

ENFORCING THE CLEAN WATER ACT IN THE TWENTY-FIRST CENTURY: HARNESSING THE POWER OF THE PUBLIC SPOTLIGHT

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INTRODUCTION

The modern Clean Water Act¹ (“CWA”) was passed in 1972 with goals that were both broad and ambitious. Congress called for restoring the “chemical, physical, and biological integrity of the Nation’s waters.”² The CWA sought to achieve, by 1983, water quality levels that protect fish and wildlife and recreational use of waters—in shorthand, make the waters fishable and swimmable.³ It was also intended to eliminate the discharge of toxic pollutants in toxic amounts and eliminate the discharge of any pollutants into navigable waters by 1985.⁴

At the heart of the statute is the requirement that the Environmental Protection Agency (“EPA”) adopt controls for industrial and municipal point source dischargers that reflect the best pollution control technology, considering cost and other factors, but regardless of location.⁵ This requirement is implemented through a permit system known as the National Pollutant Elimination Discharge System (“NPDES”).⁶ The EPA estimates that there are approximately 60,000 facilities nationwide that have been issued individualized wastewater NPDES permits, and another 400,000 to 550,000 that require stormwater discharge permits.⁷

Controlling point source discharges has led to impressive improvements in water quality over the past thirty years, although considerable problems and challenges remain.⁸ Prominent among these is the spotty record of gov-

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1. 33 U.S.C. §§ 1251-1376 (2000).
2. *Id.* § 1251(a).
3. *Id.* § 1251(a)(2).
4. *Id.* § 1251(a)(3).
5. *See id.* §§ 1311, 1314, 1316-17.
6. *Id.* § 1342.
7. Email from Nikos Singelis, U.S. Env’tl. Prot. Agency, Office of Wastewater Management (Feb. 4, 2004).
8. *See* William Andreen, *Water Quality Today: Has the Clean Water Act Been a Success?*, 55 ALA. L. REV. 537 (2004) (hereinafter Andreen, *Water Quality Today*) (describing significant improve-

ernment enforcement of the CWA's permitting requirements. A nationwide EPA survey in 2003, for example, found that the rates of significant non-compliance with the CWA among 6600 major facilities—those facilities with the largest discharges—was approximately twenty-five percent.⁹ At the same time, resources for water quality control programs, particularly at the state level, are scarce and creating a daunting gap between needed and available resources.¹⁰

Thirty years later, how can we strengthen enforcement of the CWA, increase rates of compliance, and move closer to achieving the statute's underlying objectives? This Article argues that legislators and policymakers looking for solutions in this resource-strapped era should harness the power of the public spotlight to enhance enforcement efforts. Part I describes the strong Congressional and public support for vigorous enforcement of the statute. Part II discusses how successfully the NPDES program currently is being implemented by the states and the EPA. The record of performance shows that there are numerous deficiencies in the permitting and enforcement programs of many states and that rates of noncompliance by regulated entities are disturbingly high. Part III describes the large resource gap affecting many state NPDES programs, including state enforcement and compliance assistance programs. Part IV discusses various spotlighting approaches that can be used to improve enforcement programs. These include (1) shining an EPA spotlight on the enforcement and compliance-related records of regulated firms; (2) shining an EPA spotlight on the performance of state NPDES programs in achieving compliance among regulated firms; and (3) requiring that publicly-traded corporations disclose more enforcement and compliance-related information to investors and the public.

I. CONGRESSIONAL AND PUBLIC SUPPORT FOR VIGOROUS ENFORCEMENT OF THE CWA

Both Congress and the public have expressed strong support for vigorous and effective enforcement of the CWA. When it originally enacted the CWA in 1972, Congress wanted a statute that would achieve results. As Professor Bill Andreen has carefully documented, strong enforcement was a central Congressional goal. Professor Andreen explains:

A major weakness of the prior federal program lay in the area of enforcement. Federal efforts to exact compliance with clean water objectives had languished for years. In fact, in over twenty years of the program's existence, only one case against a polluter had been

ments in water quality due to the CWA).

9. See U.S. ENVTL. PROT. AGENCY, OFFICE OF ENFORCEMENT & COMPLIANCE INSURANCE, A PILOT FOR PERFORMANCE ANALYSIS OF SELECTED COMPONENTS OF THE NATURAL ENFORCEMENT AND COMPLIANCE ASSURANCE PROGRAM (2003).

10. *Id.*

prosecuted in federal court. Thoroughly disenchanted by this experience, Congress set out in 1972 to ensure vigorous enforcement.¹¹

For Senator Edmund Muskie, the chief Senate architect of the bill, “[f]eeble enforcement . . . was the principal target of [his] ire.”¹² Muskie declared that “enforcement under the previous program had been so ‘spotty’ and ineffective that polluters had been able to continue spoiling the streams and lakes of the nation with apparent impunity. It was time, therefore, ‘to require . . . tougher enforcement.’”¹³ During consideration of the bill on the Senate floor, senator after senator “rose to call for tougher, more effective federal enforcement.”¹⁴

This Congressional desire for strong enforcement is reflected in numerous provisions of the statute. One, of particular note, section 309, appears to *require* the EPA to take enforcement action to remedy statutory violations, an unusually strong directive from Congress.¹⁵ Professor Andreen has persuasively argued that Congress really did intend in this section to impose mandatory enforcement duties on the EPA—to go beyond “reliance solely upon mere words exhorting vigorous enforcement; instead, Congress acted to assure it.”¹⁶ The majority of courts have not found this duty to be mandatory,¹⁷ but, in any event, the language about government enforcement is as strong as that found in any federal environmental statute.

11. William L. Andreen, *Beyond Words of Exhortation: The Congressional Prescription for Vigorous Federal Enforcement of the Clean Water Act*, 55 GEO. WASH. L. REV. 202, 203 (1987) [hereinafter Andreen, *Exhortation*]; see also *id.* at 204 (“Congress obviously thought that there had been too much talk about stringent enforcement and too little action.”).

12. William L. Andreen, *The Evolution of Water Pollution Control in the United States—State, Local, and Federal Efforts, 1789-1972: Part II*, 22 STAN. ENVTL. L.J. 215, 261-62 (2003) [hereinafter Andreen, *Evolution*].

13. *Id.*

14. Andreen, *Exhortation*, supra note 11, at 229.

15. As Professor Andreen notes, section 309(a) provides:

In the event a state-issued NPDES permit is violated, the EPA either “shall” issue a notice of violation to the state and the polluter, or “shall” issue an administrative compliance order or institute suit against the polluter. If the Agency chooses the first alternative, and appropriate state enforcement is not forthcoming within thirty days, the EPA “shall” issue an administrative compliance order or commence civil enforcement. In the event of any other relevant violation of the Act, the EPA “shall” issue a compliance order or bring a civil enforcement action. Section 309(b), on the other hand, uses discretionary language when referring to civil actions and compliance orders. It provides that the EPA is “authorized” to initiate a civil action “for any violation for which [the EPA] is authorized to issue a compliance order” under section 309(a).

Id. at 208-09.

16. *Id.* at 210. Professor Andreen interprets these provisions as requiring the EPA to issue administrative compliance orders for certain statutory violations, although retaining some limited discretion to determine whether a relevant violation has occurred, as well as discretion to select appropriate cases for enforcement. In his view, the EPA’s duty to take enforcement actions can be enforced by citizen suits. *Id.* at 210, 244-45, 256.

17. See, e.g., *Sierra Club v. Whitman*, 268 F.3d 898, 903 (9th Cir. 2001); *Sierra Club v. Train*, 557 F.2d 485, 491 (5th Cir. 1977); but see *S.C. Wildlife Fed’n v. Alexander*, 457 F. Supp. 118, 134 (D.S.C. 1978). Another recent decision lends support to the argument that the CWA imposes mandatory enforcement duties on the EPA. In this case, plaintiffs alleged that the State of Indiana had wholly failed to

When it amended the CWA in 1987, Congress strengthened the statute's enforcement provisions, granting the EPA authority to impose administrative penalties for violations and again expressing support for forceful and effective enforcement. A Senate report explains that this new authority would increase the total number of enforcement actions brought by the EPA by complementing a "vigorous" civil judicial enforcement program and providing greater deterrent value than an administrative order for relatively small violations.¹⁸ Members of Congress spoke of the bill as substantially increasing the EPA's enforcement capabilities to ensure compliance and of their desire for strong enforcement by the EPA.¹⁹ The chief Senate sponsor, Senator Chafee, for example, voiced his expectation that the EPA would use its new administrative penalty "aggressively against illegal polluters."²⁰ Senator Mitchell, who served as the minority floor manager for the bill and worked closely with Senator Chafee in developing the bill,²¹ similarly stated that the intention of the conference committee members for the EPA was to provide for "full and aggressive enforcement."²² Senator Mitchell also reflected on the strong public support for a muscular statute, noting that "[the bill's] proposals are consistent with the national consensus for clean water. The great majority of persons responding to a recent Harris survey either supported the Clean Water Act or wanted it strengthened, even considering the costs of pollution controls."²³

The EPA, under President Reagan, supported the beefing up of enforcement. EPA Administrator William Ruckelshaus testified that the "Clean Water Act will not work unless EPA and state enforcement efforts are vigorous and effective."²⁴ Assistant EPA Administrator Jack Ravan told

enforce the CWA against Concentrated Animal Feeding Operations ("CAFOs") and that, as a result, the EPA was required to take over enforcement of the act in Indiana under section 309(a)(2) of the statute. *Save the Valley, Inc. v. EPA*, 99 F. Supp. 2d 981, 985 (S.D. Ind. 2000). Section 309(a)(2) requires the EPA to take over CWA enforcement in a state "[w]henever on the basis of any information available to him, the Administrator finds that violations of permit conditions or limitations . . . are so widespread that [they] appear to result from a failure of the State to enforce such permit condition[s]." *Id.* at 983. The EPA argued that this section creates a discretionary duty only, but the court disagreed, holding "[t]he legislative history of the CWA shows that Congress intended that the public be permitted to seek enforcement of the CWA through citizen suits when state and federal agencies fail to exercise their enforcement responsibility," and that the EPA's interpretation of the "finding" requirement "would allow the Administrator to frustrate citizen enforcement of the CWA merely by refusing to issue a finding." *Id.* at 985.

18. S. REP. NO. 99-50, at 26 (1985), *reprinted in* ENVIRONMENT AND NATURAL RESOURCES POLICY DIVISION, 99TH CONG., 2 LEG. HISTORY OF WATER QUALITY ACT OF 1987, at 1447 (1988).

19. 133 CONG. REC. H161-216 (daily ed. Jan. 8, 1987) (statement of Congressman Roe), *reprinted in* ENVIRONMENT AND NATURAL RESOURCES POLICY DIVISION, 99TH CONG., 1 LEG. HISTORY OF WATER QUALITY ACT OF 1987, at 559 (1988).

