, any additional measures to improve enforceability of environmental regulations will likely not be effective.

[299] *Able*, MERRIAM-WEBSTER ONLINE DICTIONARY, https://www.merriam-webster.com/dictionary/able (last visited Sept. 17, 2021).

[300] *Feasible*, MERRIAM-WEBSTER ONLINE DICTIONARY, https://www.merriam-

should grapple with the use of terms like "enforceable" and "feasible" to help ensure that future enforcement will not only potentially exist, but also have the real ability to actually exist.[301]

This is not the first article to push for more rigor in environmental law and regulation. Professor Joseph Aldy, for example, has recently pushed for EPA to stage a framework for retrospective analysis of a regulation. According to Aldy, designing and implementing rules to enable retrospective analyses can produce information about the realized environmental outcomes, public-health impacts, benefits, costs, labor-market impacts, and other factors.[302] Other scholars spend ample time debating how cost-benefit analysis should be (or not be) redone.[303] Still other scholars are arguing for new environmental regulations in areas that are not regulated at all or under-regulated, such as energy efficiency, and coal ash disposal.[304] That is not to say that scholars are not addressing individual legal and regulatory hurdles to enforcement in given contexts. For example, scholars have identified key preemption hurdles to implementation and enforcement of energy efficiency standards.[305] Yet, with the importance of enforcement and enforceability as a crosscutting topic across multiple areas of environmental law, it is time to examine environmental enforceability across agency drafting writ large, and that should come through guidance from the top.

CONCLUSION

This article argues for consideration of resource, regulatory, and legal hurdles in attempts to make pollution and anti-pollution standards actually enforceable over the long-term in the United States. However, because enforcement agencies abroad face similar hurdles and enforceability concerns as in the United States, there is significant opportunity for increased scholarly

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webster.com/dictionary/feasible (last visited Sept. 17, 2021).

[301] Hillsdale Envtl. Loss Prevention, Inc. v. U.S. Army Corps of Engineers, 702 F.3d 115675 (10th Cir. 2012) (rejecting plaintiffs insinuation that enforcement may not happen, stating that state agency has duty and court "presumes" that state agency will perform that duty).

[302] Joseph E. Aldy, *Evaluating Regulatory Performance Learning From and Institutionalizing Retrospective Analysis of EPA Regulations*, 70 CASE W. RES. L. REV. 971, 1005-06 (2020).

[303] Vartan Shadarevian et al., *Multiple-Rule Cost Benefit Analysis*, 15 CHARLESTON L. REV. 373 (2021).

[304] Noah M. Sachs, *Can We Regulate Our Way to Energy Efficiency? Product Standards as Climate Policy*, 65 VAND. L. REV. 1631 (2012); Thomas O. McGarity et al., *The End Game of DeRegulation: Myopic Risk Management and the Next Catastrophe*, 23 DUKE ENVTL. L. & POL'Y F. 93 (2012).

[305] *See, e.g.*, Ann E. Carlson, *Energy Efficiency and Federalism*, 1 SAN DIEGO J. CLIMATE & ENERGY L. 11 (2009).

and practice-based attention to these issues in the international context as well.[306] In China, scholars have recognized the importance of political hurdles, suggesting that that local pollution enforcement officials in particular are often beholden to local political officials who tend to favor development and industry interests over environmental concerns.[307] In India, researchers have found that coordination and state/federal jurisdictional hurdles, similar to preclusion and preemption hurdles in the United States, are barriers to effective environmental enforcement.[308] On the case study identified in this article, it is clear that the European Union is looking to the United States for ideas on enforcement of defeat devices, which are a pervasive non-compliance problem in multiple European countries.[309] Deeper discussion over hurdles to environmental enforceability in the international context is beyond the scope of this article. However, it is likely an excellent topic for established international networks, such as the International Network for Compliance and Enforcement (INECE), to undertake.[310]

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[306] *See, e.g.*, MARTI NESBITT ET AL., INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, ENSURING COMPLIANCE WITH ENVIRONMENTAL OBLIGATIONS THROUGH A FUTURE UK-EU RELATIONSHIP (Oct. 2017), https://ieep.eu/uploads/articles/attachments/b6cdff2e-3292-49e1-993f-cd39b3b897a4/Ensuring%20compliance%20with%20environmental%20law%20post%20-%2004%20October.pdf?v=63674328709.

[307] *See, e.g.*, Juan Chu, *Vindicating Public Environmental Interest: Defining the Role of Public Interest Litigation in China*, 45 ECOLOGY L.Q. 485, 502–03 (2018).

[308] OECD, ENVIRONMENTAL ENFORCEMENT IN INDIA: A RAPID ASSESSMENT 13–15 (2006), https://www.oecd.org/env/outreach/37838061.pdf.

[309] ICCT Legal Note, Strengthening the Regulation of Defeat Devices in the European Union (June 2016), https://theicct.org/sites/default/files/publications/DefTerre_StrengtheningDefeatDeviceRegulation_Briefing_jun2016.pdf.

[310] *See* INECE, https://www.eli.org/environmental-governance/inece.