2022

Environmental Enforceability

Seema Kakade

Follow this and additional works at: https://digitalcommons.law.umaryland.edu/fac_pubs

Part of the Administrative Law Commons, and the Environmental Law Commons
ENVIRONMENTAL ENFORCEABILITY

SEEMA KAKADE*

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 can be 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, “[l]aws are only as good as their enforcement.”

INTRODUCTION ..............................................................................................................66
I. BACKGROUND ...........................................................................................................71
   A. Law and Regulation ..............................................................................................71

* Seema Kakade is an Associate Professor and Director of the Environmental Law Clinic at the University of Maryland Francis King Carey School of Law. She formerly worked as an attorney for the U.S. Environmental Protection Agency’s Office of Compliance and Enforcement Assurance. The author would like to thank Michael Sammartino for his invaluable student research assistance on this Article.

INTRODUCTION

The Biden administration has put racial equity and climate change at center stage of the federal government’s regulatory and policy agenda.² In particular, the Biden administration has launched the Justice40 Initiative, designed to enhance benefits from government programs related to environmental quality and clean energy for disadvantaged communities.³ Further, the Biden administration has signaled a desire to tackle its racial equity and environmental goals not only by enacting new regulatory programs, but also by improving environmental enforcement. Within its first one hundred 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” and EPA to “strengthen enforcement of environmental violations.”⁴ The stated goal of such an enforcement strategy will be to “provide timely remedies for systemic environmental violations and

contaminations, and injury to natural resources.”

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 on environmental justice and enforcement.

This Article is one of three by this author that explores challenges with environmental enforcement. The first article, published in 2020, focuses on the final stage of environmental enforcement—remedies. 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 2021, focuses on the beginning stage of environmental enforcement—how to find potential violations. 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, often as defenses, that the environmental legal and regulatory system itself provides.

In noting wide-ranging problems with environmental noncompliance by a variety of regulated entities, legal scholars,

---

5 Id. (emphasis added).


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 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 and efficiency.


9 See generally Seema Kakade & Matt Haber, Detecting Corporate Environmental Cheating, 47 ECOLOGY L.Q. 771 (2020).
practitioners, and journalists have tried to understand the gaps in enforcement. Indeed, as many note, significant reasons for the challenges in environmental enforcement include lack of government agency resources and political pressures. At the detection stage alone, enforcement agencies need basic resources to conduct inspections at specific facilities. Enforcement agencies also need significant 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.

Yet a continued focus on resource and political hurdles alone shortchanges the discussion about steeper challenges with environmental enforcement that relate to the legal and regulatory system itself. While environmental regulatory design may offer compliance flexibility for regulated entities, such flexibility often manifests in extensive exceptions and forgiving pollution limits, creating obstacles for actual enforcement. While environmental statutes

---

10 See Sadasivam, supra note 1 (discussing long-term decline in funding and shifting political priorities for environmental enforcement since the 1990s).

11 For example, in an internal EPA memo from April 30, 2021, the EPA Acting Assistant Administrator for Enforcement told federal enforcement staff to increase its inspections and take action where state enforcement officials were not acting fast enough. See Kelsey Brugger, Internal EPA Memo Urges Agents to Up Inspections, E&E NEWS: GREENWIRE (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.”).


may provide enforcement authority for federal agencies, state agencies, and citizen groups, in reality, the preemption and preclusion doctrines often impede actual enforcement.\textsuperscript{15} Regulatory and legal hurdles hinder environmental enforcement just as much as resource and political hurdles. Moreover, resource and political hurdles are often intertwined with regulatory and legal hurdles.

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.\textsuperscript{16} It is important, however, to acknowledge that such hurdles exist and manifest as powerful defenses for regulated entities that become defendants in enforcement matters.\textsuperscript{17} 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 support in the world.\textsuperscript{18} Without acknowledging such a barrier, local communities have difficulty grasping the reasons behind why environmental enforcement fails to meet their hopes and expectations for clean-up of pollution. Without acknowledging real hurdles to enforcement, regulated entities that seek a level playing field in enforcement activity will continue to be frustrated.\textsuperscript{19}

\textsuperscript{15} See, e.g., Sierra Club v. Two Elk Generation Partners, L.P., 646 F.3d 1258, 1264 (10th Cir. 2011); Empire Pipeline v. Town of Pendleton, 472 F. Supp. 3d 25, 46–47 (W.D.N.Y. 2020).

\textsuperscript{16} See infra Part II.

\textsuperscript{17} See infra Part II.

\textsuperscript{18} See Stuart Parker, EPA Faults Texas Air Permits Amid Looming Fights Over Trump-Era Policy, INSIDE EPA (Aug. 9, 2021), https://insideepa.com/daily-news/epa-faults-texas-air-permits-amid-looming-fight-over-trump-era-policy (“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.”).

\textsuperscript{19} See generally Seema Kakade & Matt Haber, Detecting Corporate Environmental Cheating, 47 ECOLOGY L.Q. 771 (2020) (discussing the role of enforcement in promoting fair competition within specific industrial sectors).
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 statutes 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.”

Guidance implementing the National Environmental Policy Act (NEPA) refers to “enforceable” mitigation measures during the environmental review process for major federal actions. Further, pollution trading programs, such as in greenhouse gas regulation, require that credits be quantifiable, verifiable, permanent, and “enforceable.” As this Article describes, the term “enforceable” has limited meaning without recognition of the hurdles in the way to actual enforcement.

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 arguments later, in enforcement cases. The Article concludes with remarks on the broader applicability of environmental enforceability in the international context.

20 42 U.S.C. §§ 7410(a)–(k); 42 U.S.C. §§ 7404(a)–(e).
22 See, e.g., Sacramento Carbon Exchange Program Rule 250-301 (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.”).
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 there is a law or regulation to enforce in the first place. Enforcement also only exists if there is noncompliance, but, as this Part 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. Presidents Ford and Carter made inroads in the 1970s to advance environmental protection through new laws and regulations. However, as scholars have noted, all social and economic regulation received significant pushback in the twentieth century in response to the “expansion of regulation that occurred during the New Deal and postwar periods.” 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.” To this day, cost-benefit analysis has shaped a federal environmental regulatory system that is complex and varied in its requirements.

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. 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. Further complicating Table 1 is the fact that the listed types of environmental regulations are not mutually exclusive, but rather overlap and intertwine.

Table 1: Common Types of Federal Environmental Regulations

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance-Based</td>
<td>Describe required end results, leaving regulated entities free to choose compliance methods.</td>
</tr>
<tr>
<td>Design</td>
<td>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.</td>
</tr>
<tr>
<td>Technology</td>
<td>Specify the technology or technique a regulated entity must use to control its pollution.</td>
</tr>
<tr>
<td>Integrated Permitting</td>
<td>Incorporate multiple requirements into a single permit rather than having a permit for each individual emissions source at a facility.</td>
</tr>
<tr>
<td>Trackable Emissions</td>
<td>Allow regulated entities to trade emission control responsibilities among themselves,</td>
</tr>
</tbody>
</table>

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 entities to pay a 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 a 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 proposed projects that receive government funding.

Corporate Disclosure
Require certain private corporate entities to disclose risks to shareholders and in 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. 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 For example,

---

compliance with paperwork, e.g., recordkeeping and reporting, regulations may be very different than compliance with physical, e.g., disposal and discharge, regulations. 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. In general, there is simply no easy way to assess broad-level noncompliance rates because doing so is always dependent upon so many factors.

First, noncompliance rates depend on information. Determining compliance rates is much easier for environmental statutes and regulations that require self-monitoring and self-reporting of violations than for those that do not. Indeed, Cynthia Giles, the former head of compliance and enforcement at EPA in the Obama administration, has stressed the importance of established and reliable measurement systems in ensuring compliance with environmental regulations. Scholars that discuss enforcement have also typically 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 ENV’T L. REV. 299, 309 (“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.”).


focused on monitoring tools for agency enforcers to achieve goals, emphasizing tools such as electronic reporting and third-party verification. 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. In contrast, because monitoring and reporting is not always required 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. Much of the data on noncompliance is anecdotal, coming from inspectors and news stories.