20. 133 CONG. REC. S733-69, 912-18, 1003-34 (daily ed. Jan. 14, 20, 21, 1987) (statement of Senator Chafee), *reprinted in* ENVIRONMENT AND NATURAL RESOURCES POLICY DIVISION, 99TH CONG., 1 LEG. HISTORY OF WATER QUALITY ACT OF 1987, at 367 (1988).

21. *Id.* at 364.

22. *Id.* at 376 (statement of Senator Mitchell).

23. 132 CONG. REC. S16424-611 (daily ed. Oct. 16, 1986) (statement of Senator Mitchell), *reprinted in* ENVIRONMENT AND NATURAL RESOURCES POLICY DIVISION, 99TH CONG., 2 LEG. HISTORY OF WATER QUALITY ACT OF 1987, at 632 (1988).

24. *Possible Amendments to the Federal Water Pollution Control Act: Administration Testimony at*

Congress that the EPA wanted administrative penalty authority “as a complement to our enforcement tools so that we can most efficiently and effectively assure compliance with the [statute].”²⁵

In the 1987 amendments, Congress also amended the criminal penalty provisions of the CWA. Before 1987, the statute provided for criminal penalties for those who “willfully and negligently” violated the CWA. Expressing its intent to heighten enforcement efforts and create stiffer penalties for violations of CWA provisions, Congress in 1987 created two separate criminal sections: felony penalties for “knowing” violations and misdemeanor penalties for “negligent” violations.²⁶ Both Congress and the EPA noted that “[s]trong public support exists for aggressive enforcement action in cases of environmental misconduct.”²⁷ Congress also demonstrated its support for strong citizen enforcement, providing that administrative enforcement actions preclude citizen enforcement only in carefully circumscribed circumstances.²⁸ A Senate report explained that “[c]itizen suits are a proven enforcement tool. They operate . . . to both spur and supplement . . . government enforcement actions. They have deterred violators and achieved significant compliance gains.”²⁹

Since then, the public has also indicated its strong support for vigorous environmental enforcement. A 1991 survey, for example, found that by a 78% to 18% margin, the public supports criminal sanctions for responsible corporate officials when companies are found guilty of deliberately violating pollution laws (the same margin supports such legal provisions for government officials responsible for deliberate violations).³⁰ A 1996 survey found that 82% of the public believes either that current environmental laws need to be made tougher (28%) or that better enforcement is needed

House Hearings Before the Subcomm. on Water Res. of the Comm. on Pub. Works & Transp., 98th Cong. (1983) (statement of William D. Ruckelshaus, Administrator, EPA), reprinted in ENVIRONMENT AND NATURAL RESOURCES POLICY DIVISION, 99TH CONG., 3 LEG. HISTORY OF WATER QUALITY ACT OF 1987, at 2007 (1988).

25. *Amending the Clean Water Act: Hearing on S.53 and S.652 Before the Subcomm. on Water Res. of the Senate Comm. on Pub. Works*, 98th Cong. (1985) (statement of Jack E. Ravan, Assistant Administrator for Water, EPA), reprinted in ENVIRONMENT AND NATURAL RESOURCES POLICY DIVISION, 99TH CONG., 2 LEG. HISTORY OF WATER QUALITY ACT OF 1987, at 1646 (1988).

26. *United States v. Premcor Refining Group, Inc.*, 2001 WL 1335734, *3 (N.D. Ill. June 8, 2001). The courts have held that knowing violations do not require specific intent but that Congress sought to impose liability on an individual who knowingly engages in conduct that results in a permit violation, regardless of whether the person knew what the permit required or that his conduct was illegal. *See, e.g., United States v. Weitzenhoff*, 35 F.3d 1275, 1284 (9th Cir. 1993).

27. S. REP. NO. 99-50, at 30 (1985), reprinted in ENVIRONMENT AND NATURAL RESOURCES POLICY DIVISION, 99TH CONG., 2 LEG. HISTORY OF WATER QUALITY ACT OF 1987, at 1451 (1988); *supra* note 24, at 2008 (testimony of EPA Administrator Ruckelshaus).

28. Specifically, the statute provides that administrative penalty orders preclude citizen enforcement actions where the EPA or the state has issued a final order and the violator has paid a penalty assessed under the CWA or “such comparable state law.” 33 U.S.C. § 1319(g)(6)(A)(iii). However, citizen actions filed within 120 days of the date that notice is provided are not precluded by administrative penalty orders. *Id.* § 1319(g)(6)(B)(ii).

29. S. REP. NO. 99-50, at 28 (1985), reprinted in ENVIRONMENT AND NATURAL RESOURCES POLICY DIVISION, 99TH CONG., 2 LEG. HISTORY OF WATER QUALITY ACT OF 1987, at 1449 (1988).

30. U.S. ENVTL. PROT. AGENCY, ENVIRONMENT OPINION STUDY, INC. (SECOND NATIONAL SURVEY), PUBLIC ATTITUDES ON THE ENVIRONMENT (June 1991).

(54%).³¹ Only 15% responded to the contrary, either that the laws and enforcement are at the right levels (7%) or that the laws are too tough (8%).³² These results were closely replicated in another study four years later.³³ Other recent survey results are equally pro-enforcement. Gallup polls, for example, found that by overwhelming margins (75% to 21% in 2003, 77% to 20% in 2001), the public favors “more strongly enforcing federal environmental regulations.”³⁴

Surveys also suggest that the public supports stronger environmental standards, including standards affecting water pollution. In a 1996 poll, for example, a significant majority (73%) said that water pollution laws generally have not gone far enough.³⁵ A Gallup poll conducted in 2000 found that 58% of the public believed the federal government was doing “too little” to resolve environmental problems (only 10% said it was doing “too much”).³⁶ The survey found that close to two thirds of those polled believed that “only some progress” had been made in dealing with environmental problems.³⁷ A 2001 Gallup survey found that 88% of those surveyed personally worried about water pollution—62% a great deal and 26% a fair amount.³⁸ And a Gallup poll in 2003 found that an overwhelming majority of the public (80% to 19%) favors setting higher emission and pollution standards for business and industry.³⁹

31. Belden & Russonello, *The Ecology*, Feb. 29-Mar. 12, 1996 (n = 2005 adults nationwide), Q37, available at LEXIS, News & Business Library, Public Opinion Online File, Accession No. 0286490.

32. *Id.*

33. That survey found that 81% of the public believes either that our environmental laws are not strong enough and tougher laws should be enacted (25%) or that current laws are tough enough but they are not enforced and that they should be strictly enforced (56%). Tarrance Group & Greenberg-Quinlan Research, Inc., Nov. 12-19, 2000 (n = 1200 national registered voters), Q27, available at <http://www.greenbergresearch.com/publications/reports/fqlcvefpoll111200.pdf>. By contrast, 16% believe either that current laws and enforcement are fine (13%) or laws and enforcement are too strict and should be relaxed (3%). *Id.*

34. Gallup Organization, March 3-5, 2003 (n = 1003 adults nationwide), Q9, available at LEXIS News & Business Library, Public Opinion File, Accession No. 0428056; Gallup Organization, March 5-7, 2001 (n = 1000 adults nationwide), Q19, available at LEXIS, News & Business Library, Public Opinion File, Accession No. 0380807. Another poll, conducted in 2001 after the Bush Administration announced a reorganization of the Department of Justice to focus more on terrorist threats and less on environmental enforcement, found that by a margin of 64% to 27%, the public opposed relaxing enforcement of safe drinking water and clean air laws to focus on threats like anthrax. Frank O'Donnell, *In Apparent Rebuke to Ashcroft, Public Overwhelmingly Rejects Easing Environmental Enforcement*, CLEAN AIR TRUST, at <http://www.cleanairtrust.org/release.112001.html> (Nov. 20, 2001).

35. NAT'L ENVTL. EDUC. & TRAINING FOUND., REPORT CARD: ENVIRONMENTAL ATTITUDES AND KNOWLEDGE IN AMERICA 31-33 (1996) (citing Roper and Starch survey).

36. DEBORAH LYNN GUBER, *THE GRASSROOTS OF A GREEN REVOLUTION: POLLING AMERICA ON THE ENVIRONMENT* 22 (2003).

37. *Id.* at 52.

38. *Id.* at 40 (quoting 2001 Gallup poll).

39. Gallup Organization, March 3-5, 2003 (n = 1003 adults nationwide), Q11, available at LEXIS, News & Business Library, Public Opinion Online File, Accession No. 0428058.

II. THE PERFORMANCE GAP IN NPDES PROGRAMS

Thirty years after the CWA was adopted, how well is the NPDES program working? How effective have the states and the EPA been in achieving bottom line results—compliance with permit requirements?

Like most federal environmental statutes, the CWA operates under a “cooperative federalism” framework. Under this model, the federal government sets national standards and is ultimately responsible for ensuring achievement of these requirements, but states can receive authorization from the EPA to implement the program under the EPA’s oversight. To obtain authorization, states must enact standards at least as stringent as federal law and demonstrate that they have adequate personnel, enforcement authorities, and other capacity to administer the program.⁴⁰ Forty-five states have received full or partial authorization from the EPA to implement the NPDES program.⁴¹

The record of state and EPA performance under this cooperative federalism framework shows that while we have made important strides, we are still far from achieving the ambitious goals set by Congress.

For example, many states and the EPA do not promptly renew and update permits once they expire.⁴² Facilities with outdated permits may operate with weak or inadequate controls. As of September 2003, the EPA reported that approximately 15% of major facilities and one third of minor facilities were operating with outdated permits.⁴³ That is an improvement from prior years; the EPA estimated in 2002, for example, that 20% of major facility permits had expired.⁴⁴ In some states the percentage of outdated permits is much higher, such as Indiana (41%), Missouri (34%), and Louisiana (30%).

Noncompliance with permit requirements also has been a longstanding problem, one that continues today. A 1982 General Accounting Office (“GAO”) report based on over 500 facilities, for example, found that 82% of these dischargers had violated their permits at least once during a two-year period and that 24% of these polluters were in significant noncompliance with CWA requirements.⁴⁵ Significant noncompliance is defined for toxic pollutants as exceeding an average monthly limit by 20% or more in

40. See, e.g., 33 U.S.C. § 1342(b); 40 C.F.R. §§ 123.22-.64 (describing authorization requirements for state administration of NPDES program).

41. U.S. ENVTL. PROT. AGENCY, NPDES STATE PROGRAM STATUS, at <http://cfpub.epa.gov/npdes/statestats.cfm> (last modified Apr. 14, 2003).

