Organized Interests in Private Enforcement: Access and Success in Clean Water Lawsuits

Paul J. Gardner*
Queen's University

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Abstract

Studies of federal statutes enforced by private litigants have focused on legislators and judges, with scant attention to the non-state actors that must bring lawsuits. To demonstrate the power obtained by ideological interest groups when enforcement is shifted into private hands, this article develops hypotheses about how the organizational environment effects enforcement of the Clean Water Act. Using a unique dataset of "notices of intent" to sue environmental polluters, I find that environmental citizen suits are influenced by the presence of interest groups, suggesting that legal claiming is dependent on the presence of these groups. I further show that, unlike "one-shotter" plaintiffs, interest groups behave strategically both with respect to the judicial environment and the bureaucratic regulatory environment.

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In 1971, under the joint authority of the Secretary of the Interior and the various states, federal attempts to control pollution in the nation's waterways was prohibitively difficult.[1] Enforcement authority was often vague and lacking, and the government could only bring actions under the act if they were able to show that pollution had caused the water to ignite (Hodas 1995). With this backdrop, Congress took to solving the problem of America's polluted waterways. The Clean Water Act (CWA), known as the 1972 Federal Water Pollution Control Act at the time of passage, corrected a number of these problems, granting the Environmental Protection Agency (EPA) the authority to set permissible discharge levels and to enforce those standards through civil and criminal actions. But members of Congress, citing the lack of enforcement of existing statutes, feared that the still young EPA would be either unable or unwilling to enforce against the large number of polluting facilities across the United States. Indeed, Senator Philip Hart of Michigan indicated that there was a need for citizen enforcement because there already existed a constituency to enforce environmental statutes. But he was concerned about weak enforcement due to a lack of political will. He argued it was already within the power of government to enforce water pollution controls, but that federal authorities had declined to do so:

> The problem of Lake Superior, as I view it, has not been the absence of Government enforcement tools. Federal authorities have had forceful court remedies available to them right along. The real difficulty has been that those most concerned about Reserve's activities— the general public— have been without similar means to curb those activities. They have had to watch despairingly while bureaucratic delays breed ever increasing amounts of algae in their lake.[2]

In the view of Senator Hart, citizen enforcers were already lined up and ready to bring citizen suits to protect clean water, and they simply lacked the legal authority to do so.

Citizen suits under the Clean Water Act are often praised as one of the great successes of the environmental movement. Under the CWA, any person has a right of action to bring lawsuits in federal court to enforce the law's promises. But the consequences of this enforcement structure have been subject to limited examination. Some attempts have been made to quantify citizen suits and identify their

[1] For example, the Secretary of the Interior required the consent of the governor of a state to commence action if the person affected and the discharges were in the same state. Funds for enforcement activities were also not appropriated or spent at levels authorized by statute. For more details on the history of the development and enforcement of federal water pollutions statutes, see Barry (1970).
[2] U.S. Congress, Senate, Subcommittee on Air and Water Pollution, *Bills Amending the Federal Water Pollution Control Act and Other Pending Legislation Relating to Water Pollution Control,* 92nd Cong., 1st. sess., March 18, 19, 22, 23, 24, 1971, 1018.

plaintiffs. Is it the idealized prototype of the vigilant citizen who litigates over pollution in they observe in their own backyard? Or are citizen suit plaintiffs more likely to be interest groups with ideological and organizational commitments of their own?[3] As I show in this paper, interest groups and repeat players make up the large majority of Clean Water Act citizen suits. But even more importantly, the presence of interest groups as plaintiffs in CWA citizen has consequences for the nature of citizen suit enforcement. Contrary to Senator Hart's claim, litigation is substantially dependent on interest group activity, and, most significantly, interest group litigation differs in important ways from non-interest group litigation. This paper argues two closely related points: first, that successful formal legal action is largely dependent on the presence of environmental interest groups, and second, that these interest groups behave in strategic ways that may lead to gaps and inefficiencies in enforcement efforts. Finally, since pre-filing "claiming" behavior is typically unobserved (Felstiner et al. 1980), scholars rarely can follow grievances through multiple stages from claiming, to filing, to outcome. The unique dataset of CWA notice and filing allows us to distinguish between individual and group behavior at multiple stages of claiming.

I argue here that when private actors become enforcers of general policy and wielders of the capacity of the state, it is necessary to ask how that state capacity is being wielded. If Congress is using private litigation as a means of building state capacity, then studies of litigants take on the importance of traditional studies of the capacity of the bureaucracy, and the interest group actors that take up enforcement gain substantial authority over the enforcement of policy. Like policy entrepreneurs in federal agencies forge bureaucratic autonomy (Carpenter 2001), interest group plaintiffs act as policy entrepreneurs by their decision about what kinds of lawsuits to bring and where to bring them. The identity of (potential) plaintiffs affects the outcome of policy enforcement, especially when interest group plaintiffs and "backyard" plaintiffs behave differently in the legal arena. Additionally, this work provides a unique test of Galanter's (1974) arguments about "one-shotters" and "repeat players" by following grievances from claiming, to case filing, and finally a final outcome.

[3] Greve (1990), for example, has argued that interest groups should be the actors that take up most of citizen suit actions.

In the remainder of this paper, I take on several tasks. In the next section, I describe the substantive background and previous scholarly work on CWA claiming. Next, I outline theoretical expectations for the role of interest groups and resources in claiming and outcomes of CWA citizen suits. I then proceed to demonstrate the role that interest groups have in environmental enforcement, showing that the importance of groups surpasses what the literature has recently supposed. Specifically, I show that the presence of interest group activity is strongly associated with the initiation of CWA grievances using a previous unanalyzed dataset of notices of intent to sue—statutorily required letters sent by potential plaintiffs to violators, states, and the EPA. I then turn to the lawsuits themselves, showing that interest groups are more likely to convert notices of intent to lawsuit filings and interest groups are more likely to obtain a favorable judgment or settlement. Additionally, I show that both filings and outcomes in CWA citizen suits appear to be influenced by strategic behavior that is unique to interest groups. While interest groups are significantly less likely to bring suits in conservative judicial environments or where the EPA has engaged in little enforcement activity, one-shotter plaintiffs' behavior is unaffected. I conclude by suggesting that these patterns indicate previously unrecognized inefficiencies in citizen suit statutes.

Background

Legal scholars and political scientists have long investigated how private plaintiffs use courts to achieve public policy objectives. Some argue that a legalistic culture encourages Americans to resolve political disputes through litigation (Kagan 2001; Melnick 1983). Others focus on how social movements leverage litigation strategically, influenced by broader political contexts (McCann 1994; Epp 2010), or how elected officials reshape legal institutions to encourage or constrain litigation (Farhang 2010; Burke 2004). A related body of work examines how court actors themselves use legal authority to advance policy agendas (Frymer 2007; Feeley and Rubin 1998). While these literatures illuminate various facets of how litigation translates claims into policy change, they often overlook the interaction between plaintiffs, courts, and other governmental institutions in shaping access to justice—especially under federal private enforcement regimes.

Clean Water Act (CWA) litigation is a central case in the broader literature on private enforcement in the United States. These regimes—statutory frameworks that empower private parties to enforce regulatory standards—span civil rights, environmental protection, labor law, and more (Farhang 2010). Designed to decentralize enforcement and harness private initiative, such regimes frequently include provisions for attorneys' fees or damages in excess of harm. The CWA similarly permits citizen suits, allows recovery of legal costs for prevailing plaintiffs, and permits suits even when the federal Environmental Protection Agency (EPA) also has enforcement authority. But it differs from other regimes in one crucial respect: plaintiffs may not retain any damages, which instead must be paid to the U.S. Treasury.

Environmental interest groups had long prioritized litigation, even before statutes like the CWA offered citizen suit provisions. Early efforts to constitutionalize a right to a clean environment through judicial interpretation—modeled after civil rights litigation—largely failed. It was not until Congress enacted a suite of environmental statutes in the 1970s that litigation began to yield more tangible results. Political opposition to citizen suit provisions was more muted than it had been for civil rights enforcement mechanisms. Although President Nixon vetoed the Clean Water Act, Congress overrode the veto. As in the Civil Rights Act debates, moderate Republicans expressed concern over enforcement provisions, wary of burdens on the business community. Initially, some conservatives saw citizen suits as a way to check bureaucratic overreach (Farhang 2010). But by 1972, Republicans reversed course, fearing that unstructured private litigation could burden the courts and disrupt a scientifically grounded regulatory system. Opponents argued that administrative agencies were better equipped to handle the technical complexity of pollution regulation:

> ...to superimpose unstructured private suits on this system of administrative control could well operate to the detriment of the system and needlessly burden court calendars, as well. [The reasons to prefer administrative enforcement] are essentially the ability of administrative agencies to focus scientific, technological, economic, and other specialized expertise on complex subjects for which judicial forums are ill-suited ...[4]

[4] U.S. Congress, Senate, Subcommittee, *Bills Amending the Federal Water Pollution Control Act,* 694.