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. Simply put, compliance with environmental regulations is expensive, and providing flexibility for regulated entities on how, when, and where...

---

36 See Adam Babich, The Unfilled Promise of Effective Air Quality and Emissions Monitoring, 30 GEO. ENV’T L. REV. 569, 590 (March 2018). Facilities subject to Title V of the CAA, however, require compliance certifications and reporting of deviations. See 40 C.F.R. § 70.6 (2020) (listing EPA air programs permit requirements).
37 See, e.g., Sharon Buccino & Steve Jones, Controlling Water Pollution from Coalbed Methane Drilling: An Analysis of Discharge Permit Requirements, 4 WYO. L. REV. 559, 576 (2004) (citing to a news article discussing an inspector’s ability to perform a compliance inspection on each coalbed methane site only once during the five-year lifetime of the relevant water permit).
to comply eases the expense.\textsuperscript{39} As a result, some environmental regulations impose voluntary standards instead of actual requirements or 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.\textsuperscript{40} Some environmental statutes explicitly allow environmental permit holders to request variances from a permit limit or make the permit conditions broad enough to cover any flexibility that a regulated facility might argue it needs.\textsuperscript{41}

Third, part of the complication in assessing noncompliance with environmental regulations is that the compliance metric often does not relate directly to actual pollution. Noncompliance with an information disclosure regulation means that a regulated entity failed to report data.\textsuperscript{42} Noncompliance with a recordkeeping regulation means that a regulated entity failed to properly keep or show specific documentation.\textsuperscript{43} Noncompliance with an agency environmental review regulation means that the agency did not conduct an adequate analysis.\textsuperscript{44} Thus, even though the terms “noncompliance” or “violation” conjure images of excess pollution, particularly when

\textsuperscript{39} See e.g., Caroline Cecot, Regulatory Fracture Plugging: Managing Risks to Water from Shale Development, 6 TEx. A&M L. Rev. 29, 44 (recommending that State regulators use cost-benefit analysis to create flexible standards for the natural gas industry).

\textsuperscript{40} See 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, 1920–28 (discussing, for example, the concept of alternative compliance payments in CAA regulation).


discussing pollution and exposure for communities, this is not always the case.

Fourth, society places varying values on different kinds of non-compliance, 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.\textsuperscript{45} Willful 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.\textsuperscript{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.\textsuperscript{47} Thus, while noncompliance is a single term, it hardly denotes a single idea.

\textbf{C. Enforcement}

When regulated entities fail to comply, or worse, cheat or commit fraud, enforcement needs to step in.\textsuperscript{48} Widespread noncompliance threatens the achievement of the underlying public health and


\textsuperscript{46} See KRISTI PULLEN FEDINICK ET AL., 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 Sneirson, supra note 45, at 461 ("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.").

\textsuperscript{47} See FEDINICK ET AL., supra note 46, at 5–7 (between 2016 and 2019, 40% 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 Environmental Non-Compliance, CTR. FOR POL’Y RsCH. 44–45 (2019) (discussing “large-scale legal violations in specific sectors such as mining”).

\textsuperscript{48} See David L. Markell & Robert L. Glicksman, Dynamic Governance in Theory and Application, 58 Ariz. L. Rev. 563, 581 (pointing to an example of effective enforcement in a Norwegian study finding that parties audited by regulators were 37% less likely to be in noncompliance the following year).
natural resource benefits that a given regulation hopes to achieve.\textsuperscript{49} For example, when multiple countries adopted strict fuel standards for oceangoing vessels, many expected that the health benefits anticipated by the standards would never come to fruition because of rampant expected noncompliance.\textsuperscript{50} In addition, while some may assume that regulated entities relish the opportunity to avoid compliance—and some likely do—a lack of enforcement can also create uncertainty in the overall marketplace, which ultimately hurts regulated entities.\textsuperscript{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.”\textsuperscript{52} Thus, some enforcement regime must exist to keep noncompliance in check.\textsuperscript{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.\textsuperscript{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

\textsuperscript{49} See Giles, supra note 13, at 3.

\textsuperscript{50} See Jack Jordan & Paul Hickin, Tackling 2020: The Impact of the IMO and How Shipowners Can Deal with Tighter Sulfur Limits 8 (2017) (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”).


\textsuperscript{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).
obtain injunctive relief and penalties.\textsuperscript{55} In addition, federal statutes authorize administrative enforcement actions through administrative hearing officers and administrative law judges.\textsuperscript{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.\textsuperscript{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, EPA’s Office of Inspector General (OIG) has discussed concerns over underperformance of environmental enforcement in the face of significant noncompliance.\textsuperscript{58} In 2011, 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.”\textsuperscript{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.\textsuperscript{60} The questions for this Article are why enforcement is deficient and how to strengthen enforcement in the long term.

\section*{II. Hurdles to Enforceability}

This Part 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 real reason for enforcement’s lackluster performance is resource hurdles. 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. In essence, the environmental enforcement system simply has far too much on its plate to keep up; “a handful of enforcers will never be able to ensure general compliance at millions of facilities.”

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 than was true in previous years,” and in a wider array of new program areas. Core functions of enforcement, like records review and inspection, are simply too expensive to undertake consistently and comprehensively.

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

---

63 GILES, supra note 33, at 3.
65 See Lucas Satterlee, Climate Drones: A New Tool for Oil and Gas Air Emission Monitoring, 46 ENV’T L. REP. 11069, 11073–74 (2016) (discussing drones for use in enforcement inspections to check compliance with the CAA in the oil and gas sector).
communities with multiple pollution sources. 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. 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.” 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.

Moreover, political hurdles undoubtedly impede environmental enforcement policy. 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. EPA, FY 2022 EPA BUDGET IN BRIEF 11 (2021), https://www.epa.gov/sites/production/files/2021-05/documents/fy-2022-epa-bib.pdf.


See Symposium, supra note 64, at 10209 (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.”).


For example, under the Obama administration, EPA’s practice had been to allow objections to state-issued permits, including where the permits had weak enforcement provisions.\textsuperscript{72} Yet, under the Trump administration, EPA established a policy that EPA cannot “second guess” a state’s permitting decisions.\textsuperscript{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.\textsuperscript{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.”\textsuperscript{75}

Legal scholarship has certainly acknowledged political hurdles in environmental enforcement. Professor Joel Mintz has discussed that even though environmental enforcement should be a professional activity, partisan politics plays a significant role.\textsuperscript{76} Professor Caroline Cecot has noted that a federal administration’s particular stance on enforcement, particularly involving statements of non-enforcement, changes the perceived threat of federal enforcement, thereby impacting state enforcement.\textsuperscript{77} Professors Uma Outka and Elizabeth Kronk Warner have described the changes in federal initiation of new enforcement actions under Presidents Bush, Obama,

\textsuperscript{72} See 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).

\textsuperscript{73} Parker, \textit{supra} note 71.

\textsuperscript{74} See \textit{Stacey H. Mitchell, Akin Gump et al., Tearing Down Trump’s Environmental Wall: Justice Department Ditches Impediments To Effective Enforcement} 1 (2021), https://www.akingump.com/a/web/e4caGGUA66Tz3X2XgBzqEb2mSQE8/environment-alert.pdf.

\textsuperscript{75} See id.

\textsuperscript{76} See Symposium, \textit{supra} note 64, at 10209.

and Trump. 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 areas of enforcement and compliance.