42. 5 U.S.C. § 558(c) (2000). The Administrative Procedure Act allows a facility to continue operating under the terms of an expired permit if it filed a timely renewal application. *Id.*

43. This figure is for minor facilities that have individual permits, not those that are covered by general permits. U.S. ENVTL. PROT. AGENCY, BACKLOG STATUS REPORT FOR MINOR FACILITIES, at <http://cfpub.epa.gov/npdes/permitissuance/backlog.cfm> (last modified Oct. 17, 2003). For minor facilities covered by general permits, approximately 19% of permits are outdated. *Id.*

44. U.S. ENVTL. PROT. AGENCY, BACKLOG STATUS REPORT FOR MAJORS—JANUARY 2002 (Jan. 2002) (copy on file with author).

45. U.S. GEN. ACCT. OFFICE, WASTEWATER DISCHARGERS ARE NOT COMPLYING WITH EPA POLLUTION CONTROL PERMITS 7 (1983), quoted in Andreen, *Exhortation*, *supra* note 11, at 205.

any two months of a six-month period and for conventional pollutants as exceeding an average monthly limit by 40% in any two months of a six-month period.⁴⁶ A 1993 study evaluating the CWA's first twenty years concluded:

[I]nadequate enforcement is [a] major problem with both the NPDES and pretreatment programs. Study after study has documented that dischargers, both direct and indirect, violate the law repeatedly and flagrantly—and get away with it nearly all the time In addition to reported instances of noncompliance, many facilities fail to meet Clean Water Act requirements, masked through the fiction of their placement on “schedules of compliance” through the enforcement process [P]enalties, when they are assessed, are too low to offer [a] meaningful incentive to comply.⁴⁷

More recent studies reach similar conclusions. For instance, the GAO found that in fiscal years 1992-1994, one in six major facilities was in significant noncompliance with its permit limits and that the actual number could be twice as high.⁴⁸ A series of investigations by public interest groups have found similar results. For example, a review by the U.S. Public Interest Research Group (“PIRG”) found that nearly 30% of major facilities examined were in significant noncompliance during at least one quarter from January 1, 2000 to March 31, 2001.⁴⁹ A later analysis found that over 5000 major facilities, or 81%, violated their permits at least once in the years from 1999 to 2001, a total of 88,000 exceedances.⁵⁰

In early 2003, the EPA conducted a detailed nationwide analysis of compliance by major facilities.⁵¹ The report showed that approximately 25% of major facilities were in significant noncompliance with their CWA per-

46. U.S. GEN. ACCT. OFFICE, WATER POLLUTION: MANY VIOLATIONS HAVE NOT RECEIVED APPROPRIATE ENFORCEMENT ATTENTION 3 (1996) [hereinafter GAO, WATER POLLUTION].

47. ROBERT W. ADLER ET AL., THE CLEAN WATER ACT: 20 YEARS LATER 166-68 (1993).

48. GAO, WATER POLLUTION, *supra* note 46, at 4, 7.

49. U.S. PUB. INT. RES. GROUP, PERMIT TO POLLUTE: HOW THE GOVERNMENT'S LAX ENFORCEMENT OF THE CLEAN WATER ACT IS POISONING OUR WATERS 6 (2002), available at <http://uspirg.org/reports/permittopollute2002.pdf> (Aug. 2002). A study two years earlier found virtually identical results from September 1997 to December 1998, *see* U.S. PUB. INT. RES. GROUP, POISONING OUR WATER: HOW THE GOVERNMENT PERMITS POLLUTION 137 (2000), while an earlier review found that during a fifteen-month period from 1995 to early 1996, close to 20% of major dischargers were in significant noncompliance in at least one quarter and that 21% of major industrial dischargers exceeded their discharge limits by 50% or more during the first quarter of 1996, *see* U.S. PUB. INT. RES. GROUP, DIRTY WATER SCOUNDRELS: STATE-BY-STATE VIOLATIONS OF THE CLEAN WATER ACT BY THE NATION'S LARGEST FACILITIES (1997).

50. U.S. PUB. INT. RES. GROUP, IN GROSS VIOLATION: HOW POLLUTERS ARE FLOODING AMERICA'S WATERWAYS WITH TOXIC CHEMICALS 9 (2002), available at http://uspirg.org/reports/ingrossviolation2002/ingrossviolation_Revised_10_25_02.pdf (Oct. 25, 2002).

51. This includes facilities regulated by states authorized to implement the NPDES program and by EPA regional offices in states that have not received authorization to implement the program. *See* U.S. ENVTL. PROT. AGENCY, OFFICE OF ENFORCEMENT & COMPLIANCE ASSURANCE, A PILOT FOR PERFORMANCE ANALYSIS OF SELECTED COMPONENTS OF THE NATIONAL ENFORCEMENT AND COMPLIANCE ASSURANCE PROGRAM (2003) [hereinafter EPA, PILOT FOR PERFORMANCE ANALYSIS].

mits at any given time. It noted that rates of significant noncompliance have effectively remained steady since 1994.⁵² The violations, moreover, are of a magnitude with potentially serious environmental impacts. Half of the permit exceedances for toxic discharges were more than twice the permitted levels; 13% of the exceedances were greater than 1000% over permitted levels.⁵³ For conventional pollutants, the exceedances are also high; one third of the exceedances were twice permitted levels.⁵⁴

The same EPA study also found that levels of CWA enforcement activity have been declining. From 1999 to 2001, the number of state and EPA inspections decreased by 8%.⁵⁵ The number of EPA and state formal enforcement actions dropped by 11%, and the number of informal actions declined by 50%.⁵⁶ During this period, only 24% of significant violations resulted in a formal enforcement response.⁵⁷ Additionally, a low percentage (9%-13%) of enforcement actions are carried out in a "timely and appropriate" fashion, only about 40% of formal actions result in penalties, and average penalties imposed are low, between \$5000 and \$6000 per action.⁵⁸ On the other hand, between 1999 and 2001, there was an increase in the percentage of enforcement actions resulting in pollutant reductions.⁵⁹ Interestingly, the study found a modest association between levels of enforcement activity and compliance rates, both among EPA regions and states. For example, fourteen of twenty-four states (58%) with the worst overall compliance records also had the lowest enforcement activity levels, while fourteen out of twenty-three states (61%) with the lowest activity levels also had the worst overall compliance records.⁶⁰

52. *Id.* at 1, 7, 11-12. The raw data shows an increase in the rate of significant noncompliance between 1994 and 1997, but this is due to changes in the definition of significant noncompliance. *Id.* at 2. Of the 25% in significant noncompliance, 16% to 29% remained in that status for two years or longer. Major facilities include industrial, municipal, and federal facilities. *Id.* at 7.

53. *Id.* at 6-7, 11-12.

54. *Id.* at 6-7.

55. *Id.* at 17-19. For all environmental media, EPA inspections have declined over the past five years, by about 24% since 1998, and 12% since 2000. *Summary of EPA Enforcement Statistics for Fiscal Year 2002*, 34 ENVTL. REP. 332, 334 (Feb. 7, 2003).

56. See EPA, PILOT FOR PERFORMANCE ANALYSIS, *supra* note 51, at 17-19. The study looked at the combined total of EPA informal actions, state informal actions, and EPA formal actions. *Id.* at 17. Informal responses are those without legal force, designed simply to bring the violator into compliance. *Id.* They include phone calls, site visits, warning letters, and notices of violations. *Id.* Formal responses have legal effect and are accompanied by procedural safeguards to protect regulated entities. *Id.* They can include administrative, civil, or criminal actions. *Id.* A 2003 Knight-Ridder investigation found that in approximately the first three years of the Bush Administration, the EPA averaged 35 notices of CWA violations per month, compared to approximately 134 notices per month during the Clinton Administration and the first Bush Administration (a 74% decline). Seth Borenstein, *Far Fewer Polluters Punished Under Bush Administration, Records Show*, COMMON DREAMS NEWS CTR., at <http://www.commondreams.org/headlines03/1209-02.htm> (Dec. 9, 2003).

57. See EPA, PILOT FOR PERFORMANCE ANALYSIS, *supra* note 51, at 17-19.

58. *Id.* at 3.

59. *Id.* at 7.

60. *Id.* at 27. Likewise, three of five EPA regions with the worst overall compliance records also had the lowest relative activity levels, while two of the five regions with the lowest activity levels also had the worst compliance records. *Id.*

Numerous other studies have pointed out serious weaknesses in many state enforcement programs, including failure to carry out inspections, failure to take timely and appropriate enforcement actions, and failure to obtain meaningful penalties, including penalties that recover the economic benefit of noncompliance.⁶¹ A report by a PIRG research foundation lists some recent examples:

In Wisconsin, a 2001 study by a non-profit group found that only 10 percent of municipal and industrial facilities in significant noncompliance with their water discharge permits were sent notices of violation—the first step in the formal enforcement process—by the state’s Department of Natural Resources between 1990 and 1998. Of that number, only one-quarter were referred for prosecution

Maryland auditors investigated the resolution of 13 consent orders negotiated between state environmental officials and Clean Water Act violators. In five cases, the violator failed to take promised corrective action, yet state officials did not levy additional penalties. In one case, a polluter agreed to submit a plan for corrective action by the fall of 1997 and pay a fine of \$100 per day for each day the plan was late. The discharger did not submit the plan and the state did not assess the fine. The facility went on to register 13 more violations of its discharge limits over the next two and a half years before the state finally took additional enforcement action in 2000.

A 1999 review [by EPA] of New Hampshire’s environmental enforcement efforts found that the state relied heavily on informal enforcement practices and that penalties were sought against only a few of the worst violators each year. The review found “an institutional reluctance to pursue formal enforcement” in the state’s water pollution control program.⁶²

Similarly, the Minnesota Pollution Control Agency reported in 2003 that approximately 18% to 31% of Minnesota’s major facilities have been in significant noncompliance in recent years and that 45% of major facilities exceeded effluent limits at least once.⁶³ In addition, 6% of facilities never submitted required discharge monitoring reports (“DMRs”), and many

61. For a general discussion, see Clifford Rechtschaffen, *Competing Visions: EPA and the States Battle for the Future of Environmental Enforcement*, 30 ENVTL. L. REP. 10,803, 10,807-09 (2000).

62. TONY DUTZIK, PIRG FOUNDATION, *THE STATE OF ENVIRONMENTAL ENFORCEMENT: THE FAILURE OF STATE GOVERNMENTS TO ENFORCE ENVIRONMENTAL PROTECTIONS AND PROPOSALS FOR REFORM* 17, 19, 24, available at http://www.environmentcolorado.org/reports/envenfco10_02.pdf (Oct. 2002).

63. MINNESOTA POLLUTION CONTROL AGENCY, *PROGRESS REPORT: WASTEWATER POINT SOURCE PERMITTING, COMPLIANCE AND ENFORCEMENT* 16 (Feb. 2003) (citing 2002 report by Office of Legislative Auditor), available at <http://www.pca.state.mn.us/hot/legislature/reports/2003/index.html>.