Supporters of the CWA responded by proposing a qui tam mechanism that would allow citizen plaintiffs to share in fines collected from polluters, thereby compensating them for the burden of litigation.[5] Qui tam suits would allow citizen plaintiffs to collect fines from polluters if the government declined to prosecute illegal pollution, which environmentalists argued would support enforcement by compensating citizens for time and effort spent in identifying violations.[6] In their absence supporters feared few violations would lead to legal action, but ultimately qui tam provisions did not become part of the CWA. In the end, environmental groups would gain the right to bring suits against firms and the EPA, the possibility of collecting attorneys' fees, and damages against polluters payable to the U.S. Treasury, but would not get to collect in any of those damages. The result was a unique new regime—one in which private litigants could bring their own enforcement lawsuits even where a robust bureaucratic regime was provided for in the EPA.

Early cases were selected and litigated to completion by large groups like the Chesapeake Bay Foundation, but due to uncertain legal precedent and few resources to identify violations of the Clean Water Act, little private enforcement litigation took place (Environmental Law Institute 1984). Examination of all CWA cases decided by the U.S. federal courts indicates that several early suits were brought by private landholders using the act as additional leverage in toxic tort actions, and even more were brought by private companies against the EPA challenging its attempts at pollution abatement. Most accounts of early CWA litigation indicate that following the passage of the CWA environmental groups filed fewer than ten cases against polluter firms each year before 1980.[7] Suits by altruistic individual citizens were virtually nonexistent. Despite existing infrastructure supporting constitutional litigation, citizen suits did not immediately find a place on the agenda of environmental interest groups, which found the new citizens suits to be more burdensome and less effective than lawsuits targeting EPA regulations and enforcement.

[5] U.S. Congress, Senate, Subcommittee, *Bills Amending the Federal Water Pollution Control Act,* pp. 728, 1020, 1041.
[6] *Qui tam* plaintiffs are meant to be privately motivated to support public goods—the phrase is an abbreviation of the Latin for "who pursues this action on our Lord the King's behalf as well as his own" (Bucy 2002)
[7] See the Data section below for a discussion of the limitations in determining the number of citizen suits under the CWA. [8]U.S. Congress, Senate, Subcommittee, *Bills Amending the Federal Water Pollution Control Act*.

Environmental groups had argued for the importance of giving citizens the right to sue[8] and in mobilizing citizen activity to get legislation passed (Hays 2000). Groups did not become active, however, in identifying lawsuits or creating support structures. Instead, interest groups bypassed the new private enforcement tools in favor of what they perceived to be stronger opportunities at in obtaining favorable court rulings in statutory interpretation and constitutional cases. Interest groups were also much less successful in obtaining favorable interpretation of statute. Environmental groups faced numerous setbacks, including precedential rulings that undermined interest group standing. In *Lujan v. Defenders of Wildlife* the Supreme Court argued that foreseeable harm needed to be present in order for plaintiffs to obtain standing, making large interest groups poorly situated to bring suit. While larger interest groups have been able to recover by redirecting resources to areas where standing is more easily obtained or by creating standing (e.g. by buying a plane ticket to visit the Everglades[9]), small local groups and individuals faced additional hurdles to bringing lawsuits (Sunstein 1992).

This pattern is consistent with Greve (1990), who suggested that most environmental litigation would be driven by interest groups, and that individuals would rarely bring suits. However, Greve's account, though prescient, lacked systematic data, in large part because established patterns of enforcement had not been fully established by the 1980s. More recent empirical work provides valuable descriptive accounts but leaves major theoretical questions unanswered. May (2003) and Smith (2004) provide data on the frequency and nature of environmental citizen suits, especially under the CWA. Smith compares government and private enforcement, finding differences in case targets and strategies. Yet both studies focus on who files and how often, without delving into the determinants of claiming—that is, under what conditions potential litigants choose to sue in the first place.

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[8] U.S. Congress, Senate, Subcommittee, Bills Amending the Federal Water Pollution Control Act.

[9] The Supreme Court has required concrete evidence of harm in environmental citizens suits. See *Lujan v. Defenders of Wildlife* (1992) 504 U.S. 555, in which the opinion states, "And the affiants' profession of an 'inten[t]' to return to the places they had visited before—where they will presumably, this time, be deprived of the opportunity to observe animals of the endangered species—is simply not enough. Such 'some day' intentions—without any description of concrete plans, or indeed even any specification of when the some day will be—do not support a finding of the 'actual or imminent' injury that our cases require." Justice Kennedy, joined by Justice Souter, concurring, writes that, "While it may seem trivial to require that Mss. Kelly and Skilbred acquire airline tickets to the project sites or announce a date certain upon which they will return [...] this is not a case where it is reasonable to assume that the affiants will be using the sites on a regular basis [...]"

Langpap and Shimshack (2010) advance the literature by examining how private and public enforcement interact. Using judicial instruments to address endogeneity, they find that private suits tend to "crowd in" public monitoring, but "crowd out" public sanctions. However, their unit of analysis is the filed lawsuit. Their framework assumes that claiming occurs and cannot disentangle whether the real constraints on private enforcement lie in identifying violations, overcoming the costs of litigation, or navigating procedural hurdles such as standing. Classic law and society literature emphasize that resources differences and procedural hurdles are likely to have major effects on lawsuit behavior (Galanter 1974; Felstiner et al. 1980), thus greater distinction between interest groups and individuals is merited. In short, while existing studies show that environmental citizen suits are a regular feature of statutory enforcement, they tell us relatively little about how plaintiffs—especially interest groups versus individuals—decide to initiate litigation. This project addresses that gap by examining the strategic behavior of environmental interest groups under the Clean Water Act—highlighting how legal design, institutional context, and organizational resources shape enforcement decisions.

Theory

The foregoing background illustrates how environmental litigation under the CWA is not a always spontaneous or grassroots endeavor but often a strategic and resource-intensive process dominated by repeat-player interest groups. Although Congress envisioned citizen suits as a way to democratize enforcement, the reality has skewed toward politically motivated and resource-dependent litigation (Greve 1990). Interest group action had to be tailored to respond to an environment that was not immediately hospitable. The indirect path of interest groups to regular use of CWA suits highlights the difficulties of implementing private enforcement regimes. For Congress, private lawsuits are inexpensive and easy to implement. But suits cannot be turned on like a spigot, and enforcement through litigation has a different set of consequences compared to traditional command-and-control models. The proposed benefits of private enforcement are at least threefold: (1) massive amounts of litigation supplements agency action and can force private actors into compliance (Frymer 2003), (2) private enforcement depoliticizes enforcement efforts (Farhang 2010), and (3) private actors can bring enforcement actions based on information that is unavailable to the government (Burbank, Farhang and Kritzer 2013).

But it's not clear that the structure of environmental citizen suits can deliver on these proposes benefits. To the first benefit, environmental citizen suits have been relatively few compared to private enforcement in other policy areas (see Bucy 2002; Miller 2004). Decided cases rarely number more than 20 per year, while criminal actions by the EPA are measured in the hundreds. Civil enforcement outcomes by the EPA are more difficult to measure, but settlements reported by the EPA between 2000 and 2005 averaged 255 per year. Other measures of enforcement activities under the CWA have civil penalties and injunctions by the EPA reaching into the thousands.[10] Even at the level of notices to sue, environmental litigation still does not nearly approach the magnitude of employment discrimination litigation, though notices may more accurately represent the overall impact of environmental citizen suits. To the second benefit, if private citizens experiencing personal harm are not flooding the courts with lawsuits, then it becomes important to understand who is litigating and through what mechanism they are influencing public policy outcomes. If citizen suit enforcement is largely dependent on interest groups, then that enforcement is likely to be strategic and politicized (Gardner 2021). Not only do the enforcement decisions of the interest groups themselves have political consequences, but, more broadly, litigation as a mechanism for enforcement is a unique strategic environment worthy of examination. And to the third benefit, there exists evidence that environmental interest groups benefit substantially from evidence of pollution developed by federal regulators rather than gathered independently.

In the remainder of this section, I outline my hypotheses related to interest group behavior in citizen suit notice, filing, and success. The two main mechanisms I examine are interest group concentration and plaintiff experience. In the first set of hypotheses *Notice Filing Hypotheses*, I argue that interest group concentration increases the rate of citizen suit filings, especially under conditions that are

[10] Federal enforcement and compliance (FE&C) data from the Integrated Compliance Information System. The EPA does not provide standards for how this data is compiled and maintained, which makes cross-year comparisons difficult, particularly for years in the beginning of the program.

strategically favorable to those groups with regard to the judicial environment and federal enforcement behavior. In the second set of hypotheses, *Filing and Success Hypotheses*, I argue that more experienced plaintiffs, who are very likely to be interest group actors, are more likely to convert notices of intent to case filings and are more likely to win their cases. The conditional hypotheses echo those in notice filing—experience interest group plaintiffs are more likely to behave strategically than inexperienced and "one-shotter" plaintiffs—such that filing and success at the merits stage are both more likely in favorable judicial environments and where federal enforcement efforts are common.