**B. Regulatory Design Hurdles**

There has been even less attention paid to the way in which regulatory hurdles impact environmental enforcement than to resource and political hurdles. Yet, environmental enforcers struggle with regulatory hurdles that stem from “flexibility” for regulated entities. Such flexibility can come in multiple forms, including providing exceptions for specific classes of regulated entities and setting pollution standards that are voluntary rather than numeric. Providing flexibility is a key way in which executive branch agencies reduce the cost for regulated entities to comply with new environmental regulations. However, flexibility in regulatory design also 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.

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

---


81 See EPA, *Building Flexibility with Accountability Into Clean Air Programs*, https://www.epa.gov/clean-air-act-overview/building-flexibility-accountability-clean-air-programs (“In designing clean air programs, EPA strives to provide companies with flexibility on ways to comply while ensuring accountability for environmental performance. This often makes it possible to achieve greater health and environmental protection at lower overall cost.”) (last visited Nov. 21, 2021).
regulations that changed permitting requirements for new and modified large sources of air pollution.\textsuperscript{82} 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 maintenance” exception and hence did not need a permit.\textsuperscript{83} In one enforcement case, the defendant, operator of a coal-fired power plant, argued that life-extension modifications that cost millions of dollars were “routine” and thus fell under the exception.\textsuperscript{84} In another enforcement case alleging violations of the 2002 regulations, another defendant-operator of a coal-fired power plant argued that all modifications fell within the exception.\textsuperscript{85}

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.\textsuperscript{86} 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.”\textsuperscript{87} 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 when the pollution control equipment is going through cleaning.\textsuperscript{88} While such “excused” emissions may seem reasonable when drafting a permit, they

\textsuperscript{82} See Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR), 67 Fed. Reg. 80,186, 80,193–94 (Dec. 31, 2002).

\textsuperscript{83} For an excellent student note on the routine exception’s implications in enforcement cases, see Graham Zorn, Note, Prevention of Significant Deterioration and Its Routine Maintenance Exception: The Definition of Routine, Past, Present, and Future, 33 VT. L. REV. 783, 791–93 (2009).

\textsuperscript{84} Wis. Elec. Power Co. v. Reilly, 893 F.2d 901, 906 (7th Cir. 1990).

\textsuperscript{85} See United States v. DTE Energy Co., 711 F.3d 643, 648 (6th Cir. 2013).

\textsuperscript{86} See Nat. Res. Def. Council v. Ill. Power Res., LLC, 202 F. Supp. 3d 859, 882, 884 (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).


\textsuperscript{88} See \textit{id.}
often become easy defenses for defendants in enforcement cases that later allege noncompliance.\textsuperscript{89}

Further, 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.\textsuperscript{90} The idea behind a permit shield is “‘to relieve permit holders of having to litigate in an enforcement action the question whether their permits are sufficiently strict.’”\textsuperscript{91} As an example, the CWA’s 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.”\textsuperscript{92} 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.\textsuperscript{93}

The permit shield has been a common defense in water permits involving national water quality standards. For example, in a 2015 federal district court case in Georgia, the court agreed with the

\textsuperscript{89} See Sierra Club v. Ga. Power Co., 365 F. Supp. 2d 1297, 1301 (N.D. Ga. 2004) (showing argument by 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)).

\textsuperscript{90} See Nat. Res. Def. Council v. County of Los Angeles., 725 F.3d 1194, 1204 (9th Cir. 2013) (explaining that if a polluter holds a water permit, compliance with the terms of the permit satisfies its obligations and it cannot be liable for discharges in accordance with the permit); see also 33 U.S.C. § 1342(k) (“Compliance with a permit issued pursuant to this section shall be deemed compliance,” for purposes of any citizen suit or government enforcement action of this title, “except any standard imposed under section 1317 of this title for a toxic pollutant injurious to human health.”). Note, the CAA Amendments also include permit shields for permittees. See, MINN. POLLUTION CONTROL AGENCY, FACTS ABOUT APPLICATION AND PERMIT SHIELDS (1998), https://www.pca.state.mn.us/sites/default/files/2-04.pdf.


\textsuperscript{92} Piney Run Pres. Ass’n v. Cty. Comm’rs of Carroll Cty., 268 F.3d 255, 259 (4th Cir. 2001); see also Nat. Res. Def. Council, 725 F.3d at 1204.

\textsuperscript{93} See 42 U.S.C. § 7661c(f) (“Compliance with a permit issued in accordance with this subchapter shall be deemed compliance”); see also WIS. STAT. § 285.62(10)(b) (2019–2020) (“compliance with all emission limitations included in an operation permit is considered to be compliance with all emission limitations”).
defendant pulp and paper mill that the CWA’s permit shield provisions shielded the mill from liability under the CWA. The plaintiff environmental groups had 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. The mill, however, argued in its defense that the state’s narrative water quality standards were not incorporated into the permit issued to the mill for wastewater discharges. The court agreed with the pulp mill, granting its motion for summary judgment on the plaintiff environmental groups’ CWA claims.

Similarly, in a Sixth Circuit case in Kentucky, the court found that a permit shield for a mining company protected the company from CWA liability associated with discharges of selenium. The company’s discharge of selenium resulted in levels that exceeded the threshold in the state’s water quality standard, but the company’s permit did not specify effluent limitations for selenium. The plaintiff, a citizen group, argued that “the permit shield [did] not apply because the discharge of selenium was neither expressly authorized by the permit nor reasonably contemplated by the [state agency] when it issued the permit.” The Sixth Circuit disagreed, however, shielding the mining company from liability.

97 See id. at *28.
98 See Sierra Club v. ICG Hazard, LLC, 781 F.3d 281, 282 (6th Cir. 2015).
99 See id.
100 See id. at 283.
101 See id. at 282; see also Atl. States Legal Found. v. Eastman Kodak Co., 12 F.3d 353, 357–59 (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 the regulated entity was shielded from liability); but see Nw. Env’t Advoc. v. City of Portland, 56 F.3d 979, 989–90 (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).
Environmental regulations also exempt regulated facilities from needing permits if the facility is only a “minor” source of pollution, with easily-abused criteria qualifying a source as minor. In CAA permitting, for example, to stay classified as a minor rather than major source, a regulated entity only needs to promise to keep the facility’s pollution under minor source pollution thresholds. 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. In *Wild Earth Guardians v. Extraction Oil and Gas Inc.*, for example, the court struggled with reliance on the defendant’s “promise” to keep emissions below threshold limits when it was clear that recordkeeping on the defendant’s actual emissions was sparse and not publicly available. At the same time, regulated facilities often push back on monitoring requirements as permit conditions.

At a broad level, exceptions are not really exceptions, but instead are quite the norm in regulatory design. For example, the

---

102 See Nat’l Parks Conservation Ass’n v. N.D. Dept. of Env’t Quality, 945 N.W.2d 318, 325 (N.D. 2020) (upholding 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) (citing, Voigt v. Coyote Creek Mining Co., No. 1:15-CV-00109, 2016 WL 3920045, at *34 (D.N.D. July 15, 2016)). In *Voigt*, the court rejected the argument that a numeric cap was required when determining a source’s potential to emit in the PSD context. *See Voigt*, 2016 WL 3920045, at *34.


105 See Petition for Review of Limetree Bay Refin., LLC & Limetree Bay Terminals, LLC Plantwide Applicability Limit Permit Issued by EPA Region 2 at 1, Limetree Bay Refining (No. 20-03M) (EAB Feb. 3, 2021) (2021 case pending with Environmental Appeals Board involving an oil refiner’s challenge to EPA’s issuance of an air permit that requires general air monitoring to ensure compliance with national ambient air quality standards).

CWA and implementing regulations allow variances from water quality limits for wastewater dischargers when compliance might cause “substantial and widespread economic and social impact[s]” in communities.  

Additionally, the CAA and its implementing regulations allow permit exemptions for regulated facilities that may promise to keep emissions below certain threshold levels.  