DMRs that were submitted were incomplete. The percentage of permitted facilities inspected declined from 32% in 1995 to 17% in 2000 and 12% in 2001.⁶⁴ An evaluation prepared by the University of Maryland Law Clinic in 2002 concluded:

[The Maryland Department of Environment] does not have anywhere near enough inspectors to track compliance at major sources of air and water pollution. As a result of this shortfall and policy decisions made by the Department's leadership over the last several years, MDE has de-emphasized traditional enforcement, creating a climate that does not effectively deter violations, especially in circumstances where compliance is costly.⁶⁵

In Louisiana, a recent report by the Legislative Auditor's Office documented wholesale failures in the state's enforcement program.⁶⁶ It found that the state failed to conduct required inspections for 31% of minor facilities, that 26% of required self-monitoring reports for water were either not submitted or could not be located,⁶⁷ that 80% of water enforcement actions were not filed in a timely fashion, and that the department had not collected 58% of the monetary penalties assessed for water quality violations in fiscal years 1999 to 2001.⁶⁸

While the above illustrations provide an overall picture, it is worth emphasizing that state CWA programs are far from monolithic and that some states have strengthened their enforcement and compliance laws in recent years. New Jersey and California, for example, have both enacted laws requiring that agencies impose penalties for repeat, serious violations of water pollution requirements.⁶⁹ At least some anecdotal evidence suggests that

64. *Id.*

65. JENNIFER ABBRUZZESE ET AL., KEEPING PACE: AN EVALUATION OF MARYLAND'S MOST IMPORTANT ENVIRONMENTAL PROBLEMS AND WHAT WE CAN DO TO SOLVE THEM, EXECUTIVE SUMMARY 4 (2003), available at http://www.law.umaryland.edu/environment/Senator_Brian_Frosh_Report.pdf (Dec. 18, 2002).

66. ST. OF LA. LEGIS. AUDITOR, DEP'T OF ENVTL. QUALITY, PERFORMANCE AUDIT 6 (2002), available at <http://www.lla.state.la.us/perform/DEQ02.pdf>.

67. *Id.* at 19.

68. *Id.*

69. New Jersey's law, adopted in 1990, provides for mandatory minimum penalties for serious violations and significant noncompliance. N.J. STAT. ANN. §§ 58:10A-10.1 (West 1992). A serious violation is an exceedance of an effluent limit by 20% or more for hazardous pollutants and 40% or more for non-hazardous pollutants. *Id.* § 58:10A-3v. A significant noncomplier is a permittee who (1) commits a serious violation for the same pollutant at the same discharge point in any two months of any six-month period; (2) exceeds the monthly average in any four months of the six-month period; or (3) fails to submit a completed discharge monitoring report in any two months of any six-month period. *Id.* § 58:10A-3w. New Jersey's law also requires annual inspections of permitted facilities and inspections of facilities at which significant noncompliance is identified within sixty days. California's law, first adopted in 1999, requires minimum fines of \$3000 for serious or repeat violations of state water pollution control requirements. CAL. WATER CODE § 13385(h)-(i) (West supp. 2004). Serious violations include discharges that are 20% or 40% in excess of effluent limits, depending on the pollutant, as well as failure to file certain discharge monitoring reports. *Id.* § 13385(h)(2). In 2003, California expanded the reach of this law to cover noncompliance with additional reporting requirements. 2003 CAL. LEGIS.

these laws have improved compliance. According to the New Jersey Department of Environmental Protection, since the early 1990s, the number of total violations, serious violations, and instances of significant noncompliance have dropped by amounts ranging from 80% to 90%.⁷⁰ Likewise, according to an analysis by Environment California, between 2000 and 2002 (following enactment of the state's mandatory penalty law), there was a 41% reduction in the number of clean water permit violations in California.⁷¹

Besides weak enforcement by states, compliance efforts also are impeded by limitations in EPA's data management systems. For instance, a 2002 audit by EPA's Inspector General found that "EPA's Permit Compliance System—its national permitting and enforcement system—was incomplete, inaccurate and obsolete Hundreds of thousands of dischargers were not monitored by the system."⁷² The report estimated that EPA lacks data on an estimated 96% of storm water discharges, 65% of discharges from concentrated animal feeding operations, and thousands of minor dischargers.⁷³ It also noted the failure of officials in the states examined to identify significant violators by major sources. These findings were confirmed in another Inspector General report a year later, which found that EPA had made slow progress in fixing the flaws in the system.⁷⁴ (Eighteen states use EPA's computer system as their primary tool for enforcing the CWA.)

Moreover, many states fail to fully monitor the condition of their water bodies as required by the CWA. For instance, according to the EPA, as of 1998, states have assessed water quality for only 23% of the nation's rivers and streams; 42% of its lakes, ponds, and reservoirs; and 32% of its estuaries.⁷⁵ Even for those water bodies that have been assessed, the data is often unreliable and inconsistent across states (or even over time within the same state). The GAO found in 2000 that only six states reported that they had a

SERV. 609 (West) (A.B. 1541).

70. N.J. DEP'T OF ENVTL. PROT., 1998 ANNUAL REPORT OF THE CLEAN WATER ENFORCEMENT ACT 19-34 (1999). The 1998 report shows decreases from 1992 to 1998 in serious violations, instances of significant noncompliance, and penalties assessed, and decreases from 1993 to 1998 in total violations and enforcement actions. *See id.* The report also credits the department's expanded compliance assistance activities for playing a significant role in improving compliance. *Id.* at 32.

71. Assembly Floor Analysis, A.B. 1541, *available at* http://info.sen.ca.gov/pub/bill/asm/ab_1501-1550/ab_1541_cfa_20030910_014035_asm_floor.html (Sept. 2, 2003). Environment California was the prime supporter of the legislation. *Id.*

72. OFFICE OF INSPECTOR GEN., U.S. ENVTL. PROT. AGENCY, WATER ENFORCEMENT: STATE ENFORCEMENT OF CLEAN WATER ACT DISCHARGES CAN BE MORE EFFECTIVE 38 (2001) [hereinafter EPA, WATER ENFORCEMENT], *available at* <http://www.house.gov/georgemiller/cwaenforce.pdf>.

73. *Id.* at 19-21. Although many states were developing their own systems, they did not fill the information void. *Id.* at ii.

74. OFFICE OF INSPECTOR GEN., U.S. ENVTL. PROT. AGENCY, EPA SHOULD TAKE FURTHER STEPS TO ADDRESS FUNDING SHORTFALLS AND TIME SLIPPAGES IN PERMIT COMPLIANCE SYSTEM MODERNIZATION EFFORT (2003), *available at* http://www.epa.gov/oigearth/reports/2003/20030520_2003-M-00014.pdf.

75. OFFICE OF WATER, U.S. ENVTL. PROT. AGENCY, THE QUALITY OF OUR NATION'S WATER: A SUMMARY OF THE NATIONAL WATER QUALITY INVENTORY: 1998 REPORT TO CONGRESS 5 (2000), *available at* <http://www.epa.gov/305b/98report/98brochure.pdf> (Jan. 2000).

majority of the data needed to assess whether their waters meet water quality standards.⁷⁶

In theory, flaws in state implementation of the CWA should be remedied by the EPA in its role of overseeing state programs. In practice, however, the EPA has had only limited success in promoting better state performance. Numerous studies show that EPA oversight of state programs has been inconsistent and not particularly effective, for a variety of reasons.⁷⁷ In some cases, regional EPA administrators and regional EPA offices (the primary interlocutors with the states) feel loyalties to and develop close relationships with the states that they oversee;⁷⁸ in other cases, they may feel intimidated by the prospect of tangling with governors or state congressional delegations. Some oversight tools, such as “overfiling” and withdrawing authority for poorly performing states, are so politically charged and resource-intensive that they are rarely used by the EPA.⁷⁹ Other traditional oversight techniques also have not been especially effective.⁸⁰ To cite one among many recent examples, earlier this year EPA’s Inspector General found that despite well-documented problems with Louisiana’s water (and air and hazardous waste) programs, as noted above, the EPA’s regional office lacked a plan for conducting oversight of the state’s programs, did not hold the state accountable for meeting its commitments or escalate oversight in response to poor performance, and did not ensure that data submitted by the state was accurate.⁸¹

76. EPA, WATER ENFORCEMENT, *supra* note 72, at 12.

77. See CLIFFORD RECHTSCHAFFEN & DAVID L. MARKELL, REINVENTING ENVIRONMENTAL ENFORCEMENT AND THE STATE/FEDERAL RELATIONSHIP 117-19, 168 (2003).

78. *Id.* at 118-19. As Professor Joel Mintz has observed, the attitudes and preferences of regional EPA administrators are often significantly shaped by state politicians and state environmental officials, whose support helped them get appointed in the first place. JOEL MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES 13, 74-75 (1995).

79. Overfiling refers to the filing of a suit by the EPA against an alleged violator even though the state has already initiated its own enforcement action against the party alleging the same violation(s). The EPA appears to overfile in approximately 0.1% to 0.3% of federal enforcement actions. RECHTSCHAFFEN & MARKELL, *supra* note 77, at 339. In approximately the first three years of the Bush Administration, the EPA overfiled in six cases (none of them under the CWA). E-mail from Gary Jonesi, Senior Counsel for Strategic Litigation, Office of Regulatory Enforcement, EPA (Nov. 24, 2003) (listing overfilings initiated by the EPA from January 20, 2001 to November 24, 2003) (copy on file with author). The EPA has rarely if ever actually withdrawn a state’s authorization. RECHTSCHAFFEN & MARKELL, *supra* note 77, at 330.

80. RECHTSCHAFFEN & MARKELL, *supra* note 77, at 289.

81. OFFICE OF INSPECTOR GEN., U.S. ENVTL. PROT. AGENCY, EPA REGION 6 NEEDS TO IMPROVE OVERSIGHT OF LOUISIANA’S ENVIRONMENTAL PROGRAMS 3-11 (2003), available at <http://www.epa.gov/oig/reports/2003/2003-p-0005.pdf>. In October 2001, the Tulane Environmental Law Clinic filed a petition with the EPA requesting that it withdraw authorization for Louisiana’s water program. Mark Schleifstein, *EPA Puts Pressure on State DEQ*, TIMES-PICAYUNE, Feb. 15, 2003, at 1, available at 2003 WL 3993211. In February 2003, the EPA informed Louisiana that unless it made a series of improvements to its water program, the EPA would consider initiating withdrawal proceedings. *Id.*

III. THE RESOURCE GAP IN NPDES PROGRAMS

At the same time that state NPDES programs are falling short in their performance, resources available to them are growing scarcer. While state environmental spending grew rapidly during the late 1980s and mid-1990s,⁸² the rate of spending increases slowed in the late 1990s.⁸³ In 2001, the impact of the recession hit the states, leading to major budget shortfalls and cutbacks in spending on environmental protection. The Environmental Council of States (“ECOS”), an organization of state and territorial environmental commissioners, found that in fiscal year 2002, thirty of forty-two states responding to its survey were forced to cut their environmental budgets, by an average of six percent.⁸⁴ Operating budgets absorbed about three quarters of the cuts. Staff actions—leaving a position vacant or instituting a hiring freeze—were the most commonly mentioned ways for meeting the budget reductions. More cuts were made in fiscal year 2003, as overall state spending on environmental protection and natural resources programs dropped by another 1.6%.⁸⁵ ECOS reports that states spent 1.4% of their total state budgets on environmental protection and natural resources in 2003; this is the lowest percentage in the seventeen years that ECOS (or similar groups) has been calculating these numbers.⁸⁶ Notably, federal contributions to state programs have increased significantly in the past few years, from \$3.75 billion in 1999 to \$5 billion in 2003.⁸⁷ Absent these additional contributions, state program cuts would have been far more precipitous.