Notice Filing Hypotheses

Congress expected that citizen suits would empower ordinary individuals to enforce environmental law. However, the reality is that successful litigation requires significant legal expertise, organizational capacity, and financial backing. As Galanter (1974) and Felstiner, Abel, and Sarat (1980) note, the transformation of grievances into legal claims is uneven—favoring repeat players like interest groups. Moreover, interest groups are largely strategic, filing suits that are geographically convenient and legally and politically expedient. Responding to entreaties from plaintiffs in a Louisiana case to join as plaintiff, Michael McCloskey, Executive Director of the Sierra Club, lamented that "We are asked to participate in far more cases than we can reasonably manage ...I would hope that you would not judge us too harshly because of the limits of our resources."[11] The Sierra Club also noted the geographic limits of its reach, in line with the geographic concentration of citizen suits near areas with high interest groups. "SCLDF's [the Sierra Club Legal Defense Fund] attorneys conduct some of the Club's environmental litigation directly, usually in courts close to its two offices," according to a Sierra Club memo.[12] Lawsuits otherwise considered strong lawsuits for the Club were rejected because they were "simply too far away" from Sierra Club headquarters in San Francisco.[13] Thus,

H1: *Citizen suit notices will be higher where interest group concentration is higher.*

[11] Sierra Club Legal Defense Fund Records, Box 1, Folder 2, Sierra Club Archives, University of California, Berkeley.
[12] Ibid.
[13] Ibid.

Interest groups necessarily make calculations to achieve their goals under the constraint of limited resources. While some scholars argue that private enforcement depoliticizes regulatory action (Farhang 2010), the heavy reliance on interest groups introduces a different kind of politicization—one rooted in the strategic selection of favorable courts. Judicial forum shopping is well-documented in the literature (George and Williams 2018, Ley and Weber 2015), and therefore, perhaps unsurprisingly, groups like the Sierra Club made judicial jurisdictions a reason to either proceed with or drop a grievance. One memo, for example, labeled the First Circuit Court of Appeals as a "good Court" for the Club.[14] But such venue shopping takes on different meaning under private litigation regimes. Traditional support structure narratives are typically focused on obtaining favorable constitutional interpretation, especially from the Supreme Court. Jurisdiction shopping has a more procedural consequence in this context. But in the context of CWA citizen suits, such jurisdiction shopping may mean a lack of pollution abatement for some, not because of the seriousness of the violation, but because of the ideology of the federal court where the violation takes place. Therefore,

H2. *Citizen suit notices will be higher where interest group concentration is higher, conditional on more liberal courts in the jurisdiction.*

While litigation incentives are clear when it comes to the judicial environment, there is conflicting evidence in the literature and historical record for what our expectations should be regarding how interest groups respond to EPA enforcement. May (2003) emphasizes the complementary effect of citizen suits. Like Senator Hart, this line of reasoning understands citizen suits as providing a critical backstop for underenforcement. In this view, environmental interest groups have the resources and ideological drive to search out and prosecute violations of statute (Greve 1990). Furthermore, notices of intent may be relatively inexpensive ways to put pressure on polluting firms even in the absence of hard evidence. At the notice filing stage, talk is cheap but may yield beneficial results. Hodas (1995), on the other hand, characterizes concurrent private and regulatory enforcement as a "race to the bottom" in which

[14] Hoffman, John. Memo to Michael McCloskey, 9/10/1974. Sierra Club Legal Defense Fund Records, Box 1, Folder 2

regulatory action suffers when citizen suits act as substitutes. State actors do not need to engage in consistent enforcement if enforcement can be outsourced. Harrington (1988) notes, however, that the EPA does identify violations on a regular basis, but when the EPA identifies violations, they often do not pursue penalties. The EPA, given its repeat relationships with firms, has independent reasons for not pursuing these violations. But identification of violations creates opportunity for private actors to capitalize on EPA work product. If environmental groups are resource constrained and lack the investigatory powers of the EPA, they will tend to rely on EPA findings of violations when sending notices and notices will be higher when both interest group concentration and EPA identified violations are high. If, however, notices are "cheap talk" that help interest groups to obtain compliance with environmental laws even in the absence of slam-dunk evidence, then where interest group concentration is high, they will substitute for low EPA enforcement with more notice filing. Given this conflict in the literature, I take the unconventional approach of offering two mutually exclusive, competing hypotheses to be evaluated against one another.

H3a. *Citizen suit notices will be higher where interest group concentration is higher, conditional on more EPA regulatory violations in the jurisdiction.*

H3b. *Citizen suit notices will be lower where interest group concentration is higher, conditional on more EPA regulatory violations in the jurisdiction.*

Filing and Success Hypotheses

In addition to filing in locations close to their operations, environmental groups also have strategic incentives to bring cases with high likelihood of success. Because Congress rejected qui tam provisions and barred citizen-plaintiffs from collecting damages, environmental groups sought alternative mechanisms to make litigation worthwhile. One such mechanism emerged through settlements that include "environmentally beneficial expenditures" (EBEs)—projects funded by polluters under consent decrees, with funds directed not to the U.S. Treasury but to environmental restoration efforts overseen by interest groups themselves (Mann 1991). In effect, EBEs serve as an informal substitute for qui tam-style rewards: they finance group-led programs, offset litigation costs, and improve organizational capacity. This dynamic creates a strong strategic incentive for interest groups to pursue litigation aggressively, even in the absence of direct monetary awards. This is particularly true because groups make choices about what cases to litigate—their resources are limited, so case selection must be strategic. Individual plaintiffs, by contrast, lack standing programs that could benefit from EBEs and therefore are more likely to bring cases based on their particularized interests rather than strategically based on prospect for success. As a result, we should expect case initiation and success to be disproportionately concentrated among experienced, repeat-player plaintiffs who are better positioned to leverage these institutional advantages, especially if we define success as including settlements that are likely to include EBEs.

H4: *Case filings and wins will be higher for high experience plaintiffs compared with low experience plaintiffs.*

The preference of experienced actors for more favorable courts extends beyond simply deciding whether to send a notice of intent to sue. A substantial body of scholarship suggests that litigants—particularly repeat players and well-resourced actors—are highly sensitive to judicial ideology when deciding where and whether to file suit. Classic economic models of litigation suggest that parties are more likely to pursue claims when they perceive a higher probability of favorable outcomes, especially in ideologically aligned forums (Priest and Klein 1984). More recent work has confirmed this behavior among interest groups and other strategic actors, who engage in forum shopping to exploit judicial variation (Atkinson et al. 2009). If these strategic behaviors are successful—i.e., if interest groups effectively select jurisdictions aligned with their policy goals—then judicial ideology should exert an effect at the filing stage for high-experience interest groups more than low-experience one-shotters. Expectations at the outcome stage, however, are more complicated. If litigant strategic filing behavior is successful, cases should be tailored to have equal chances in both conservative and liberal courts for strategic plaintiffs. On the other hand, high experience, interest group plaintiffs are also more likely to be playing for rules (Galanter 1974) and therefore may be more likely to offer novel argumentation that is less likely to appeal to conservative judges. Additionally, experienced defendants may be less inclined to agree to settlements in conservative courts where they expect more favorable treatment. Meanwhile, for less experienced plaintiffs, novel argumentation is substantially less likely which makes judicial ideology less relevant for their cases. On balance, then, we would likely expect that on average, interest groups will succeed more in liberal courts compared to conservative courts but one-shotters will be less affected by ideology.

H5. *Citizen suit filings and wins will be higher for more experienced plaintiffs if the case is filed in more liberal courts compared to conservative courts, but less experienced plaintiffs' filing decisions will not be affected by judicial ideology.*

While the influence of EPA regulatory enforcement is unclear at the notice filing stage, the benefits of the resources of the EPA to groups are clearer at the filing and merits stage. To obtain monetary rewards without significant investigative expenditures, interest groups may be likely to rely upon government documented permitting violations in private litigation. Where notice filing has the possibility of obtaining "cheap" compliance, court cases are resource intensive and require substantial fact finding. Indeed, some scholars have documented opportunistic instances of private litigation in which plaintiffs use findings of fact in government-led litigation to obtain a private benefit through litigation, especially in antitrust litigation (Bucy 2002). While this behavior may be desirable in a context where plaintiff often experience direct damages, like antitrust, the benefits are less clear in an environmental context. Contrary to bringing new information to the regulatory regime (Burbank, Farhang and Kritzer 2013), this behavior may have the effect of duplicating efforts and expending resources in an inefficient manner (Langpap and Shimshack 2010). Furthermore, this runs in contrast to the expectation of stewards of the CWA like Senator Hart, who had argued that private enforcement would serve the function of filling gaps in regulatory enforcement. All of this suggests that government enforcement actions improve the likelihood of success for environmental interest groups, such that interest groups are more likely to concentrate their filing efforts in jurisdictions where federal enforcement is ongoing. Moreover, the evidence provided by the EPA is also likely to bolster interest group claims enhancing their likelihood of success.