At state and local levels, exemptions are replete, particularly, for example, in variances from zoning requirements.

Second, environmental regulations provide flexibility by imposing voluntary standards instead of required standards. 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. Similarly, under the CWA, every state must promulgate water quality standards for EPA approval that require individual sources to obtain permits. State-selected implementation measures, through permits or other specific pollution reducing programs, must be “enforceable” under the CAA and CWA.

However, state pollution reducing measures in CAA and CWA plans or permits can be voluntary, raising the question of whether such measures also meet the requirements for enforceability. For example, a significant issue in *Bayview Hunters Point Community Advocates v. Metropolitan Transportation Commission* was whether a voluntary implementation mechanism included in the

regulatory standards are different between hazardous waste standard generators and de minimis generators).

---

107 40 C.F.R § 131.10 (2021); see also id. § 131.14 (water quality standards variances).

108 See, e.g., *Air Permit Exemptions*, WIS. DEP’T OF NAT. RES., https://dnr.wisconsin.gov/topic/SmallBusiness/Exemptions.html (last visited Oct. 7, 2021) (“Some facilities or construction projects at existing facilities may have a low enough environmental impact that they are exempt from obtaining air pollution permits.”).


110 See 42 U.S.C. § 7410(a)–(k).

111 See 33 U.S.C. §§ 1313(a), 1342.

112 See, e.g., 33 U.S.C. § 1319(d); 42 U.S.C. § 7410(a)(2) (describing that each SIP must, among other requirements, include “enforceable emission limitations”).
California SIP was “enforceable.” 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 fifteen percent “target” public transportation ridership increase. 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. 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. 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. 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. 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. Similarly, in *Committee for a Better Arvin v. 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.

114 See id. at 695, 697.
115 See id. at 698.
116 Id. at 698–99, 702.
117 See BCCA Appeal Grp. v. EPA, 355 F.3d 817, 841 (5th Cir. 2003).
118 Id. at 840 (citing Approval and Promulgation of Implementation Plans; Texas; Houston/Galveston Nonattainment Area; Ozone, 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 is capable of fulfilling its commitment; and (3) whether the commitment is for a reasonable and appropriate period of time.”
119 See Comm. for a Better Arvin v. EPA, 786 F.3d 1169, 1173 (9th Cir. 2014) (challenging the State of California’s reliance on unenforceable measures to meet
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.\textsuperscript{120}

Third, 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, record-keeping requirements, and exemptions and exceptions.”\textsuperscript{121} Yet, in Nat’l Parks Conservation Ass’n v. N.D. Dep’t of Env’t Quality, 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.\textsuperscript{122} The court based its reasoning on the fact that “[n]othing in applicable state or federal law require[d] the [state] to specify a numeric cap for a limit.”\textsuperscript{123} Similarly, under the CWA, water quality standards can be either narrative or numeric.\textsuperscript{124} Indeed, some scholars have argued for the adoption of numeric water quality standards as preferable to narrative standards, which are “vaguer and less susceptible to enforcement.”\textsuperscript{125}

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.\textsuperscript{126} In its request that the court enjoin EPA from implementing the new regulation,

---

\textsuperscript{120} Id. at 1179–80.

\textsuperscript{121} Requirements for the Preparation, Adoption, and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans, 54 Fed. Reg. 27,274, 27,283 (June 28, 1989).

\textsuperscript{122} See Nat’l Parks Conservation Ass’n v. North Dakota Dep’t of Env’t Quality, 945 N.W.2d 318, 327 (N.D. 2020).

\textsuperscript{123} Id. at 327.

\textsuperscript{124} See 40 C.F.R. § 131.3(b) (2020).


\textsuperscript{126} See Colorado v. EPA, 989 F.3d 874, 885 (10th Cir. 2021).
Colorado presented an 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.”\(^\text{127}\) 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.\(^\text{128}\) 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.\(^\text{129}\)

C. Legal Hurdles

In addition to regulatory hurdles, legal hurdles also present significant difficulties for environmental enforcers, particularly with the doctrines of preclusion and preemption. Defendants typically raise both of these arguments as affirmative defenses in environmental enforcement litigation.\(^\text{130}\) Preclusion prevents enforcers from bringing an enforcement action because of a prior resolved enforcement case involving the same issue. 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.

Defendants in environmental enforcement actions raise preclusion arguments 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

\(^{127}\) *Id.* at 886.

\(^{128}\) See *id.* (“to constitute irreparable harm, an injury must be imminent, certain, actual and not speculative.”).

\(^{129}\) See, *e.g.*, New Jersey v. EPA, 989 F.3d 1038, 1046 (D.C. Cir. 2021).

\(^{130}\) 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.
state law in court. 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 commonly arise with citizen suit enforcers.

Government enforcers can also face preclusion defenses. 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. In Harmon Industries, the Eighth Circuit found that the plain language of RCRA showed a “congressional intent for an authorized state program to supplant the federal hazardous waste program in all respects including enforcement.” The defendant in that case challenged EPA’s claims by, in part, arguing that EPA was barred from suing because the state had begun its own action against the defendant. 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. EPA then initiated an enforcement action against it under RCRA, seeking over $2 million in penalties. After litigating EPA’s claim through an administrative law judge and federal district court, the Eighth Circuit affirmed

---

131 In general, citizens are precluded from filing a suit if EPA or the 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. § 7604(b)(1)(B) (Clean Air Act); 15 U.S.C. § 2619(b)(1)(B) (Toxic Substances Control Act); 42 U.S.C. § 11046(e), (b)(2) (Emergency Planning and Community Right-to-Know Act).

132 See, e.g., Sierra Club v. Two Elk Generation Partners, Ltd. P’ship, 646 F.3d 1258, 1263–64 (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, 757 (7th Cir. 2004) (considering the doctrine of claim preclusion in a CWA citizen suit action).


134 See, e.g., Harmon Indus., Inc. v. Browner, 191 F.3d 894, 904 (8th Cir. 1999).

135 Id at 899.

136 See id at 898–99.

137 The facts of Harmon Industries, id. at 896–97, involved maintenance workers discarding solvent residue outside one of the plaintiff’s plants for many years.

138 See id. at 897.
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.139

Enforcers, particularly at the state and local level, also grapple with preemption arguments when pursuing environmental enforcement actions.140 In recent years, preemption has been particularly difficult for state and local government enforcers when attempting to enforce environmental regulations on natural gas pipelines.141 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.142 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 despite the company having secured requisite approval from a federal regulator.143 The court agreed, finding that the town’s zoning regulations conflicted with the determination approved by the Federal Energy Regulatory Commission (FERC).144 In another similar federal district court case, a natural gas company sought a declaratory judgment and an injunction against 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.145 The court held that allowing the state of Connecticut to enforce a sediment-sampling requirement for construction activities, and then

139 See id. at 897, 904.
140 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, e.g., Choate v. Champion Home Builders, Co., 222 F.3d 788, 791–92 (10th Cir. 2000). Federal preemption occurs where Congress “define[s] explicitly the extent to which its enactment preempts state law” 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.” English v. Gen. Elec. Co., 496 U.S. 72, 79 (1990).
142 See Empire Pipeline, Inc., 472 F. Supp. 3d, at 28, 30.
143 Id. at 31.
144 See id. at 42.
145 See Islander E. Pipeline Co., 478 F. Supp. 2d at 290.
potentially denying the company’s permit application, would pose a significant obstacle to the pipeline project, thereby colliding with the Natural Gas Act.\textsuperscript{146} 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.\textsuperscript{147}