These cuts are unwelcome at any time and for any program, but the effects are particularly acute given the glaring resource needs of state water programs, including NPDES programs. In the late 1990s, a state/EPA task force undertook a major project to measure states’ spending on water quality programs and forecast their resource needs for fully implementing the CWA’s requirements.⁸⁸ The study (known as the “State Water Quality

82. ECOS estimates that from 1986 to 1996, state spending on environmental and natural resource programs increased from \$5.2 billion to \$12.5 billion. R. Steven Brown, *The States Protect the Environment*, ECOSTATES, Summer 1999, available at <http://www.sso.org/ecos/publications/statesarticle.htm>.

83. R. Steven Brown, *Coping With the Budget Crunch: When the Axe Falls: How State Environmental Agencies Deal with Budget Cuts*, ECOSTATES, Winter 2002, at 16, available at <http://www.sso.org/ecos/ECOSTatesArticles/brown.pdf> [hereinafter Brown, *Coping*]; R. Steven Brown, *States Put Their Money Where Their Environment Is*, ECOSTATES, Spring 2001, at 22, 26, available at <http://www.sso.org/ecos/ECOSTatesArticles/rsbrown.pdf>.

84. Brown, *Coping*, *supra* note 83, at 16, 17.

85. R. Steven Brown & Michael J. Kiefer, *ECOS Budget Survey: Budgets are Bruised, but Still Strong*, ECOSTATES, Summer 2003, at 10, available at <http://www.sso.org/ecos/ECOSTatesArticles/Summer%202003%20ECOSTates.pdf>.

86. *Id.*

87. *Id.* at 15. During this period, the federal share of total state environmental and natural resources spending increased from 25% to 33%. *Id.*

88. Ass’n of St. & Interstate Water Pollution Control Adm’rs, *State Water Quality Management Resource Analysis: Interim Report on Results* (Apr. 1, 2002), available at <http://www.asiwpca.org/programs/docs/gap.pdf>. Approximately thirty-seven states responded to a survey about their actual expenditures, and twenty-two provided information needed to complete an exten-

Management Resource Analysis” or the “Gap Analysis” for short) estimated that state resource needs were in the range of \$1.54 billion to \$1.68 billion; that state expenditures were in the range of \$722 million to \$805 million; and that the resulting gap between needs and expenditures is between \$735 million and \$960 million.⁸⁹ Overall, state agencies are receiving less than one-half of the resources they need to fully implement the statute’s requirements.⁹⁰ ECOS reported similar results in 2003, estimating that in fiscal year 2002, the gap between funding and state resource needs for water quality programs was \$800 million.⁹¹ The Gap Analysis and a very similar but slightly updated survey by the National Academy of Public Administration (“NAPA”) reported that funding for state programs comes from a variety of sources. According to the NAPA survey, 37% came from state revenues; 37% from federal contributions; 19% from fee revenues; and 6% from other sources (e.g., special funds, special taxes, bond funds, etc).⁹²

The budget woes of the states have prompted some to consider returning authorization of their programs to EPA. For example, according to a news report in August 2003, officials at a meeting of EPA’s Environmental Financial Advisory Board reported that Missouri, Kansas, and Iowa officials were considering returning their NPDES programs back to the EPA.⁹³ (Also, in Missouri, during the summer of 2003, the federal Office of Surface Mining assumed control of most of the federal surface mining program that had been delegated to the state after the state legislature forced its hand by eliminating funding for most of the state’s program.⁹⁴)

sive model of future resource needs. *Id.* Funding shortfalls for CWA enforcement has been a persistent problem; as pointed out by Susan Hunter and Richard Waterman, a General Accounting Office report in 1980 found that staff vacancies at state agencies in the area of water control ranged from 7% to 20%. SUSAN HUNTER & RICHARD W. WATERMAN, ENFORCING THE LAW: THE CASE OF THE CLEAN WATER ACTS 223 (1996).

89. Ass’n of St. & Interstate Water Pollution Control Adm’rs, *supra* note 88, at 4-7.

90. *Id.* The analysis covers only state management activities, not spending on infrastructure improvements. A review of the Gap Analysis by the NAPA (discussed below) concluded that its estimate of the resource gap is sound and, if anything, is probably low because it does not include the costs of new and expanding water programs and may also underestimate the costs of state employees. NAT’L ACAD. OF PUB. ADMIN., UNDERSTANDING WHAT STATES NEED TO PROTECT WATER QUALITY I (2002) [hereinafter NAPA, UNDERSTANDING].

91. Env’tl. Council of Sts., *Comments on the Environmental Protection Agency FY 2005 Budget Request* (June 27, 2003) (copy on file with author).

92. NAPA, UNDERSTANDING, *supra* note 90, at 25-26. The Gap Analysis found that of total state spending, 40% came from state tax revenues, 31% from federal contributions, 19% from state fee programs, and 10% from other sources. Ass’n of St. & Interstate Water Pollution Control Adm’rs, *supra* note 88, at 6-7. There is additional anecdotal evidence of overwhelmed state agencies. The *Detroit News* recently found that the Michigan Department of Environmental Quality has five employees to handle enforcement of a range of water quality and water pollution issues, including permit limits, drinking water quality, and wetlands protection. Brad Heath, *Great Lakes Polluters Dump Without Fear, Part 2*, DETROIT NEWS, Oct. 5, 2003, available at <http://www.detnews.com/specialreports/2003/polluters/index.htm>. The department’s enforcement unit acknowledged that “[t]here are a substantial number of violations we cannot adequately address with our current staff resources.” *Id.* Lack of state resources has also led to infrequent evaluations of facility discharge monitoring reports. *Id.*

93. *States Urge EPA to Push White House for Sufficient Funds in FY 05*, 24 INSIDE EPA, No. 33 (Aug. 15, 2003).

94. John Pendergrass, *Budget Woes: MO Gives Back SMCRA*, 20 ENVTL. F. 6, 6 (Sept.-Oct. 2003).

The federal government, facing its own mounting deficits, is unlikely to significantly augment its contributions to state programs beyond the increases noted above. Indeed, states have complained for a number of years that federal grants have failed to include adjustments for inflation.⁹⁵ In the area of enforcement, the EPA has seen its own resources stretched thinner, and for each of the past three years, the Bush Administration has cut back the EPA's proposed budget before submitting it to Congress.⁹⁶ From 2001 to 2003, the EPA's enforcement and inspection staff decreased by over 12%.⁹⁷ Since September 11, numerous criminal investigators from the EPA have been assigned to help work on Homeland Security investigations and also to provide protective services when the EPA Administrator travels.⁹⁸ Resource shortfalls at the Department of Justice have resulted in civil enforcement cases referred by the EPA (regarding water pollution, drinking water, and other important problems) being ignored or delayed for months.⁹⁹

The Gap Analysis focused on gaps in overall state water programs.¹⁰⁰ To supplement these findings with specific data about NPDES programs, and also to obtain some sense of the impacts of recent budget cuts on these programs, this author conducted a short survey of states that are currently authorized to fully implement the NPDES program.¹⁰¹ The survey asked about several aspects of their NPDES programs for the period 2000 to 2002, including personnel and resources devoted to permitting, monitoring, enforcement and compliance assistance programs; examples of how budget shortfalls had impacted their program; and what level of funding they believed was necessary to meet all their mandates. Of the forty-five states to which I sent surveys, seventeen replied.

While the survey is not intended to be comprehensive or definitive, it does illustrate some general trends. Overall, the responses confirm that the state-authorized NPDES programs have been significantly impacted by shrinking funding and face major gaps between program needs and available resources.¹⁰² Of the responding states, twelve said they had been forced

95. Env'tl. Council of Sts., *supra* note 91.

96. OFFICE OF INSPECTOR GEN., U.S. ENVTL. PROT. AGENCY, CONGRESSIONAL REQUEST ON EPA ENFORCEMENT RESOURCES AND ACCOMPLISHMENTS, Report No. 2004-S-00001, at 7-9 (Oct. 10, 2003) [hereinafter EPA, CONGRESSIONAL REQUEST].

97. See ROBERT PERKS & GREGORY WETSTONE, NAT. RES. DEF. COUNCIL, REWRITING THE RULES, YEAR-END REPORT 2002: THE BUSH ADMINISTRATION'S ASSAULT ON THE ENVIRONMENT 26 (2003), available at <http://www.nrdc.org/legislation/rollbacks/rr2002.pdf>.

98. EPA, CONGRESSIONAL REQUEST, *supra* note 96, at 15.

99. Statement of Joel A. Mintz, Professor of Law, Nova Southeastern University Law Center and Member Scholar, Center for Progressive Regulation, to the U.S. House of Representatives Subcomm. on Energy Policy, Nat. Res. & Reg. Aff., submitted to the record for hearing held in Boston, Mass. (Oct. 14, 2003) (copy on file with author). The 2003 Knight-Ridder study mentioned above found that most indices of enforcement activity for the CWA (as well as other statutes) had dropped in the first three years of the Bush Administration. See Borenstein, *supra* note 56.

100. According to the Gap Analysis, expenditures associated with NPDES programs, including permitting, compliance, and enforcement activities, represent approximately 37% of total state water quality expenditures. Ass'n of St. & Interstate Water Pollution Control Adm'rs, *supra* note 88, at 6.