H6. *Citizen suit filings and wins will be higher for more experienced plaintiffs if the case is filed where more EPA enforcement takes place, while low experience plaintiffs will be largely unaffected by EPA behavior.*

CWA Notice and Filing Data

To test the above hypotheses, we require a reliable measure of legal claiming. As intimated above, it is difficult to measure Clean Water Act citizen suits. Scholars have generally relied on a study by the Environmental Law Institute (ELI) (Environmental Law Institute 1984) to identify early counts of citizen suits (e.g., Smith 2004; May 2003). These numbers, while considered the best available, are limited to the late 1970s and early 1980s. More recently, some scholars have relied on data from reports of the Administrative Office of the U.S. Courts (AO) (e.g. Farhang 2012), but this data is over-inclusive if we wish to identify trends associated with a specific statute—necessary given the differences in statutory incentives and interest group involvement across statutes.[15] Other scholars have relied on reports from the Department of Justice (DOJ), which logs filings of citizen suits (May 2003; Smith 2004). These figures, however, appear to be significantly under-inclusive, and suffer from other problems.[16] Both the EPA and DOJ have a limited number of years of citizen suits on file, and there exists limited information about the suits filed.

For my count of citizen suits, I instead rely on two sources of data. First, I use data compiled by the AO, but rather than the compiled reports, I use individual district court filings, which after 1995 reliably indicate the specific statute at issue in the case.[17] Additionally, these data include useful information about case outcomes, which allows for the consideration of lawsuit success. But, as discussed above, settlements are an important mechanism of enforcement, even

[15] The AO data combines citizen suits under all environmental statutes with varying targets, including "toxic torts" which are authorized under some environmental statutes.
[16] It is not clear that the DOJ has any procedure for maintaining citizen suit statistics. Excluded from environmental citizen suits are all toxic torts, including a significant number of suits filed for diseases caused by environmental pollution following the attacks on the World Trade Center on September 11th, 2001. While it is appropriate to exclude these sorts of suits from some analyses, their absence from the DOJ data calls into question their reliability. It should also be noted that separate requests requests by May (2003) and Smith (2004) from the DOJ yielded only similar, and not identical, counts of citizen suits, which further indicates that there are limits to the reliability of these counts.
[17] Data available as "Federal Court Cases: Integrated Data Base," created by the Federal Judicial Center, and hosted at the Inter-University Consortium for Political and Social Research.

before case filings. This, therefore, makes case filings from the AO an incomplete dataset. To observe cases left unfiled, in addition to those filed, another source of data is needed.

The Clean Water Act is attractive for the purpose of observing all *possible* federal court cases because of a statutory provision in the law that requires potential plaintiffs to file with the defendants, the Environmental Protection Agency, and relevant state agencies a "notice of intent to sue," 60 days in advance of any filing in federal district courts. These notices, then, represent a set of potential lawsuits, where would-be plaintiffs have already taken preliminary legal step of obtaining a lawyer and giving notice to other parties. In the language of Felstiner, Abel and Sarat (1980), they have partially converted their claim but have not yet formally filed a lawsuit. For a measure of these potential suits, I rely on data obtained from the EPA through a FOIA request. The data obtained from the EPA is a database of notices of intent to sue—statutorily required letters to the would-be defendant, the EPA and the state in which the alleged violation took place.[18] This is the first systematic analysis of these data, and they represent a significant improvement over previous measures because they come even before filing, and most potential citizen suits are settled before they can be filed in a court.

Both the AO data and the EPA notice data contain the names of the complainant and the respondent but otherwise include few other data fields that would be useful in matching notices to cases. Therefore, I use partial string-matching techniques to match notices of intent to district court filings, allowing me to track cases from the notice stage to the final outcome. Matching notices to cases is made difficult by errors present in the EPA database and the differences in coding standards between the two databases. For example, while the AO data typically only include a single name for plaintiff and defendant (even when there are several named plaintiff or defendants) the EPA data includes the names of all parties. First, the notice data was cleaned to match appropriate groups and misspellings within the EPA data (e.g., matching Northern California River Watch to its often-used shortened name, California River Watch).

[18] U.S.C. §1365(b) states: No action may be commenced–(1) under subsection (a)(1) of this section–(A) prior to sixty days after the plaintiff has given notice of the alleged violation (i) to the Administrator, (ii) to the State in which the alleged violation occurs, and (iii) to any alleged violator of the standard, limitation, or order.

Once each unique plaintiff was identified, plaintiffs were matched to the closest corrected unique character string. Then, finally, those corrected plaintiffs' names were matched to the AO database. When plaintiffs' names were successfully matched, matches were validated by confirming a match in the defendant fields. If both were approximate matches, it was reported as case match. The matches were purposefully liberal, and the over-inclusive case-notice pairs were validated by the author, eliminating false positive matches. Additionally, searches for some unmatched cases on the websites that collect case dockets indicate that there are likely few cases that were filed in federal court that were not matched through this procedure. The location of the polluter facility subject to notice can be identified at the county level.

The results of this procedure indicate the continuing importance of interest groups and repeat players in environmental litigation. Previous work that has attempted to define the plaintiff pool for citizen suits argues that interest group involvement in citizen suits has decreased. Attempting to extend work by the Environmental Law Institute, May (2003) and Smith (2004) argue that only about one-third of citizen suit cases are filed by interest groups. Using a more reliable data collection method as described above, however, it is apparent that well over half of notices of intent to sue are filed by potential plaintiffs that file more than one notice per year. Figure 1 shows that vast majority of filers of notices are those who filed an average of at least one case per year from 2003 to 2012. More than 1 in 3 notices were filed by interest groups that filed at least 50 notices over ten years. Citizen suit plaintiffs are typically resource-rich, ideologically motivated groups that regularly engage in legal activity.

Additional data on pollution and emissions provide important controls in the models described below. These data are publicly available on the EPA's website, including emissions data from the Enforcement and Compliance History Online (ECHO) database. EPA enforcement data is federal enforcement and compliance (FE&C) data from the Integrated Compliance Information System, including measures of NPDES permits (permits required of those facilities that discharge effluents into U.S. waterways; *Polluter Facilities*), permit violations identified by the EPA (*Permit*

Violations), and penalties levied by the EPA on violators (*EPA Penalties*). Data on state population and surface water area in states was gathered from the U.S. Census Bureau (*State Population; Water Area*). Other key independent variables are described in further detail below.

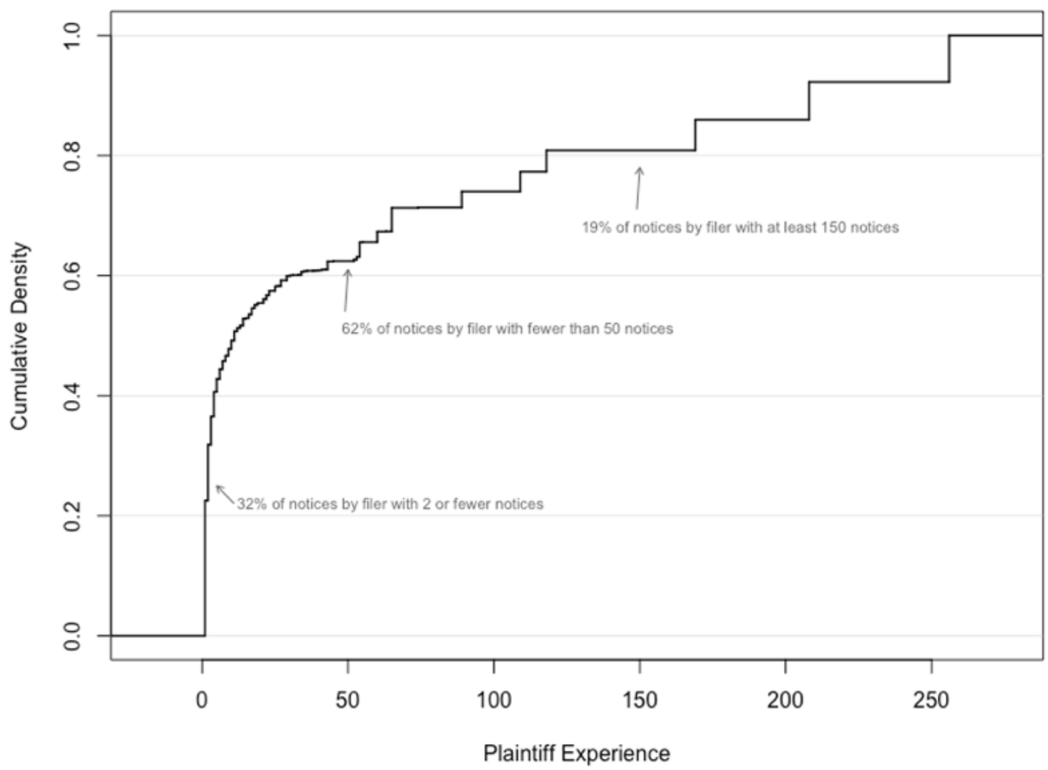

Figure 1: Cumulative Density of Plaintiff Experience

Organizational Influences on Citizen Suit Enforcement

Using the notice of intent data described above, I now turn to examination of hypotheses associated with this first required step of citizen suit claiming, namely H1, H2, and H3. How does interest group organization affect the likelihood of serving notice? The theory indicates that interest group organization should have a substantial effect on lawsuit filings. To determine if this relationship is present, I now examine where and by what factors these plaintiffs are motivated. Further, I examine the consequences of an enforcement regime in which altruistic interest groups engage in a significant amount of enforcement with substantial autonomy. I show that the inconsistency in enforcement is not just time based, but also geographically varied. This has important normative implications—if one externality of the enforcement mechanism is systematic under-enforcement in some areas, it may suggest the mechanism is less than ideal.