In addition to natural gas pipelines, preemption of local government enforcement also arises in the context of railway expansion.\textsuperscript{148} For example, in \textit{Grafton & Upton R.R. Co. v. Town of Milford}, a local government dealt with a challenge to its efforts to enforce zoning restrictions on preemption grounds.\textsuperscript{149} In that case, the local government informed a railroad company that it “intended to file a petition with the Surface Transportation Board... seeking a declaratory order” that the railroad company’s proposed development of an old rail yard was prohibited by the town’s zoning law.\textsuperscript{150} 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 local statute, ordinance, or regulation” supporting a delay or prohibition on the railroad’s proposed development.\textsuperscript{151} 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.\textsuperscript{152} However, the court found that the relevant federal statute, the Interstate Commerce Commission Termination Act, “indicates an express intent on the part of

\textsuperscript{146} See \textit{id.} at 294–95.
\textsuperscript{148} See, e.g., Ass’n of Am. R.Rs. v. S. Coast Air Quality Mgmt. Dist., 622 F.3d 1094 (9th Cir. 2010) (discussing the preemption, by the federal Interstate Commerce Commission Termination Act, of a local government regulation limiting “permissible amount of emissions from idling trains,” imposing, “reporting requirements, backed by threat of penalties, on railyard operators.”).
\textsuperscript{150} Id. at 237.
\textsuperscript{151} See \textit{id.}
\textsuperscript{152} See \textit{id.} at 238.
Congress to preempt the entire field of railroad regulation, including activities related to but not directly involving railroad transportation.\textsuperscript{153} Thus, the court held that the local government’s enforcement of its zoning regulations would interfere with the proposed interstate rail operations.\textsuperscript{154}

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.\textsuperscript{155} In a Nebraska case, a state court found a city’s ordinance banning landfills within five 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.\textsuperscript{156} However, in New Hampshire, the state Supreme Court found that state solid waste statutes did not completely preempt the solid waste management field and that a town’s local ordinance regarding the location of a landfill was not preempted.\textsuperscript{157}

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 manner 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.\textsuperscript{158} The defendant raised a statute of limitations defense, arguing in part that the government

\textsuperscript{153} Id.
\textsuperscript{154} See id. at 239 (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”) (referencing Boston and Maine Corp. v. Town of Ayer, 330 F.3d 12, 16 (1st Cir. 2003)).
\textsuperscript{155} See, e.g., BCCA Appeal Grp., Inc. v. City of Houston, 496 S.W.3d 1, 5, 24 (2016).
\textsuperscript{157} See N. Country Env’t Servs., Inc. v. Town of Bethlehem, 150 N.H. 606, 615–17 (2004).
plaintiffs “should have known of the violations because EPA has the right to inspect permitted facilities.” The court specifically noted that the EPA region covering Texas and other neighboring states receives over fourteen thousand such DMRs 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.”

III. CASE STUDY: VEHICLE TAMPERING

This Part 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 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 the U.S. market. To ensure that every vehicle and engine introduced into the market satisfies emissions standards, EPA administers a certification program. Vehicle manufacturers apply for a certificate, and in these applications must describe specific elements of design to meet relevant emissions standards. Design features may include, for example, fueling strategies, ignition timing, exhaust gas recirculation systems, filters, and catalysts. The CAA also explicitly

159 See id. at 646.
160 See id. at 647.
161 Id.
163 See id.
164 See Memorandum from Evan Belser, Deputy Director, Air Enforcement Division, Office of Civil Enforcement, EPA, to Jason E. Sloan, Executive Director, Association of Air Pollution Control Agencies (Nov. 20, 2020),
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.\textsuperscript{165} Thus, the regulations employ, as this Article describes 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 emissions standards, vehicle and engine manufacturers must obtain a certificate from EPA for new fleets of vehicles coming into the market.\textsuperscript{166} A certificate “demonstrates that the respective engine or vehicle conforms to all of the applicable emission requirements.”\textsuperscript{167} 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.”\textsuperscript{168} 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.\textsuperscript{169} 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.\textsuperscript{170} EPA uses such testing and reporting to watch for noncompliance.\textsuperscript{171}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{166} See 42 U.S.C. § 7525(a)(1) (EPA administers a certificate of conformity (“COC”) program to ensure that every new motor vehicle introduced into United States commerce satisfies applicable emission standards); 42 U.S.C § 7521.
\item \textsuperscript{167} Overview of Certification and Compliance for Vehicles and Engines, EPA, https://www.epa.gov/verified-diesel-technology/requirements-use-emissions-testing-clean-diesel-technology (last visited Oct. 7, 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.")
\item \textsuperscript{168} See EPA Policy Memorandum, supra note 162, at 3.
\item \textsuperscript{169} See 42 U.S.C. § 7525(a)(1); 40 C.F.R. §§ 86.1803-01, 86.1827-01 (2020) (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).
\item \textsuperscript{171} See EPA Policy Memorandum, supra note 162.
\end{itemize}
\end{footnotesize}
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 devices (AECDs) installed on the motor vehicles. 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. The difficult thing is that EPA regulations allow AECDs when there is a specific justification for their use. An AECD only becomes a prohibited defeat device when it “reduces the effectiveness of the emission control system under conditions that may reasonably be expected” during operation and use of the vehicle. Such prohibited AECDs are defeat devices. As Richard Epstein wrote in a Forbes article, enforcement 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.

---

172 See 40 C.F.R. § 86.1844-01(d)(11) (2020) (each certificate must also include 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 rationale for why it is not a defeat device”).

173 See 40 C.F.R. § 86.1803-01.

174 See id. (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 See id.

B. Noncompliance and Enforcement

Noncompliance with the CAA’s defeat device regulations made national headlines in 2015 with the Volkswagen diesel emissions scandal.\footnote{See Russell Hotten, Volkswagen: The Scandal Explained, BBC (Dec. 10, 2015), https://www.bbc.com/news/business-34324772. Also, note, the EPA has long brought 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).} That infamous case involved a large original equipment manufacturer (OEM) installing defeat devices in the computer program of several classes of new vehicles.\footnote{See Learn About Volkswagen Violations, EPA, https://www.epa.gov/vw/learn-about-volkswagen-violations (last visited Oct. 8, 2021).} 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-Chrysler, Daimler, and Mercedes-Benz.\footnote{See Daimler AG and Mercedes-Benz USA, LLC Clean Air Act Civil Settlement, EPA, https://www.epa.gov/enforcement/daimler-ag-and-mercedes-benz-usa-llc-clean-air-act-civil-settlement (last visited Oct. 8, 2021); see Fiat Chrysler Automobiles Clean Air Act Civil Settlement Information Sheet, EPA, (Jan. 10, 2019), https://www.epa.gov/enforcement/fiat-chrysler-automobiles-clean-air-act-civil-settlement-information-sheet.} 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 reprogramming original engine software to override the diagnostic system so a tampered vehicle can run without a diagnostic check, installing hardware designed to defeat emissions controls, and replacing original exhaust systems with hollow straight pipes.\footnote{See EPA Policy Memorandum, supra note 162, at 3.}

There are multiple reasons for tampering with emissions controls in the aftermarket context. Some emissions control devices affect engine performance by increasing fuel consumption, thereby reducing fuel economy.\footnote{Nat’l Renewable Energy Lab., Diesel Emissions Control—Sulfur Effects Project (2002).} Tampering also avoids cost and time to
maintain emissions controls.\textsuperscript{183} Further, tampering allows vehicle owners to customize their cars.\textsuperscript{184} Despite the relative lack of attention it receives, aftermarket noncompliance by existing vehicles is also a rampant problem in the United States.\textsuperscript{185} Thus, EPA’s enforcement office made aftermarket defeat devices a formal compliance priority initiative during the Trump administration, one which continues today.\textsuperscript{186} As one law firm blog notes, “even with the pandemic, EPA has resolved more than twenty aftermarket ‘defeat device’ and tampering enforcement cases.”\textsuperscript{187}