101. For the results of the author's survey, see Table 1 *infra*.

102. See Table 1 *infra*.

to make budget cuts; five said they had not.¹⁰³ Maryland, for example, from 2002 to 2004, cut back 7% of its compliance staff (and anticipates additional cuts in the upcoming year), leading it to conclude in internal budget analyses that the impacts would be poorer water quality and a high risk of public health effects.¹⁰⁴ Wyoming reported that inspections had been cut and monitoring had been limited.¹⁰⁵ Washington officials said there was a backlog in permits, fewer inspections, and less technical assistance provided.¹⁰⁶ Several states, including Georgia, North Carolina, and Hawaii, reported freezing program positions (and in some cases, freezing salaries).¹⁰⁷ Oregon noted that because of a permanent cut of two positions from its permitting staff, there would be delays in issuing permits for at least 25 smaller communities and 400 construction sites.¹⁰⁸ California reported that its regional boards had “reduced their commitments” to perform virtually all aspects of the regulatory program, including reissuing expired or expiring permits, conducting inspections, issuing enforcement orders, responding to public complaints, and handling cases.¹⁰⁹ Arizona responded that during fiscal years 2003 and 2004, “our water programs have received budget and personnel cuts due to state budget constraints. This has impacted compliance/enforcement programs and all water programs.” Minnesota’s comments reflect the predicament facing many states:

As with most, if not all states, Minnesota’s NPDES program has been and continues to be squeezed between rising program demands and expectations and stagnant or declining revenues. On the revenue side, a major problem continues to be the lack of inflationary adjustments at both the federal and state levels. With each passing year, the federal grants and state appropriations simply buy less program delivery so expectations and deliverables will have to be adjusted accordingly Minnesota has taken some steps to address these problems, but taken individually or even as a group, they do not address the long term problem of fund shortages. Annual water quality permit fees and application fees have been increased but still fund less than a third of the program. . . . In the past, the legislature has provided stop gap funding to the program on a one time basis, but that is not to be considered a reliable long term funding solution.¹¹⁰

103. *Id.*

104. Telephone Interview with Pam Wright, Program Administrator, Maryland Department of Environment (Dec. 2, 2003).

105. See Table 1 *infra*.

106. *Id.*

107. *Id.*

108. *Id.*

109. *Id.*

110. Author’s Survey Results (on file with author); see also MINNESOTA POLLUTION CONTROL AGENCY, PROGRESS REPORT, *supra* note 63, at 23 (agency estimates that an additional nine full-time

TABLE 1: STATE ENVIRONMENTAL RESOURCE NEEDS
AND THE IMPACT OF BUDGET CUTS (2002)*

State	Resources Needed in \$ Million	Percent of Program Needs Met By Current Level of Resources	Impacts of Recent Budget Cuts
Alabama	Adequate	100%	None
Arizona	2.9	30%	Budget & Personnel Cuts; Compliance/Enforcement, All Water Programs Impacted
Calif. Wastewater	215 Positions v. 49.3 Currently Funded	23% (est)	“Reduced Commitments” to Virtually All Aspects of Program
Calif. Stormwater	200 Positions v. 119 Currently Funded	60% (est)	Staff Departures, Shift in Personnel, Loss of Interns
Delaware	Adequate	100%	None
Florida	5	90%	None
Georgia	21.5	20%	Positions Frozen
Hawaii	3.6(w/TMDL)**	58%	Positions Frozen
Maryland	17,604,566	50%	6% Cut in Positions
Minnesota	8,161,000	90%	Staff Transferred, Lower Priority Positions Reduced, Greater Efficiencies
Montana	2x Current Level to Meet Mandates Timely	50% (est)	1 Staff Position Cut
North Carolina			Positions Frozen
New Jersey	15.76	100%	None
Nevada	0.2	100%	None

employees, an estimated \$740,000 annually, would need to be allocated to wastewater point-source program to meet federal goals).

TABLE 1: STATE ENVIRONMENTAL RESOURCE NEEDS
AND THE IMPACT OF BUDGET CUTS (2002) [CONTINUED]

State	Resources Needed in \$ Million	Percent of Program Needs Met By Current Level of Resources	Impacts of Recent Budget Cuts
Oregon	68 Positions v. 56 Currently Funded	82% (est.)	2 Positions Eliminated; Permit Delays for 400 Construction Sites, 25 Small Communities
Washington	13.1	85%	Fewer Inspections, Technical Assistance, Backlog in Permits
West Virginia	3.4	86%	Funding Shifted from General Revenues to Fees
Wyoming	5.5	29%	Fewer Inspections & Less Monitoring

* Source: Author's Survey and Results

** Includes expenditures on the Total Maximum Daily Load (TMDL) program.

Thirteen of the responding states indicated that there were shortfalls in the level of funding needed to adequately meet all federal and state statutory mandates.¹¹¹ As indicated in Table 1, the shortfalls identified were often significant, such as by Georgia (five times current level of funding needed), California (more than four times current level needed), Wyoming (three times current level), and Maryland (two times current level).¹¹² Montana's response was that "to better meet our mandates *in a timely manner* we might need twice our resources."¹¹³ Other data prepared by Wisconsin in 2001 (not in connection with this survey) estimated that its resource gap for water quality compliance programs was \$5.3 million and for enforcement programs, \$1.2 million.¹¹⁴

111. *Id.*

112. *See id.* Notably, current staff levels for California's wastewater discharge program are only about 55% of the level (49.3/87.4) that the state committed to in its Memorandum of Agreement with the EPA (the document spelling out the state's obligations for implementing the NPDES program once it receives authorization from the EPA).

113. Author's Survey Results (on file with author).

114. Wis. Dep't of Nat. Res., Bureau of Watershed Mgmt., *Wisconsin Expenditure Data and State Water Quality Management Workload Model Summary of Needs* (May 11, 2001) (on file with author). Another report to the California legislature by the State Water Resources Control Board in 2000 estimated that the state would need 1674 positions, plus \$8.6 million in annual spending on outside contracts, to comply with both current and anticipated future mandates for its core water regulatory program (a large portion of which is the state's NPDES program). To put this in context, at the time of the report,

The states that reported fewer cuts generally were those more heavily supported by permit fees (as noted below, not all states with fee programs authorize fees at levels that fully fund their programs, and in some states fees can be used for other purposes). For example, Florida, which is required to have a program fully supported by fees, indicated that it experienced no budget cuts or layoffs.¹¹⁵ Nevada, which also is 100% fee-supported, also did not make any cuts; it reported that after the agency faced shortfalls four years ago, “[w]e were able to raise fees with the support of the regulated community. We also built in an automatic increase [of 3%] due to inflation. We are doing well.”¹¹⁶ New Jersey likewise has a fee program which insures that the Department of Environmental Protection can recover all of the costs of administering its permit system (which covers both the NPDES program and state discharge requirements); thus its program has not been impacted by recent state budget problems.¹¹⁷ West Virginia (83% fee supported) reported that through its fee program it was able to save five positions that it otherwise would have been forced to cut because of reductions in general fund monies.¹¹⁸ Other states are moving in the direction of greater reliance on fees. Oregon, for example, responded that “[a]s general funds become increasingly scarce, [we are] relying more heavily on fees.”¹¹⁹ California increased its fees in 2002 and again in 2003 to offset the severe shortfall facing the state’s general fund; the state’s 2003 Budget Act requires that the entire general fund portion of the state’s core water quality regulatory program be paid for by permit fees.¹²⁰ Other states reported that fee increases are not currently feasible. For example, Washington officials, after noting that its fee program is currently underfunded by roughly 20%, noted that increasing fees was not desirable, “especially in the current economy.”¹²¹

As resources grow scarcer, it makes sense for other states to shift more of the costs of implementing their NPDES programs to regulated entities

these programs were staffed by 414 people. Cal. State Water Res. Control Bd., *Final Report, Core Regulatory Programs’ Needs Analysis* 1, 9 (2000), available at <http://www.swrcb.ca.gov/legislative/docs/finalcorereg.pdf>.

115. Author’s Survey Results (on file with author).

116. Telephone Interview with Darrell Rasner, Technical Services Branch Supervisor, Nevada Bureau of Water Pollution Control (Nov. 26, 2003). The Bureau of Water Pollution Control apparently was able to win support among regulated entities for a fee increase by holding out the prospect that the state’s NPDES program otherwise would have to be returned to EPA to administer. *Id.*

117. Under New Jersey law, the Department of Environmental Protection is authorized to assess fees necessary to administering the permit program. Telephone Interview with William F. Boehle, Chief, Bureau of Permit Management, New Jersey Department of Environmental Protection (Nov. 26, 2003). In the past, the State Department of Treasury funded some portion of the costs of the program (in 2002, approximately 20%), meaning that the department could assess fees at a somewhat lower level. *Id.* According the Chief of the New Jersey Bureau of Permit Management, over the past two years, the state has required that the permit program fully recoup its operating costs through fees. *Id.*

118. *See supra* Table I.

119. Author’s Survey Results (on file with author).

120. *See* Cal. Water Res. Control Bd. Res. No. 2003-0064 (citing Budget Act) (Sept. 30, 2003), available at <http://www.swrcb.ca.gov/resdec/resltn/2003/03res.html>.

121. Author’s Survey Results (on file with author).

through permit fee programs. The Clean Air Act, for example, requires states to impose permit fees sufficient to fund the costs of administering and enforcing their Title V permit programs.¹²² Most states now do collect fees from NPDES-permitted facilities; the NAPA study referenced above found that of thirty-seven states surveyed, thirty-two collect permit fees, although in many cases they cover only a portion of the state's program costs.¹²³ A more detailed survey by the Association of State and Interstate Water Pollution Control Administrators in 2003 found that of twenty-two states responding, seventeen had permit fees.¹²⁴ Of these seventeen, ten use the fee proceeds solely for NPDES-related activities; in five states, the proceeds can fund any water program activity; in five, the fees were deposited into the general fund; and in two states, the fee proceeds could be used only to a very limited extent or not at all for water quality programs.¹²⁵ While there remain substantial political and other constraints to increasing fees from regulated entities, in the long run greater reliance on fees likely will prove essential to bridging the gap between state resources and program needs.¹²⁶

IV. USING THE POWER OF SPOTLIGHTING TO REDUCE THE PERFORMANCE GAP

As the above discussion illustrates, the clear Congressional and public desire for strong enforcement of the CWA is being undermined by deficiencies in enforcement efforts and resource shortfalls. How, then, can enforcement of the CWA be improved? Resource shortfalls seem likely to be a constant; if anything, they may grow to larger proportions as NPDES programs expand to cover thousands of additional sources such as stormwater dischargers and Concentrated Animal Feeding Operations ("CAFOs"). Stricter state oversight of state programs is desirable as well but is unlikely to produce any dramatic changes given the past track record of EPA timidity in this area.

In recent years, a lively debate has raged about what type of enforcement approach best achieves compliance with environmental laws.¹²⁷ The

122. 42 U.S.C. § 7661a(b)(3)(A); 40 C.F.R. § 70.4(b)(7).

123. NAPA, UNDERSTANDING, *supra* note 90.

124. ASS'N OF ST. & INTERSTATE WATER POLLUTION CONTROL ADM'RS, FEE SURVEY RESULTS 1 (2003), available at <http://www.asiwpca.org/home/docs/NPDESFeeSurveySummary.pdf>.

125. *Id.*

126. Proponents of fee programs argue that it is only fair to require entities that benefit from being allowed to dispose of their wastes in the nation's waters to pay for a regulatory program designed to protect the quality of those waters. On the other hand, fee programs that force regulated entities to shoulder more of the costs of NPDES programs, especially as program costs rise, may generate concentrated opposition from powerful industrial groups.