The dependent variable is a binary variable of whether any notice is filed at the county level in any given year. While the dependent variable could be treated as a count, as might be expected, the data has an inflated number of zeroes. When notices are filed against a polluter in a county, over 60 percent of observations have only one notice filed. For this reason, it seems most appropriate to model the binary outcome so as to avoid undue influence of outlier county-years. To determine the extent to which environmental interest group activity is important for CWA litigation, I use a measure of the number of environmental non-profit groups filing IRS Form 990 collected by the National Center for Charitable Statistics.[19] This measure has the benefit of being exogenous to strategic lawsuit activity, unlike direct measures of litigation by groups. The count of interest groups derived from tax filings is included in the model as Interest Groups and is logged to account for skewness in the data, and the diminished marginal benefit provided by each additional group. The variable is at the state level, reflecting both the difficulty of identifying interest groups within counties, but also reflecting the reality that environmental interest groups tend to operate across entire states. Consistent with H1, I expect that years and counties with higher levels of interest group presence in the state will have more CWA citizen suits.

Figure 2 shows the distribution of notices of intent to sue juxtaposed against where pollution is occurring. The top panel shows that notices of intent to sue mostly occur where there is a concentration of polluter facilities, but the reverse is clearly not true. There are areas of substantial pollution activity where polluters are rarely challenged by citizen suit enforcement. The second panel again shows notices of intent to sue, but this time layered over interest group activity, as measured by contributions to political candidates. Some western states like California

[19] Form 990 is the tax return form filed by organizations exempt from income tax. Environmental groups are identified by their National Taxonomy of Exempt Entities (NTEE) code, which for environmental groups is "C."

and Washington have more enforcement than would be predicted by levels of pollution, while other states like Indiana, the Carolinas, and Louisiana have relatively few citizen suit actions, despite some of the highest levels of water pollution discharges. Citizen suits are concentrated around urban areas, though there is significant pollution outside of major metropolitan areas as well. The figure provides suggestive evidence that the concentration of interest group activity is a potentially significant driver of litigation, over and above the actual incidence of pollution. But this visual test excludes potentially relevant factors, including EPA enforcement levels in the states, the amount of surface water, and political climate influenced by local judges and legislatures. I therefore employ a regression analysis to control for these factors. Specifically, I will test the ability of interest group activity to explain the amount the number of lawsuit threats, as measured by notices of intent to sue.

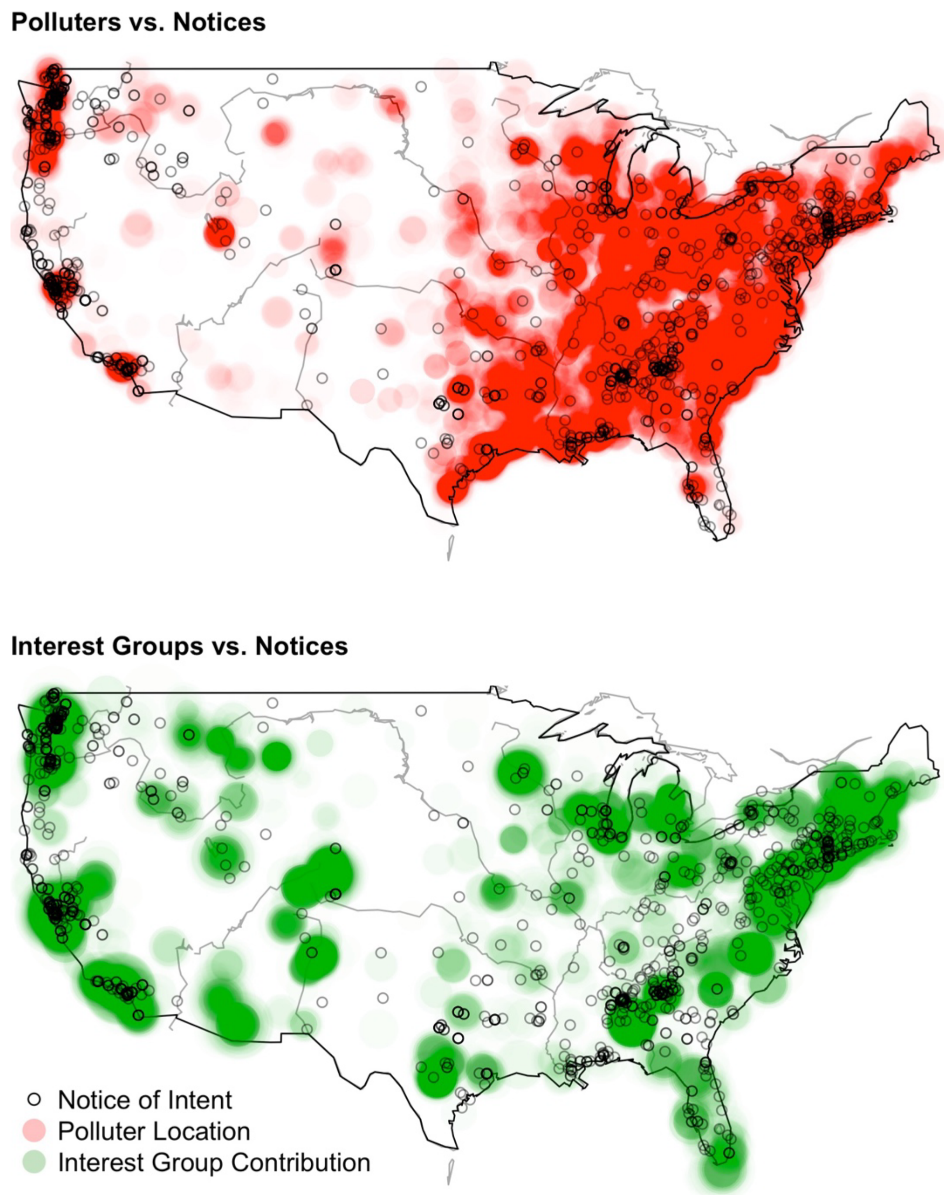

Figure 2: Geographic Distribution of Pollution and Notices of Intent to Sue

There are additional factors that must be accounted for in measuring the effect of interest groups on lawsuit activity. The theory in H2 argues that interest groups will be more likely to file in judicial circuits with more favorable politics, therefore I also include a measure of the ideology of the judges in the circuit where the firm is located with more positive values indicating more conservative circuits (Circuit Court Ideology).[20] Judges have a significant amount of authority in deciding the outcome of environmental citizen suits, so it is reasonable to expect that potentially plaintiffs will be more likely to file when they view judges as being more likely to side with their cause. Since environmentalism is traditionally a greater priority of the Democratic Party than the Republican Party, plaintiffs will likely be less willing to initiate cases in more Republican circuits, therefore I expect that this measure should produce a negative coefficient, indicating fewer lawsuits in Republican circuits. I use circuit ideologies, rather than Supreme Court or district court ideologies, because circuit courts act as the most natural principal. While the Supreme Court theoretically can grant certiorari in citizen suit cases, its discretionary docket is small, making this eventuality unlikely. On the other hand, district court rulings, while significant, can be appealed to judicial circuits as of right. This creates pressure on district court judges to make the "correct" decision—that is consistent with circuit principals (Kastellec 2007; Boyd 2015b)—and allows plaintiffs a formal appeal to the circuit court. I do, however, also include district court ideology as a control using measures developed by Boyd (2015a).