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.\textsuperscript{188} 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 thousand excess tons of NO\textsubscript{x} and five thousand tons of PM, significantly contributing to the inability of many states to attain national air quality standards.\textsuperscript{189} The report also found that 15 percent of all diesel-fueled pickup trucks—about 550 thousand—have been tampered with over the past decade, resulting in more than 570 thousand tons of excess NO\textsubscript{x}.\textsuperscript{190} In the mid-Atlantic states, around 8.5 percent of all diesel vehicles registered in Mid Atlantic Regional Air

\begin{itemize}
\item \textsuperscript{183} See EPA Tampered Diesel Pickup Trucks Investigation, \textit{supra} note 164, at 4.
\item \textsuperscript{184} See id. For more on customization of cars, see, e.g., \textit{Best Cars to Customize: Everything You Need To Know}, CAR & DRIVER, \url{https://www.caranddriver.com/research/a32811308/best-cars-to-customize} (last visited Oct. 8, 2021).
\item \textsuperscript{185} See Memorandum from Susan Parker Bodine, Assistant Administrator for Enforcement and Compliance Assurance, EPA, to Regional Administrators (June 7, 2019), \url{https://www.epa.gov/sites/production/files/2019-06/documents/2020-2023ncimemo.pdf}.
\item \textsuperscript{186} See id.
\item \textsuperscript{188} See EPA Policy Memorandum, \textit{supra} note 162, at 3.
\item \textsuperscript{190} See EPA Tampered Diesel Pickup Trucks Investigation, \textit{supra} note 164.
\end{itemize}
Management Association (MARAMA) states have had their emissions controls “deleted” between 2009–2019. That is the equivalent of sixty thousand tons of excess NOₓ above expected levels.\(^\text{191}\)

C. Resource, Regulatory, and Legal Hurdles

The multitude of both distinct and intertwined hurdles, as described in this Article, presents significant obstacles for enforcement of aftermarket tampering. 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.\(^\text{192}\) Indeed, many states have laws prohibiting tampering with in-use vehicles,\(^\text{193}\) and some states also prohibit dealers from selling tampered in-use vehicles.\(^\text{194}\) However, various


\(^{193}\) See, e.g., Utah Admin. Code r.307-201-4 (2019) (“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 (2016) (prohibiting tampering with emission control apparatus); Cal. Code Regs. Tit. 13 § 2711(e) (2013) (“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) (2002) (“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 . . . .”).

\(^{194}\) See, e.g., N. J. Admin. Code § 7:27-15.7(a)(3–3) (prohibiting “[t]he sale, lease, or offer for sale or lease” of tampered vehicles); Ohio Admin. Code 3704.16(B)(1) (1993) (“No person 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) (2002) (“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 EPA Policy Memorandum, supra note 162.
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. The lack of credit in the SIP process for state tampering efforts impedes state enforcement activity. In general, states have 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. Instead, EPA grants SIP credit for mobile emissions reductions on a case-by-case basis. 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. Moreover, given federal enforcement measures to address such tampering, some states view state-specific tampering enforcement as unnecessary and redundant.

195 See Arnold W. Reitze, Jr., Control of Air Pollution from Motor Vehicle Transportation by the Federal and State Governments, ROCKY MTN. MIN. L. INST., Feb. 2000, at §§ 11-1, 11-3 (2000) (describing the types of control measures available under SIP regulations to achieve reductions in mobile source emissions, none of which include preventing vehicle tampering, and noting that “states that need reduction measures to meet SIP revision requirements have a strong incentive” to get the reductions, presumably via any available means).

196 See Kenneth J. Adler et al., Using an Emissions Banking and Trading Program to Reduce Diesel Emissions, 49 TEX. ENV’T L.J. 183 (Nov. 2019) (describing that movement of the pollution source makes it difficult to track and enforce, and hence programs to reduce diesel emissions from tugboats have not received credit in SIPs and in similar credit banking programs in Houston, Texas).


Additionally, state enforcers have been confronted with a number of legal hurdles when addressing vehicle tampering. While the CAA prohibits states and localities from “adopt[ing] or attempt[ing] 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. Such language in the statute has required states and local government enforcers to thread the needle in deciding which enforcement cases to pursue.

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. In the aftermath of the Volkswagen diesel emissions 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.

---

200 Clean Air Act § 209, 42 U.S.C. § 7543. See Engine Mfrs. Ass’n v. S. Coast Air Quality Mgmt. Dist., 541 U.S. 246, 253, 258 (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. General 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, F. Supp. 1120, 1124 (S.D.N.Y. 1972), aff’d, Allway Taxi, Inc. v. City of New York, 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.”).

201 See, e.g., In re Office of Attorney General of State of New York, 709 N.Y.S.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.”).


203 See In re Volkswagen “Clean Diesel” Mktg., Sales Practices, & Prods. Liab. Litig., 959 F.3d 1201, 1210 (9th Cir. 2020). Note, both the Utah and Florida cases
initially the claims focused on Volkswagen’s pre-sale installation of defeat devices, after a district court decision found Wyoming’s claim against Volkswagen preempted,204 the local government plaintiffs from Florida and Utah amended their complaints to focus on aftermarket software updates.205 Nonetheless, the Northern District of California dismissed the local government enforcement cases.206 On appeal, the Ninth Circuit reversed, finding that state and county actions relating to Volkswagen’s post-sale actions were neither expressly nor impliedly preempted under the CAA.207 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 the original design of the engine by the original manufacturer.208 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.

Despite this, state and local government enforcement is important to support federal enforcement efforts, particularly given challenges with citizen suit enforcement authority for defeat device cases. In addition to deciding the appropriate defendant, there have also been challenges calling into question the use of citizen suits to enforce Title II’s anti-tampering provisions.209 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.210 By reading “emissions standards or limitations” as separate and distinct from “prohibited

were consolidated with actions brought by a number of other states and counties, including Wyoming, in the Northern District of California.

206 See id. at 1211.
207 See id. at 1205.
208 Petition for Writ of Certiorari, supra note 202, at 26–27.
210 Def’s Motion to Dismiss at 6–8, Utah Physicians for a Healthy Env’t, Inc. v. TAP Worldwide (D. Utah 2020) (No. 2:19-cv-00628-JNP-DBP).
acts,” TAP alleged that Title II citizen suits can only concern violations of an “objective measurement of air pollution emissions.”

Thus, TAP argued, any citizen suits concerning anti-tampering violations are beyond the scope of Title II’s citizen suit provision. Relying on the plain text of the CAA and a similar Tenth Circuit case, the U.S. District Court for the District of Utah rejected TAP’s claim that the anti-tampering regulations are not “emissions standards or limitations” within the meaning of the statute. However, other courts have found the opposite, including the Ninth Circuit in the Volkswagen case.

Then there are exceptions that impede aftermarket tampering enforcement cases. EPA regulations include a “racecar exemption” under which vehicles whose engines are modified solely for competitive use are exempted from anti-tampering prohibitions. While vehicles modified for racing are lawful when used at the track, they are illegal when driven on public roads. The exemption complicates tampering enforcement, as purchasers and sellers of defeat devices for on-road vehicles may circumvent the tampering prohibition simply by claiming a tampered vehicle was modified for use on the track. EPA attempted to address this anomaly in 2015 and sought to amend the racecar exemption to clarify that motor vehicles are defined by the physical characteristics of the vehicle—those which make the vehicle suitable for racing—rather than

---

211 Id.
212 See id.
214 In re Volkswagen “Clean Diesel” Mktg., Sales Pracs., and Prods. Liab. Litig., 894 F.3d 1030, 1042 (9th Cir. 2018) (“[T]he United States sued VW for violations of statutory provisions that are not, and do not incorporate, ‘standard[s], limitation[s], or order[s]’ within the meaning of § 7604(a)(1).”).
215 See 40 C.F.R. § 1068.235(b) (2016).
216 See id. (“This exemption applies only to the prohibition in § 1068.101(b)(1) and is valid only as long as the engine/equipment is used solely for competition”) (emphasis added).
by the vehicle’s use in racing. In light of severe pushback from motorsports trade associations, EPA abandoned this effort in 2016. A district court opinion in a 2021 EPA enforcement case exemplifies the role of the racing exception in enforcement, stating “[m]uch ink has been spilled already in this case regarding whether a motorsports exception, or exclusion, exists in the C.A.A.” 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.” Such reasonable basis consideration is getting prime attention by regulated entities and law firm counsel for future defenses in enforcement cases.