127. Compare David B. Spence, *The Shadow of the Rational Polluter: Rethinking the Role of Rational Actor Models in Environmental Law*, 89 CAL. L. REV. 917 (2001), and Bruce M. Diamond, *Confessions of an Environmental Enforcer*, 26 ENVTL. L. REP. 10,252 (1996), with Clifford Rechtschaffen, *Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement*, 71 S. CAL. L. REV. 1181 (1998) [hereinafter Rechtschaffen, *Deterrence vs. Cooperation*]. See also Joel Mintz, *Scrutinizing Environmental Enforcement: A Comment on a Recent Discussion at the AALS*, 30 ENVTL. L. REP. 10,639 (2000).

EPA traditionally has favored a deterrence-based approach, one that relies on inspections, formal enforcement responses, and sanctions in the event of violations (although its commitment to this approach has been wavering under the current Bush Administration, at least among its top-level political appointees).¹²⁸ The states by and large have preferred a more conciliatory, cooperative-based model that relies more on incentives and technical assistance programs to achieve compliance. Interestingly, at least one recent public opinion survey indicates that there is substantial support for traditional government enforcement as compared to more flexible, “industry friendly” approaches.¹²⁹ I have argued elsewhere that a deterrence-based approach, informed by positive elements of cooperation-based enforcement, is the best way to improve rates of compliance.¹³⁰

There is also a third avenue, however, that can effectively serve as a supplement or adjunct to any type of primary enforcement mechanism—whether it be a deterrence-based approach, cooperation-based approach, or something in between. This third approach, which relies on the mechanism of mandatory disclosure of enforcement and compliance related data, has yet to be exploited by environmental regulators. Yet, as discussed below, it has the potential to significantly improve the results achieved by existing enforcement schemes while requiring relatively few resources to implement.¹³¹

The technique of using information disclosure, or spotlighting, to achieve environmental objectives has become increasingly popular in the past two decades. It enjoys support across the political spectrum—economists like it because it relies on the efficiency of market forces, while environmental advocates favor it because it can promote citizen empowerment and create incentives for firms to reduce harmful activities. It also has proven to be quite effective in recent years. Indeed, the specter of having unfavorable information disclosed publicly has shown itself to be a very strong motivator of improved performance.

A spotlighting approach can be employed at a variety of institutional levels and for a variety of regulatory ends. This Part describes three ways in which spotlighting can be utilized to remediate the performance gap in NPDES programs: (1) an EPA spotlight on the enforcement and compli-

128. See Mintz, *supra* note 99.

129. In that survey, conducted in 2000, respondents were asked to describe which approach comes closer to their view: (1) government should strongly enforce environmental laws and require industry and businesses to follow those laws; or (2) government should work with industry and business to meet environmental goals using flexible regulations and economic incentives. The results are set forth as follows: Government strongly enforce much—34%; Government strongly enforce somewhat—28%; Flexible regulations somewhat—19%; Flexible regulations much—12%; Both (vol.)—5%; Don't know/Refused—2%. Tarrance Group & Greenberg-Quinlan Research, Inc., Nov. 12-19, 2000 (n = 1200 national registered voters), Q28, available at <http://www.greenbergresearch.com/publications/reports/fqlcvfpol111200.pdf>.

130. See Rechtschaffen, *Deterrence vs. Cooperation*, *supra* note 127.

131. See Christopher H. Schroeder, *Third Way Environmentalism*, 48 U. KAN. L. REV. 801, 817-21 (2000) (describing information disclosure strategies as promising “third way” solution that bridges the gap between prescriptive regulation and reliance on common law to deal with environmental problems).

ance-related records of regulated firms; (2) an EPA spotlight on the performance of state NPDES programs in achieving compliance among regulated firms within their states; and (3) expanding the mandatory environmental disclosure requirements for publicly-traded corporations.

A. *Spotlighting Business Enforcement and Compliance History*

As recent experience has shown, mandated disclosure of data, such as a facility's emissions and exposures to toxic chemicals from consumer products or other sources, has been quite successful in improving environmental performance. The most prominent example is the Toxic Release Inventory ("TRI") program, enacted as part of the Emergency Planning & Community Right-to-Know Act in 1986.¹³² TRI requires manufacturing and certain other industrial facilities to annually disclose their releases and transfers of 654 specified toxic chemicals, subject to reporting thresholds.¹³³ Facilities subject to this program from 1988 to 2001 have reported a remarkable 54.5% decline in their releases of covered chemicals.¹³⁴ California's Proposition 65, which requires warnings prior to exposures to listed carcinogens and reproductive toxins, has also generated substantial reductions in industrial air emissions and significant reformulations of consumer products containing toxic chemicals, including brass faucets, ceramic ware, calcium supplements, water meters, water filters, baby rash powders and creams, anti-diarrheal medications, hair dyes, wooden playground structures, and portable classrooms, among other products.¹³⁵ One public interest attorney estimates that as a result of Proposition 65 enforcement actions filed against thirty facilities over the past five years, the facilities collectively reduced

132. 42 U.S.C. § 11023.

133. U.S. ENVTL. PROT. AGENCY, TOXIC RELEASE INVENTORY, TRI ON-SITE AND OFF-SITE RELEASES, 1988, 1998 and 2000-01, available at <http://www.epa.gov/tri/tridata/tri01/press/rel-table8801.pdf>.

134. See *id.* Professor Bradley C. Karkkainen describes TRI as a "watershed" in efforts to enhance environmental performance. Bradley C. Karkkainen, *Information As Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 GEO. L.J. 257, 260 (2001). See also Mary Graham & Catherine Miller, *Disclosure of Toxic Releases in the United States*, 43 ENV'T 8, 11-12 (Oct. 2001) (concluding that "[a] close examination of the TRI data [from 1988 to 1999] confirms a core of positive trends"); but see Alexander Volokh, *The Pitfalls of the Environmental Right-to-Know*, 2002 UTAH L. REV. 805, 814-19 (arguing that it is difficult to know if the reported reductions in TRI releases are real or accurate and that data generated by TRI and other right-to-know laws is "irredeemably misleading").

135. Clifford Rechtschaffen, *How to Reduce Lead Exposures with One Simple Statute: The Experience of Proposition 65*, 29 ENVTL. L. REP. 10,581 (1999); Clifford Rechtschaffen, *The Warning Game: Evaluating Warnings Under California's Proposition 65*, 23 ECOLOGY L.Q. 303, 341-43 (1996); David Roe, *Toxic Chemical Control Policy: Three Unabsorbed Facts*, 32 ENVTL. L. REP. 10,232 (2002); Jane Kay, *Sierra Club Picks Activist President; Marin Man Uses Lawsuits to Force Action*, S.F. CHRONICLE, May 22, 2003, at A21; Ctr. for Env'tl. Health, Prop 65 Case Highlights (undated memo, on file with author). A 2000 Gallup poll found that 73% of the public in 2000 bought a product specifically because they thought it was better for the environment than competing products. See GUBER, *supra* note 36, at 50. See also *id.* at 51 (1992 survey reported that three fourths of public were at least sometimes influenced by environmental claims in marketplace and most appeared willing to spend at least 5% more for products known to be environmentally safe).

their emissions of perchloroethylene, a listed carcinogen, by approximately 640,000 pounds.¹³⁶

Related, public disclosure of a firm's record of compliance can stimulate improved performance, as borne out by a number of studies (additional studies showing how the stock market reacts negatively to poor environmental performance are discussed in the section below).¹³⁷ For example, when the Missouri Department of Natural Resources began issuing news releases about public water systems that violate monitoring requirements and posting these releases on the Internet, it found that notifying the violators in advance resulted in 80% of chronic violators coming into compliance within one month.¹³⁸ In another program, Indonesia's environmental agency developed a color-coded grading system for evaluating the environmental performance of industrial facilities.¹³⁹ The grades for the facilities were publicly disclosed, although there was a six-month delay in disclosing firms in the worst two categories to allow them an opportunity to improve their performance. Rates of compliance among participating factories increased from 35% to 51%, and discharges on average declined by 43%.¹⁴⁰ Likewise, a study of compliance and emission levels over a six-year period by pulp and paper firms in British Columbia found significant impacts when the regional environmental agency published a list of firms significantly out of compliance. Being on the list of noncompliers led to significant emission reductions, reductions that actually exceeded those attributable to enforcement orders and penalties assessed against the firms.¹⁴¹

In another recent analysis, Professors Kagan, Gunningham, and Thornton assessed the determinants of environmental performance of fourteen pulp and paper manufacturing mills in several countries. They concluded that variations in social pressures (among other factors) had a significant effect on firms' relative performance. According to the authors, many mill managers spoke of having to meet not only the terms of their regulatory license but of their "social license" from the community. They report that managers at one facility "told us that the sanction it feared the most . . . were not legal

136. Telephone Interview with Michael Freund, Dec. 5, 2003. The sources of perchloroethylene were dry cleaners, degreasers, and the motion picture industry (perchloroethylene is used to clean film).

137. This discussion is in part adapted from RECHTSCHAFFEN & MARKELL, *supra* note 77.

138. ENVTL. COUNCIL OF THE STS., ENSURING COMPLIANCE: STATE BEST PRACTICES 2, 15-16 (May 2000).

139. Shakeb Afsah & Jeffrey R. Vincent, Harvard Inst. Int'l Dev., *Putting Pressure on Polluters: Indonesia's PROPER Program* (last modified Sept. 23, 1999), at http://www.worldbank.org/nipr/work_paper/vincent/index.htm. The colors were chosen because they had cultural connotations in Indonesia analogous to the environmental performance levels they signified.

140. Shakeb Afsah, *PROPER Program for Pollution Control Environmental Evaluation and Rating: A Model for Promoting Environmental Compliance and Strengthening Transparency and Community Participation in Developing Countries* 18 (copy on file with author); Shakeb Afsah et al., *Regulation in the Information Age: Indonesian Public Information Program for Environmental Management* 9 (1997), available at http://www.worldbank.org/nipr/work_paper/govern/.

141. Jerome Foulon et al., *Incentives for Pollution Control: Regulation and (?) or (?) Information*, World Bank Policy Research Working Paper No. 2291 (Feb. 1, 2000), available at <http://www.econ.worldbank.org/docs/1042.pdf>.

but informal sanctions imposed by the public and the media, and hence it was motivated less by avoiding regulatory sanctions per se as ‘anything that could give you a bad name.’”¹⁴²

Perhaps the boldest enforcement-related spotlight is that launched by Great Britain’s Environmental Agency five years ago. The agency annually publishes a “Spotlight on Business Environmental Performance,” detailing the environmental performance of various business sectors and the firms within them.¹⁴³ Within each sector, the report highlights good and bad performers, pollution accidents, and fines assessed. The performance of firms is graded according to a scoring system developed by the agency, based on the inherent risks of processes at a facility and the operator’s ability to manage these environmental risks (one system for waste facilities, another for non-waste facilities).

Britain’s “Spotlight” report goes well beyond disclosure efforts tried in this country to date in a couple of significant ways. First, the government is actively involved in evaluating private firm performance; as a result, the evaluations are likely to have considerable credibility with the public.¹⁴⁴ Second, the environmental agency presents the information in comparative form, directly contrasting good and bad performers (including some case studies), and explicitly drawing attention to firms that were penalized the most or responsible for the most spills in the prior year. A few examples from the 2002 report are reproduced below (see attached charts).