The theory in H3 argues that citizen suit enforcement is more likely where EPA enforcement is already occurring. There are several ways to implement this measure. The EPA notes the number of inspections, violations, and penalties issues to permitted facilities. At the notice stage, I expect the number of violations to be most predictive of interest group notice behavior. Where the EPA has established violations, this creates incentives not only for interest groups to seek abatement for the betterment of the environment but also supports the ability of groups to seek EBEs. There for I include the measure *Permit Violations*, which is the number of CWA permit violations identified by the EPA. I also include measures of the number of penalties levied against polluters by the state in that year (*EPA Penalties*) as a control because, if lawsuits and regulatory enforcement are substitutes, existing penalties may lessen the likelihood

[20] The ideology scores are calculated by taking the mean of ideology of the active judges in the circuit during a given year. The scores for each judge are calculated according to the method proposed by Giles, Hettinger and Peppers (2002), which assigns judges ideology scores based on the common-space ideology of the president, unless the appointment is associated with a state where there is a senator of the president's party, in which case the ideology of the senator(s) ideology is given to the judge. Giles, Hettinger and Peppers (2002) show that this measure outperforms measures which only consider the partisanship of the appointing president. The values used here were collected by Boyd (2015).

of lawsuits. If citizen suits are supplementing EPA enforcement in underserved areas, we would expect that citizen suits will be negatively associated with state-years with high levels of EPA enforcement (H3b). Alternatively, high concentrations of interest groups may lead to high levels of notice filings even moreso in areas with more violations already identified by the EPA (H3a).

I include several other controls.[21] First, CWA citizen suits should be more likely to occur where there is greater potential for CWA violations. Therefore, I include a measure of the number of permitted NPDES facilities for each state-year (*Polluter Facilities*), which I expect will be positively associated with lawsuits. Lastly, I include county level controls for population in case interest group concentration is simply a function of population (*County Population*), state legislative ideology to account for the state regulatory environment (as measured by Shor and McCarty 2011), and the log of the total area of surface water in the county to account for increased opportunity for water pollution in counties with greater amounts of surface water (*Water Area*).[22] The location of polluting facilities can be identified down to the county level, therefore the dependent variable is identified at the county-year level. In any year, I identify the number of notices against facilities in that county. The data are also organized in panels, with each county being measured over multiple years. All variables are standardized for ease of interpretation.

Notices are relatively rare—by far the most common number of notices in a county is zero. The highest number is 26, but when there is any notice in a county-year, over 80% have only one or two notices. I therefore model the data using logit models with state random intercepts and year fixed effects, where the binary outcome is the presence or absence of a notice of intent. The results are substantially similar when using poisson or zero-inflated poisson models[23], but the binary approach is preferred to avoid influence of outlier county-years and for

[21] It is also worth noting that the models do not include any measures of defendant resources, which may or may not be a factor in determining the likelihood of claiming. The question of defendant resources, however, is beyond the scope of this analysis. The analysis as presented provides the average effect across defendants with differing resources. Moreover, the qualitative analysis above provides no reason to believe that the presence of interest group communities is determined by the legal strength of defendants in a given geographic area.
[22] Water area is logged to account for skewness in the data, but the results are not affected by the transformation.
[23] See the Supplementary Materials for more details on reported models and results of these supplementary models.

simplicity of the presentation of results. Control variables are added in stepwise fashion, in Models 1-6. Model 6 is the main model from which the results are discussed and figures are derived, but the results are substantively similar across each specification. Random intercept models are particularly well-suited for the present analysis because it seeks to explain differences not only over time, but also across state units. That is, interest group communities vary more across geography than they do year-to-year. The random intercept models take account of both kinds of variation. Random effects models with errors clustered at the county level also account for differences in counties that might not be captured by state level variables.

The results are shown in Table 1. The results of hypothesis are consistent with Hypothesis 1. The relationship holds with all combination of controls. Model 1 shows the results considering only interest group activity. Models 2 and 3 add EPA enforcement measures and political variables. Models 4 and 5 include a full batch of controls and consider the interaction between the presence of interest groups and judicial ideology and EPA identified violations, respectively. Model 6 is a full combined model with all interactions and controls. In each specification, the effect of interest group activity on notice filings is substantively and statistically significant. The effect sizes appear small, but this is because notice filings are relatively rare events. Increasing the fifth percentile of interest groups in a state-year (81 groups) to the 95^{th} percentile (1094 groups) in group concentration increases the absolute likelihood of notice from about 3.8% to about 5.5%, which is about a 70% increase. Interpreted another way, a one-standard deviation increase from the mean of interest groups in state-years increases the likelihood of a notice in a county in a given year by about 5%.

Hypothesis 2 also fairs well. There is an overall direct effect of circuit court ideology—liberal circuits in general see more lawsuits than conservative ones. But the evidence additionally demonstrates the conditional effect: in liberal circuits filings increase even more when interest group concentration is high. Meanwhile, interest group concentration has no impact on the likelihood of notice filing in conservative circuits. This can be visualized in the left panel of Figure 3—the least conservative court in the sample shows no significant effect of interest group concentration. But a one standard deviation increase in interest group concentration in liberal circuits is associated with about a 1% increase in notice filing, where the baseline rate of notice filing is about 4.4%. This is even after controlling for other measures of the political environment, like state legislative ideology and district court ideology.

Table 1: Determinants of Notice Filing

	(1)	(2)	(3)	(4)	(5)	(6)
Interest Group Concentration	0.55***	0.54***	0.16**	0.12*	0.17***	0.13*
	(0.05)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
EPA Violations		0.03	-0.01	-0.01	0.03	0.02
		(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Interest Group Concentration × EPA Violations					-0.05**	-0.05**
					(0.02)	(0.02)
Circuit Court Ideology			-1.51***	-1.46***	-1.52***	-1.46***
			(0.20)	(0.20)	(0.20)	(0.20)
Interest Group Concentration × Circuit Court Ideology				-0.45**		-0.44**
				(0.17)		(0.17)
Permitted Facilities		0.48***	0.25*	0.25*	0.25*	0.25*
		(0.12)	(0.12)	(0.12)	(0.12)	(0.12)
EPA Penalties		0.09*	0.10*	0.10*	0.09*	0.09*
		(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Water Area (1000 sq ft)		0.21*	0.10	0.12	0.10	0.12
		(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
District Court Ideology			-0.36	-0.39†	-0.38	-0.40†
			(0.24)	(0.23)	(0.24)	(0.24)
State Legislature Ideology			-0.29***	-0.25***	-0.28***	-0.25***
			(0.05)	(0.05)	(0.05)	(0.05)
County Population			0.54***	0.55***	0.54***	0.55***
			(0.09)	(0.09)	(0.09)	(0.09)
Constant	-4.78***	-4.76***	-4.19***	-4.21***	-4.19***	-4.21***
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
Observations	31390	31390	27728	27728	27728	27728

Standard errors in parentheses
† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

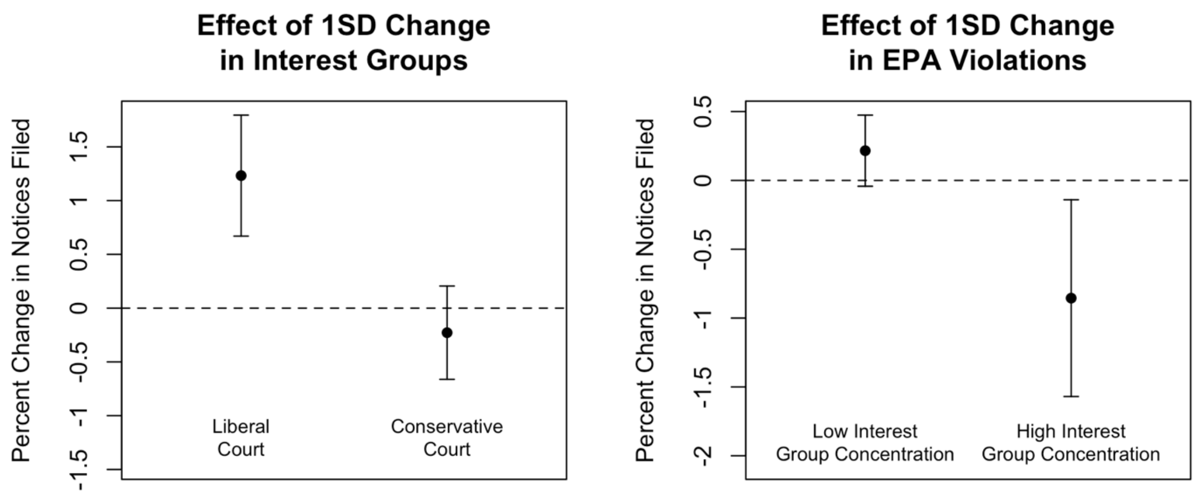

Figure 3: Effect of one standard deviation changes in variables of interest. The left panel demonstrates how liberal circuit courts have higher level of notice filings in jurisdictions where there are more interest groups. Here the "liberal court" is the most liberal court in the sample and "conservative court" the most conservative court in the sample. The right panel demonstrates that notice filings decrease where interest group concentration is high and EPA violations are low, suggesting a substitutive effect of citizen suits. Here, "Low interest group concentration" is the fifth percentile and "High interest group concentration" is the 95th percentile. All point estimates are presented with 95% confidence intervals.