IV. IDENTIFYING “ENFORCEABILITY”

This Part 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

---


219 See Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, 81 Fed. Reg. 73,478, 73,957 (Oct. 25 2016) (to be codified at 40 C.F.R. pts. 9, 22, 85, 86, 600, 1033, 1036, 1037, 1039, 1042, 1043, 1065, 1066, 1068) (“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 used on 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.


222 See, e.g., Coleman, supra note 221; Tomasi, supra note 221.
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. Preemption doctrine, rooted in the Supremacy Clause of the U.S. Constitution, promotes national uniformity in regulations.\textsuperscript{223} Preclusion doctrine helps avoid jurisdictional strife and duplicative litigation.\textsuperscript{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 failure 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.\textsuperscript{225} Communities in Camden, New Jersey have dealt with situations where the state cited and fined a plant for sixteen 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.”\textsuperscript{226} In listening


\textsuperscript{225} See NEIGHBORS FOR ENV’T JUST., \textit{Stop MAT Asphalt!}, https://n4ej.org/stop-mat-asphalt/ (last visited Nov. 2, 2021) (stating that “[a]t no point did any regulatory agency actually measure the emissions of the plant to see if they were complying with their permit. Of the six types of pollution restricted in their (expired) permit, four have still never been measured by anyone.”).

\textsuperscript{226} Sheila R. Foster, \textit{The Challenge of Environmental Justice}, 1 Rutgers J. L. & Urban Pol’y 1, 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.).
sessions conducted by the Pennsylvania Department of Environmental Protection in 2017, one commenter testified “that there is really no information provided to the public about permit violations.” In listening sessions conducted by FERC in the spring of 2021, individuals from across the nation commented that the FERC permit processes have favored corporate fossil fuel applicants in administrative hearings at the expense of actual people, particularly those in rural and low-income communities.

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.” Other researchers have found disparities in other kinds of enforcement actions beyond inspection, including in assessing penalties and in cleanup actions. 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.” Such findings in


research and audits are likely to continue in a world of enduring 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.\textsuperscript{232} Regulation writers might assume that because many environmental laws operate under a cooperative federalism model, state and local preemption is not a significant concern in environmental law.\textsuperscript{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.\textsuperscript{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.\textsuperscript{235}

\textsuperscript{232} See Ethan Ware, \textit{DOJ Defers to States for CWA Enforcement}, WILLIAMS MULLEN (Jan. 12, 2021), https://www.jdsupra.com/legalnews/doj-defers-to-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.”).

\textsuperscript{233} See Clifford L. Rechtschaffen & David L. Markell, \textit{REINVENTING ENVIRONMENTAL ENFORCEMENT AND THE STATE/FEDERAL RELATIONSHIPS} 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).

\textsuperscript{234} See David E. Adelman & Robert L. Glicksman, \textit{Reevaluating 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.”).

\textsuperscript{235} Some state governments and the Biden administration are indeed starting to look at hurdles in enforcement. See Moe Clark, \textit{There’s a Push to Increase Fines for Colorado Polluters and Directly Help Impacted Communities}, COLO. SUN (Feb. 21, 2020), https://coloradosun.com/2020/02/21/increased-penalties-pollution-environmental-justice/; Memorandum from Lawrence E. Starfield, Acting Assistant Administrator, EPA, Off. of Enf’t & Compliance Assurance (June 21, 2021), https://www.epa.gov/system/files/documents/2021-07/strengtheningjethroughcriminal062121.pdf (stating that EPA will strive “to ensure that
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 others the term is buried within the 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.

**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. 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. This type of so-called “mitigated FONSI,” however, requires that the mitigation measures are enforceable. 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.

**The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA):** CZARA refers to the term “enforceable” in its coastal nonpoint pollution control program, which was established under

prosecutions will generate remedies that yield meaningful [results and] protection for communities” that have been harmed, including restitution).


238 See id.

the National Oceanic and Atmospheric Administration (NOAA),
and sets management measures for states to use in controlling runoff
from agriculture, forestry, urban areas, marinas, and hydromodifi-
cation. All coastal and Great Lakes states and territories that par-
ticipate in the program are required to develop state coastal nonpoint
pollution control programs. Before approving a “management
program submitted by a coastal state,” NOAA must “find that the
management program contains enforceable policies and mecha-
nisms to implement the applicable requirements” of the state’s pro-
gram.

CWA: The CWA also references the term “enforceable,” partic-
ularly in its National Pollutant Discharge Elimination System
(NPDES) permit system. Under the CWA’s NPDES permit sys-
tem, the states are required to develop water quality standards. To
meet national water quality standards set by EPA, a polluter must
comply with effluent limitations, as proscribed in a NPDES per-
mit. The CWA defines an effluent limitation as any restriction
established for a pollutant discharged from the source, including
schedules of compliance. Further, the CWA defines “schedule of
compliance” as “a schedule of remedial measures including an en-
forceable sequence of actions or operations leading to compliance
with an effluent limitation, other limitation, prohibition, or stand-
ard.” 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

240 See NOAA & EPA, COASTAL NONPOINT APPROVAL PROGRAM, PROGRAM
(last visited Nov. 3, 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. 33 U.S.C. §§ 1311(a), 1342.
244 33 U.S.C. § 1313(a).
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.\(^{253}\)

*RCRA:* Regulations under RCRA require owners and operators who treat or store hazardous waste at a unit under a permit to demonstrate financial assurance for the closure and liability of such unit.\(^{254}\) An owner or operator can “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.

\(^{248}\) 40 C.F.R. § 403.8(c) (2021).

\(^{249}\) See 40 C.F.R. § 144.51 (2021).

\(^{250}\) Id.

\(^{251}\) 40 C.F.R. § 147.2921 (2021).

\(^{252}\) 40 C.F.R. § 144.3 (2021).


and enforceable.\textsuperscript{256} RCRA also requires that owners/operators must have permits, or another enforceable documents, for the active life and post closure periods of hazardous waste units.\textsuperscript{257}

\textbf{CAA:} Regulations implementing the CAA use the term “enforceable” throughout the formulation and implementation of the National Ambient Air Quality Standards (NAAQS). Pursuant to the CAA, EPA designates areas of the country as either in “attainment,” “nonattainment,” or “unclassifiable.”\textsuperscript{258} 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.\textsuperscript{259} The CAA requires that a SIP “include enforceable emission limitations and other control measures, means, or techniques.”\textsuperscript{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.”\textsuperscript{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.”\textsuperscript{262}

The CAA also requires that the SIPs for nonattainment areas “provide for the implementation of all reasonably available control measures as expeditiously as practicable.”\textsuperscript{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.”\textsuperscript{264} In a 1997 case, after EPA revised

\begin{itemize}
\item \textsuperscript{256} 40 C.F.R. § 267.141(h) (2021).
\item \textsuperscript{257} See 40 C.F.R. § 270.1(c) (2021).
\item \textsuperscript{258} 42 U.S.C. § 7407(d).
\item \textsuperscript{259} See 42 U.S.C. § 7410(a)-(k).
\item \textsuperscript{260} 42 U.S.C. § 7410(a)(2). In addition, 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, Director, Off. of Atmospheric Programs, EPA, to Reg’l Air Div. Dir. (Aug. 5, 2004), https://www.epa.gov/sites/production/files/2016-02/documents/guidance_on_sip_credits.pdf.
\item \textsuperscript{262} 42 U.S.C. § 7407(d)(3)(E).
\item \textsuperscript{263} 42 U.S.C. § 7502(c)(1).
\item \textsuperscript{264} 42 U.S.C § 7502 (c)(6).
\end{itemize}
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. The court found that the CAA authorizes EPA to approve market-based measures in addition to other enforceable controls. The cap-and-trade program itself was not enough to meet the enforceable requirement. 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.” 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. The court ultimately disagreed with the Sierra Club, but struggled in its decision, specifically noting that the CAA does not define enforceable nor did the Sierra Club offer a definition.