Meanwhile, we are now able to adjudicate between H3a and H3b. The coefficient for the interaction between EPA violations and interest group concentration is negative and significant, indicating that where interest group concentration is high, the presence of EPA violations actually decreases notice filings. Therefore, it appears that due to the low-cost "cheap talk" of notices, at the notice stage, interest groups are engaged in some limited gap-filling by filing more often where the EPA is less active. The effect size is about 0.8%, which represents an 18% increase from baseline—this can be visualized in the right panel of Figure 3. This gap filling is consistent with previous theorizing (e.g. Greve 1990, May 2003).

These results provide evidence that interest group presence is important. The finding that repeat players make up the vast majority of potential plaintiffs and are a significant driver of litigation rates across jurisdictions is notable in the legal political science literature on private enforcement, but this unique dataset can push further to examine the plaintiff access and success in courts. The centrality of interest groups to the litigation process does not end with filing notice. The percentage of actions with interest group plaintiffs is even higher when it comes to moving beyond notification and into actual litigation. So I now turn to my examination of filing and success and the evaluation of Hypotheses 4-6.

Plaintiff Filing and Litigation Success

More citizen suit notices are made by interest groups, and interest group concentration influences filing behavior. But interest group behavior is also substantially different from the behavior of low experience, non-interest group, one-shotter plaintiffs, and the forgoing notice filing analysis cannot directly test these differences. In this section, I directly compare the strategic activity of repeat play interest groups with that of less experienced litigants. In the theory, I argue that we should observe more strategic behavior from experienced plaintiffs compared with less experienced ones. To evaluate the presence of strategic behavior as described in H4-H6, I test the influence of political variables together with plaintiff experience on the rates of filing and plaintiff success conditional on the filing of a notice of intent to sue. While notices of intent to sue are not costless, lawsuits represent more costly action by plaintiffs. The conversion from notices to lawsuit filings, therefore, sends a strong signal to polluters even before a disposition is reached. Dispositions favorable to plaintiffs can prove costly to polluters and can lead to material changes in business practices. As explained above, favorable dispositions are not just limited to judgments in favor of the plaintiff. Settlements and consent decrees likewise can yield substantial benefits to plaintiffs in the form of EBEs. AO data includes a field that codes monetary awards, but the data is insufficiently complete for analysis. Instead, I code all settlements, consent decrees, and plaintiff judgments as favorable dispositions for the plaintiff.

Rather than look at lawsuit counts across jurisdictions in this section, with the baseline of notices of intent, I can directly test filing and outcomes at the individual claim-case level. For each notice, I can identify if a case was eventually filed. For each filing, I can track the outcome. But filings and outcomes are not independent. Instead, filing decisions are likely to be affected by the same variables that determine outcomes. As I argue in the theory, litigants will condition their decision to file on their belief about winning their case. To put it another way, we only find out if a case was won if it was filed—though for unfiled cases, there is still a latent unobserved outcome. For our purposes, this counsels the use of models that account for the joint nature of the decision. Therefore, a probit model with Heckman sample selection adjustment is appropriate. The two dependent variables—filing and case outcome—are estimated within a single model. The "first stage" variable is an indicator of whether a lawsuit was filed in federal court following a notice of intent. This is an opportunity not usually available—in the absence of notice data, we only observe filings and not potential filings. About one-third of notices become filings, which provides good variation in the dependent variable. The "second stage" variable is an indicator indicating lawsuit success, as described in the preceding paragraph. Roughly half of cases are won by the plaintiff in district court. Both are regressed on covariates measuring *Circuit Court Conservatism* and *EPA Penalties* (described the previous section). I focus on penalties rather than violations in this section because of the theorized benefits that come with an EPA finding of fault, as described in the theory, beyond a simple finding of a regulatory violation. Both values are interacted in the models with the variable *Plaintiff Experience,* which is a count variable that takes the value of the number of notices of intent sent by the plaintiff in the case. If a plaintiff has only ever sent a notice of intent to sue in the present case, the experience variable would be "1." If, instead, the plaintiff is a large interest group, the value will be much larger (see Figure 1). Additionally, I again include district court ideology, and a count variable of *Attorney Experience*, which is constructed in the same manner as the *Plaintiff Experience*, but indicating how many notices the contact attorney has supervised to account for the possibility it is not the plaintiff but their representation that really matters.

Table 2: Plaintiff Filing and Success Rates

	1st Stage	2nd Stage
	Case Filed	Disposition for Plaintiff
Attorney Experience	0.03	0.21
	(0.15)	(0.24)
Plaintiff Experience	0.26**	-0.32*
	(0.09)	(0.13)
Circuit Conservatism	-0.58***	0.12
	(0.15)	(0.29)
Plaintiff Experience × Circuit Conservatism	0.33	-1.20**
	(0.35)	(0.45)
District Conservatism	0.44	-0.74
	(0.30)	(0.40)
EPA Penalties	-0.18	0.02
	(0.22)	(0.34)
Plaintiff Experience × EPA Penalties	0.67*	0.20
	(0.27)	(0.33)
Constant	-0.45***	0.60
	(0.12)	(0.42)
Year Fixed Effects	✓	✓
Plaintiff-Clustered Standard Errors	✓	✓
Rho	-0.14 (.39)	
Observations	2,907	
Selected	1,108	
Non-Selected	1,799	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The expectation, given the hypotheses above, is that greater values *Plaintiff Experience* will be associated with higher levels of filings and better plaintiff outcomes. The results shown in Table 2 support are mixed for H4. While filing rates are clearly higher for experienced plaintiffs, the evidence for win rates is mixed. While the coefficient on *Plaintiff Experience* is negative in the plaintiff disposition model, the effect of experience is subsumed into the interaction terms with judicial ideology (H5) and EPA penalties (H6), both of which are more easily interpreted through the plots in Figure 4. The filing and success rates are simple to interpret in the figure—probabilities range between zero and one, with values closer to zero indicating low probability of filing or winning and values closer to one indicating near assured probability of filing or winning. Regarding filing and win rates for high- and low-experience plaintiffs, high experience plaintiffs very clearly convert notices to formal judicial claims on a more regular basis—up to 56% of interest group notices are filed as cases, while around 32% of one-shotter notices are filed as cases before considering the effect of judicial ideology and penalties. However, win rates are more similar with low experience plaintiffs having the upper hand at about 70% to 50% for interest groups. This may suggest a certain kind of conservatism on the part of one-shotters—they are less likely to file speculative cases and therefore more likely to win. But the interactions effects tell more of the story.

The figures demonstrate a pattern of behavior which supports that idea that interest groups act strategically, while less experienced plaintiffs do not—the estimates for low experience plaintiffs are essentially flat for all values of EPA penalties and circuit court ideology. This means that regardless of the political and regulatory environment, low experience plaintiffs file the same regardless. To demonstrate, let us first turn our attention to H6, the effect of EPA regulatory action. As can be seen in the two left panels, one-shotter plaintiffs appear to have no greater success when operating where EPA penalties are high for either filings or wins. Conversely, high-experience interest group plaintiffs are substantially more likely to file a lawsuits when the EPA has done some of the legwork. In fact, in jurisdictions where existing EPA penalties are high, filings resulting from notices are practically assured. This pattern suggests one of two motivations by interest groups. Either they use EPA penalties to "piggyback" and obtain monetarily useful EBEs, or interest groups act to supplement EPA penalties that they view as too low or may even use lawsuits to obtain consent decrees that require behavioral changes from firms that are unaddressed by EPA penalties. Either way, interest group behavior is largely responsive to regulatory actions of the EPA when it comes to filing.

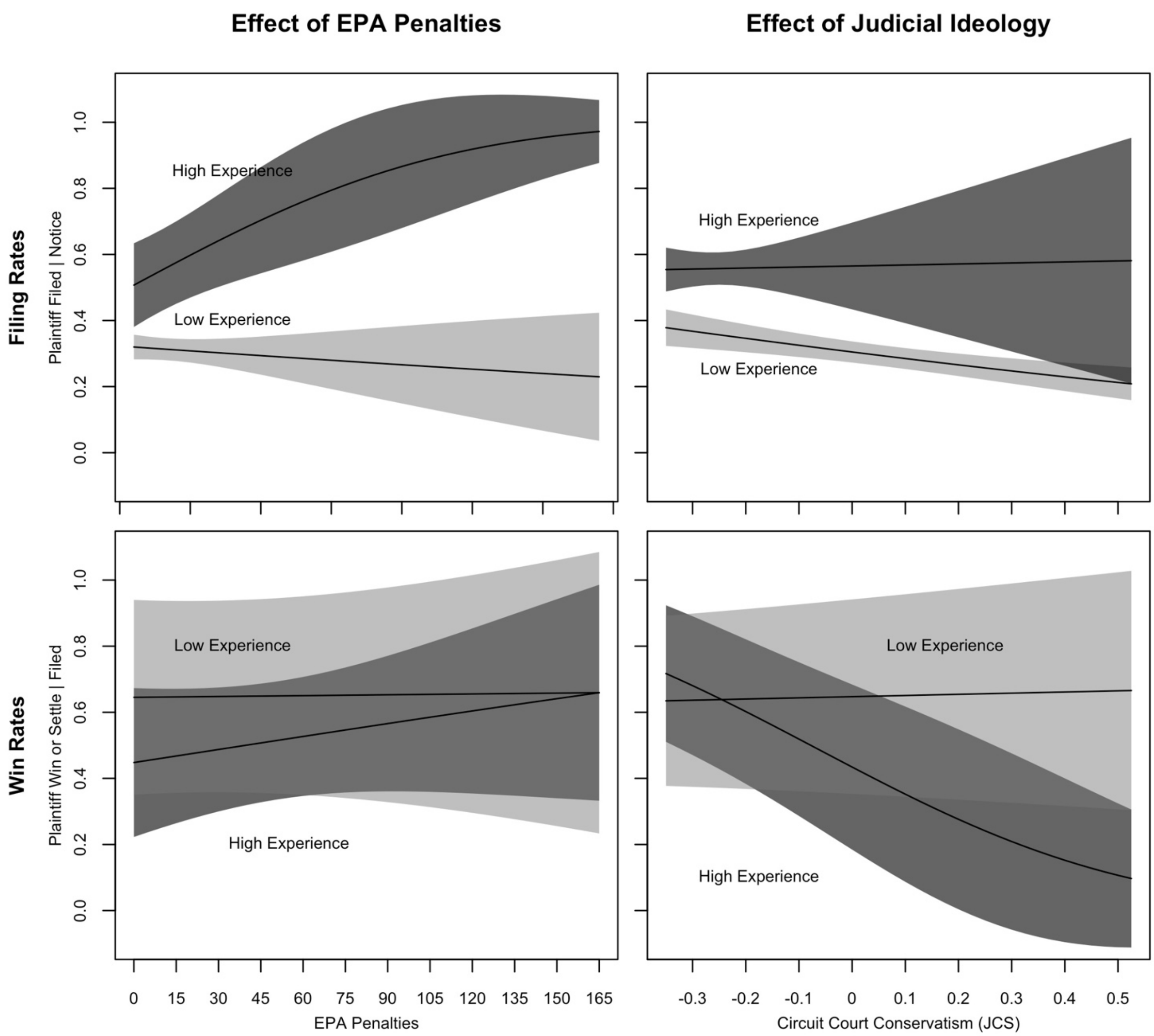

Figure 4: Plaintiff Filing and Success The figures display the estimates and 95% confidence intervals for the interactions between plaintiff experience and ideology and EPA regulatory action. High experience, in the figure, is represented by a plaintiff who has participated in 200 cases—a level reached by the two most experienced plaintiffs in the sample. Low experience are true one-shotters who file in only the case analyzed.

However, the effect of these penalties does not appear to make interest groups any more likely to win their cases. Disposition outcomes for high experience plaintiffs, however, do not appear to be affected by EPA penalties. The moderate upward slope is, perhaps, suggestive that interest groups benefit from EPA work product in the form of evidence supporting penalties, but the effect is not distinguishable from zero. Perhaps this is not surprising—when interest groups are operating in jurisdictions with high levels of EPA activity, a lawsuit filing is nearly assured, but filings drop in the absence of EPA support. That might suggest, then, that the benefits of EPA investigations are baked in at the filing stage. But for one-shotter plaintiffs, at both stages, EPA behavior has no effect. This may support the claim that environmental interest groups use EPA work product to support their own lawsuits. But there is also a possibility that this pattern results from a much greater need in areas where the EPA is active—that the "gap filling" envisioned by Senator Hart should not be conceptualized as geographic, but instead as providing additional resources in key areas. Yet, the analysis of notices of intent to sue suggest that the latter scenario is somewhat unlikely; notices do not appear to follow from where polluters are concentrated, but rather where interest groups are concentrated.

Results for judicial ideology (H5) also defied expectations to some degree. The coefficient in the filing model on the ideology variable is negative and significant, indicating fewer lawsuits are filed in conservative judicial circuits. But the core of the hypothesis is that this effect would be interactive with plaintiff experience, such that experienced plaintiffs would be more likely to file and win cases in liberal courts compared with less experienced plaintiffs. There appears to be no interactive effect of judicial ideology with experience, however, at the filing stage. Filing rates are higher for high experience plaintiffs but are unaffected by ideology. This may be because this strategic behavior is built into the notice filing stage, as we saw in the previous section. At the disposition stage, rather than high experience plaintiffs leveraging an advantage in friendly, liberal courts, it seems that the major difference between high- and low-experience plaintiffs is that high experience plaintiffs are much more likely to lose in conservative courts. The magnitude of this difference in the most conservative circuit courts is about 70% for one-shotters compared to about 12% for large interest groups, a statistically significant difference. This fits with the expectation developed in the theory that high experience, interest group plaintiffs have incentives to offer novel arguments even in conservative courts and therefore are more likely to lose those cases. It emphasizes Galanter's (1974) notion of repeat players pushing boundaries of law in order to obtain new legal rules—an idea that is consistently emphasized by scholars who have looked at how environmental interest groups leverage the law for their causes (Greve 1990, Rosenberg 1991). Where one-shotters are likely to bring cases to a conclusion only when legal arguments are grounded in existing law, large interest groups play for rules and therefore often lose in the most conservative jurisdictions.

Conclusion

These analyses confirm previous findings that plaintiffs with high levels of experience have greater success in getting successful judgments in the courts. More novel, however, is the finding that these repeat players are also much more likely to have their claims heard in court in the first place and behave more strategically in the process. The analysis suggests that those plaintiffs with greater levels of experience, like interest groups are much more likely to file in court and that, even before filing, the presence of interest groups dictates the shape of enforcement. Drawing on theories of private enforcement, interest group strategy, and judicial politics, I argued that group plaintiffs behave differently from individuals: they are sensitive to institutional context, capable of strategic forum selection, and more likely to structure remedies to advance their own goals. The empirical findings support these claims. Group plaintiffs do, in fact, target more ideologically favorable circuits when initiating litigation. While judicial ideology does not appear to systematically affect case outcomes at the merits stage, this may reflect selection effects: groups that strategically choose their venue are better positioned to win or to settle advantageously, diminishing the observable impact of judicial partisanship on final outcomes.

This paper advances several broader contributions. First, it underscores the importance of distinguishing between individual and group plaintiffs in models of private enforcement. Groups are not merely "repeat players" in the Galanter sense—they are institutional actors that shape litigation to serve long-term goals. Second, it adds nuance to our understanding of judicial ideology: courts matter, but often less at the stage of adjudication and more at the stage of access. Understanding how plaintiffs use environmental citizen suits is merely the first step in understanding the ways in which non-governmental actors can affect the development and enforcement policy through courts and the legal system. Under systems with lower personal stakes and more complex regulatory problems, fewer private individuals are going to be motivated to bring lawsuits to enforce policy. However, the question remains whether Congress could ever incentivize more private enforcement litigation even in complex policy areas. Some evidence suggests it might be difficult— amendments to the Clean Air Act in 1990 created monitoring that increased information resources and allowed for civil penalties that in some cases could be put toward pollution abatement projects (Buente1991), but the amendments yielded no discernible increase in Clean Air Act citizen suits (Smith 2004).

The political implications of these findings complicate the view of private enforcement as a neutral or technocratic tool. The dominance of environmental groups in citizen suits may reflect strategy or unequal access, but it has consequences for how environmental law is shaped. Unlike individual plaintiffs in other private enforcement regimes, like employment discrimination, environmental litigants pursue public goods without personal compensation, making organized groups essential. This shifts enforcement burdens from public agencies to civil society, raising questions about accountability and consistency. While the CWA's public enforcement mechanisms may limit under-enforcement, the frequent use of privately negotiated settlements—especially EBEs—means much enforcement occurs outside judicial or bureaucratic oversight. Rather than de-politicizing regulation, private enforcement brings new political actors into the arena, allowing organizational strategy and ideology to shape legal outcomes. In this way, private litigation doesn't just supplement bureaucratic governance—it fundamentally alters it.

Additional work may be needed, however; this analysis is unable to compare, for example, the quality of argumentation made by one-shotters and interest groups at various stages. Are one-shotter notices more often abandoned because they are frivolous? How does experience matter? This question implicates how important resources are finding violations and making strong claims. More broadly, future work might explore how these patterns vary under different environmental statutes or in other policy domains where citizen suits are common. It could also further investigate how funders, staff capacity, or regional politics shape group strategy. As administrative capacity is increasingly strained, understanding how private actors deploy legal tools will remain central to assessing the strength and direction of environmental enforcement and beyond.

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