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. 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].” 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,

---

266 See id. at 1258.
267 See id.
268 Sierra Club v. EPA, 793 F.3d 656, 659 (6th Cir. 2015).
269 See id. at 661 (6th Cir. 2015).
270 See id. at 667.
271 See 40 C.F.R. § 60.5700a (2021).
272 40 C.F.R. § 60.5755a(b) (2021).
permanent, quantifiable, verifiable, and enforceable.” 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.

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. 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.” The preamble to EPA’s regulation for re-designation and SIPs, for example, states that:

---

273 See, e.g., CAL. HEALTH & SAFETY CODE § 38562(d)(1) et seq. (Deering 2021) (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 purposes, to other allowances.).

274 See ARIZ. ADMIN. CODE § R18-2-1205 (2020).

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. See ENV’T L. INST., ENFORCEABLE STATE MECHANISMS FOR THE CONTROL OF NONPOINT SOURCE WATER POLLUTION 6 (1997), https://www.eli.org/sites/default/files/eli-pubs/d7.06.pdf.

Measures are enforceable when they are duly adopted, and specify clear, unambiguous, and measurable requirements. A legal means for ensuring that sources are in compliance with the control measure must also exist in order for a measure to be enforceable.

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. EPA 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. 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.

---

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 Federal air pollutant control regulations and other permanent and enforceable reductions.” See 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 the State Implementation Plans: General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990. See 57 Fed. Reg. 13,498, 13,561–64 (Apr. 16, 1992).


281 See e.g., EPA, NEW SOURCE REVIEW WORKSHOP MANUAL H.6 (Oct. 1990), https://www.epa.gov/sites/default/files/2015-07/documents/1990wman.pdf; 40 C.F.R. § 49.152 (2016) (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.”).
Other environmental laws and regulations such as agency-specific NEPA regulations, use the term “feasible” to denote similar concepts as 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. CEQA regulations further define “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” 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.” 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.”

Without more clarity on terms like “enforceable,” “feasible,” and “practical,” courts will continue to struggle. 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 Env’t Loss Prevention, Inc. v. U.S. Army Corps of Eng’rs*, the Tenth Circuit upheld a mitigation agreement between the project applicant and the state agency, despite plaintiff’s concern over the agreement’s enforceability. In that case, the federal government issued a FONSI for fugitive dust emissions associated with the project, where the project applicant had also entered into a binding agreement with the state environmental agency to monitor dust emissions at the project site and adopt mitigation

---

282 CAL. PUB. RES. CODE § 21081 (Deering 2021).
285 Id.
286 See Hillsdale Env’t Loss Prevention, Inc. v. U.S. Army Corps of Eng’rs, 702 F.3d 1156 (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).
measures should emissions exceed specified levels. In particular, if dust concentrations exceeded specified levels, the project applicant was required to work with the Kansas Department of Health and the Environment “to determine the cause of the elevated dust emissions” and then take “steps to reduce those emissions.” 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.

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 necessary. By contrast, in other cases like Davis v. Mineta, the Tenth Circuit found insufficient a FONSI that relied on only a 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. 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. Moreover, when agencies have not pursued a FONSI and instead completed a more detailed environmental review, courts have found that proposed

---

287 See id. at 1164, 1172.
288 See id. at 1172.
289 See id. at 1172–73 (describing how 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).
290 See id. at 1173 (citing to another case “where mitigation measures have been found to be sufficiently supported when based on studies conducted by the agency . . . or when they are likely to be adequately policed.”) (quoting Nat’l Audobon Soc’y v. Hoffman, 132 F.3d 7, 17 (2d Cir. 1997)). Additionally, in another Tenth Circuit case, the court upheld a mitigation plan that merely called for monitoring eagle activity and required that “construction activities be modified immediately” if the monitoring demonstrated that indeed the eagles were disturbed, without specifying what these modifications should be. Greater Yellowstone Coal. v. Flowers, 359 F.3d 1257, 1276–77 (10th Cir. 2004).
291 Davis v. Mineta, 302 F.3d 1104, 1125 (10th Cir. 2002).
292 See id.
mitigation measures “need not be legally enforceable, funded or even in final form to comply with NEPA’s procedural requirements.”  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 “most appropriate enforcement framework” including “on-site inspections, periodic reporting, and noncompliance penalties.” Such guidance on the 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, 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. Under such a definition, the term “enforceable” would include agency consideration of the likelihood of funding for the anticipated enforcer. Under such a definition, the term

293 Nat’l Parks & Conservation Ass’n v. U.S. Dep’t of Transp., 222 F.3d 677, 681 n.4 (9th Cir. 2000) (emphasis added).
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 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) (2021).
296 See Memorandum from Richard D. Wilson, Acting Assistant Administrator for Air and Radiation, EPA, to EPA Regional Administrators 4 (Oct. 24, 1997), https://www.epa.gov/sites/default/files/2016-05/documents/vmep-gud.pdf (suggesting that states must be able to make a resource commitment to monitor, assess and report on emission reductions resulting from any voluntary measures).
“enforceable” would include the likelihood of anticipated enforcers facing preclusion or preemption claims in an eventual enforcement action.\textsuperscript{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 up-front, 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 \textit{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.\textsuperscript{298} The dictionary defines “able” as having the power, skill, means, or opportunity to do something.\textsuperscript{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 is that in practice, merely establishing a regime for \textit{potential} enforcement does not translate to \textit{actual} enforcement. Indeed, the dictionary defines “feasible” as possible to do easily or conveniently, likely, or probable.\textsuperscript{300} Thus, amended guidance should grapple with the use of terms like “enforceable”

\textsuperscript{297} See, e.g., Assoc. of Irritated Residents v. Kern County Bd. Of Supervisors, 17 Cal. App. 5th 708, 752 (2017) (plaintiffs arguing that “federal preemption is a legal factor affecting feasibility.”).

\textsuperscript{298} For example, a study of several Asian countries found gaps in authority to enforce, particularly with respect to the ability to require “monitoring of pollution discharges, fil[ing] criminal or civil cases, tak[ing] emergency response actions (such as closing a facility), impos[ing] penalties, or order[ing] corrective measures.” U.N. Env’l PROG., ENVIRONMENTAL RULE OF LAW: FIRST GLOBAL REPORT 47 (2019), https://www.unep.org/resources/assessment/environmental-rule-law-first-global-report. 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.


\textsuperscript{300} Feasible, LEXICO, lexico.com/en/definition/feasible (last visited Nov. 3, 2021); see also Feasible, MERRIAM-WEBSTER ONLINE DICTIONARY, https://www.merriam-webster.com/dictionary/feasible (last visited Nov. 22, 2021) (defining “feasible” as “possible to do” and “capable of being done or carried out”).
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 are 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 cross-cutting 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

301 See Hillsdale Env’t Loss Prevention, Inc. v. U.S. Army Corps of Eng’r, 702 F.3d 1156, 1173 (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).
States. In addition, because enforcement agencies abroad face similar hurdles and enforceability concerns as in the United States, there is significant opportunity for increased scholarly and practice-based attention to these issues in the international context as well.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{309} Deeper discussion about 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.\textsuperscript{310}