142. Robert Kagan et al., *Explaining Environmental Performance: How Does Regulation Matter?*, UC Berkeley Pub. L. Res. Paper No. 78 (2002), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=29923.

143. ENVTL. AGENCY, ENVIRONMENTAL CRIME SHOULD NOT PAY: SPOTLIGHT ON BUSINESS ENVIRONMENTAL PERFORMANCE: SPOTLIGHT 2002, at <http://www.environment-agency.gov.uk/business/444255/518536/> (last visited Dec. 17, 2003).

144. In the United States, by contrast, environmental agencies have not attempted to qualitatively judge the environmental performance of regulated entities.

Table 6

Site name	Owner	Type of site	Operator performance score	% Change through 2002 ¹⁴⁵
Pillhead Copse, Bideford, Devon	Private	Landfill taking 'other' wastes	435	+65
Astbury Quarry, near Wrexham ¹	Caird Environmental Ltd	Co-disposal landfill site	433	+45
Winterton Landfill, near Scunthorpe ¹	Integrated Waste Management Ltd	Co-disposal landfill site	423	+51
Autodisposals and Bideford Skip Hire, Bideford, Devon	Private	Household, commercial and industrial waste transfer station	375	+ 4
Brenkley Quarry Landfill, Newcastle	Northumbrian Environmental Management	Household, commercial and industrial waste transfer station	358	-18
Imingham Landfill, Grimsby ¹	Integrated Waste Management	Co-disposal landfill site	355	+55
"L" Field Landfill, Stewartby, Beds ¹	Shanks Waste Services Ltd	Co-disposal landfill site	351	+11
Old Foundry Yard, Alston, Cumbria	Private	Metal recycling site	343	-226
Homdiffe Quarry Landfill, Rossendale, near Bury	P Casey Enviro Ltd	Household, commercial and industrial waste transfer station	334	-159
Reading Skips	Private	Household, commercial and industrial waste transfer station	332	+31

* Excerpted from British Environmental Agency, *Spotlight on Business Environment Performance*, <http://www.environment-agency.gov.uk/business/444255/518536/>.

Notably, the British Environmental Agency reports positive results from the program:

When the Environment Agency first turned the media spotlight on poor environmental performance five years ago, a chorus of disapproval rose through the ranks of regulated industry. Five years on, *Spotlight on business environmental performance* has developed and expanded into a rounded assessment of performance, good and bad, and highlights positive action as well as failings. In its short lifetime the report has become a regular fixture in the environmental calendar, its findings keenly anticipated by some, anxiously awaited by others. The latest report shows the positive trends of previous years continuing . . . [These trends include] reductions in many pollutants and significant overall improvements in environmental management.¹⁴⁵

145. ENVTL. AGENCY, *SPOTLIGHT ON BUSINESS ENVIRONMENTAL PERFORMANCE 2002*, at 1, available at http://www.environment-agency.gov.uk/commdata/105385/spt_2002full_523404.pdf.

Table 10

Offender	Sector	Number of events leading to prosecution	Total fine
Faccenda Group (South) Ltd	Production meat and poultry products	4	£75,000
BP Oil (UK) Ltd	Wholesale (fuels and related products)	5	£60,000
TotalFinaElf UK Ltd	Wholesale (fuels and related products)	3	£54,000
S H Pratt and Company (Bananas) Ltd ¹	Wholesale (fruit and vegetables)	2	£53,000
Kronospan Ltd	Manufacturing (wood products)	10	£46,000
Lear Corporation (Nottingham) Ltd ¹	Manufacturing (motor vehicles)	7	£40,000
Lear Corporation UK Interior Systems Ltd ¹	Manufacturing (motor vehicles)	7	£40,000
English Welsh & Scottish Railway Ltd	Transport (railways)	3	£35,000
Europackaging plc	Manufacturing	2	£25,000
Computer 2000 Distribution Ltd ¹	Wholesale (electrical and others)	7	£25,000
Stationery Box Ltd ¹	Retail	9	£25,000
Greenvale Foods Ltd	Manufacturing (food products)	7	£24,500
Banham Poultry Ltd	Wholesale (meat and meat products)	2	£24,000
B & D Electroplaters Ltd	Manufacturing (electrical)	1	£20,000
F & R Dunlop Services Ltd ¹	Retail	7	£17,000
Lear Corporation (UK) Ltd ¹	Manufacturing (motor vehicles)	3	£16,000
Bernstein Group plc ¹	Manufacturing (furniture)	4	£16,000
Budgens Stores Ltd	Retail	1	£16,000
P V Greenhalgh & Company Ltd	Manufacturing (textiles)	2	£15,000
E Harper (York) Ltd	Other	3	£15,000
Hedon Salads Ltd ¹	Wholesale, retail trade	6	£15,000
Bowood Event Hire Ltd	Service activities	1	£13,500
Junckers Ltd ¹	Wholesale (other)	3	£13,500
Yoplait Dairy Crest Ltd	Wholesale (food)	2	£13,000
British Telecommunications plc	Telecommunications	1	£12,500
St James Haulage Ltd	Other	3	£12,500
Honda Trading Europe Ltd	Service activities	1	£12,000
Nippon 2000 Spares and Tyres Company Ltd	Retail	4	£12,000
Paul Hartmann Ltd ¹	Wholesale (pharmaceutical)	7	£11,500
Coventry Pressvork Ltd	Manufacturing	1	£10,000
Tesco Stores Ltd	Retail	1	£10,000
Interbrew UK Ltd	Manufacturing (beer)	1	£10,000
CPS Group Ltd	Cleaning	1	£10,000

¹ Prosecuted for Producer Responsibility offences.

* Excerpted from British Environmental Agency, Spotlight on Business Environment Performance, <http://www.environment-agency.gov.uk/business/444255/518536/>.

The EPA and the states should follow the lead of Britain's Environmental Agency in its effort to spotlight the performance of regulated facilities. The EPA has taken a very significant step in this direction with the development in 2002 of the Enforcement and Compliance History Online ("ECHO") web site, although, as discussed below, it has stopped short of the British agency's efforts.¹⁴⁶

146. ENVTL. PROT. AGENCY, ENFORCEMENT AND COMPLIANCE HISTORY ONLINE, available at <http://www.epa.gov/echo/> (last visited Feb. 3, 2004).

ECHO, an outgrowth of a pilot project known the Sector Facility Indexing Project (“SFIP”), provides enforcement and compliance information under the CWA, the Clean Air Act, and the Resource Conservation and Recovery Act (“RCRA”) for about 800,000 regulated facilities.¹⁴⁷ While much of this information was previously publicly available, it was scattered in different places and hard to access. In particular, ECHO displays for the previous two years the following information: inspections or evaluations of the facility; its compliance status; violations detected; pollutants associated with the violations and whether they are significant; formal enforcement actions taken; and penalties imposed as a result of the enforcement actions. It also provides data about the demographics of the community located within one, three, and five miles of the facility. During its first year, the EPA reports that the site was accessed by over one million people.¹⁴⁸

ECHO is not without its critics and flaws. Numerous regulated entities, in particular, have made complaints about presentation and searching issues (i.e., navigating the site), that some terms are confusing, and about the accuracy and completeness of data, including whether corrections are entered rapidly enough.¹⁴⁹ They also contend that the data presented is not meaningful to the public without additional context,¹⁵⁰ and they fault the EPA for providing too much data, arguing, for example, that the “site presents an excessive amount of information that is overwhelming to members of the general public who are not environmentally sophisticated and trained in environmental law jargon.”¹⁵¹

On the other hand, as evidenced by the large number of positive comments filed with the EPA after it launched the site, disclosure can be enormously potent.¹⁵² Numerous members of the public commented on the empowering function of the site. One wrote that “[t]his is a tremendous resource to help us track the actions of potential polluters in our watershed. It helps us identify persistent flaunters of environmental laws and, just as importantly, lets us know which industries are doing a good job at managing

147. ENVTL. PROT. AGENCY, ENFORCEMENT AND COMPLIANCE HISTORY ONLINE, ABOUT THE DATA, at http://www.epa.gov/echo/about_data.html (last visited Jan. 31, 2004). ECHO focuses on information at Clean Air Act stationary sources, CWA major dischargers, and RCRA hazardous waste handlers. Most violations at minor CWA dischargers are not included. *Id.*

148. Press Release, Luke C. Hester, EPA, *EPA’s ECHO Resonates with Public, One Million Searches Recorded in First Year of Enforcement/Compliance Web Database* (Nov. 19, 2003) at <http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/e6bf84f19616f3b985256de30055afcd?OpenDocument>.

149. See, e.g., Comments of James W. Conrad, Jr, American Chemistry Council, submitted in response to the EPA’s request for public comment about pilot ECHO website (Mar. 29, 2003), available at <http://www.epa.gov/compliance/resources/comments/echo/acc-conrad-cmt.pdf>.

150. See, e.g., Comments of Mark A. Greenwood, Coalition for Effective Environmental Information, submitted in response to the EPA’s request for public comment about pilot ECHO website (Mar. 31, 2003), available at <http://www.epa.gov/compliance/resources/comments/echo/ceei-grnwood-cmt.pdf>.

151. Regulated Entity User, Response to Solicited EPA Question regarding ECHO public database (Jan. 23, 2003), available at http://www.epa.gov/echo/info/echo_comments_1_23_03.html.

152. The EPA reported receiving over 10,000 e-mails supporting continuation and enhancement of ECHO during its first year. See Press Release, *supra* note 148.

[sic] their pollution.”¹⁵³ Another commented that “I really appreciate the opportunity to see how well the companies in my community are complying with our environmental law.”¹⁵⁴ Others noted how ECHO had directly helped inform their decisionmaking:

As a concerned citizen that is presently seeking to move north of my current community, this is an invaluable resource. My family & I have already terminated an agreement for a home purchase due to the excessive quantities of both lead & arsenic in the home’s drinking water. To have access to the various water-treatment facilities’ statistical information, it will assist countless individuals to make the best choices for their loved-ones.¹⁵⁵

Interestingly, state and local agency staff also noted the value of ECHO’s information, such as reflected in the following comment: “As a state-level staff that handles facility NPDES permit compliance & enforcement, this website would definitely assist me in ensuring that correct and up-to-date data is in the federal system for facilities, as well as provide an at-a-glance overview of their 24 month compliance status.”¹⁵⁶ Another local government user noted that because of ECHO, “I was able to see many, many companies in my city and see what they are up to and what danger they might pose,”¹⁵⁷ while another reported using ECHO “as a vital component of Title V [of the Clean Air Act] reviews [that] helps me understand which plants need the most scrutiny.”¹⁵⁸ Even a substantial number of regulated entities praised ECHO, one noting that “[t]his database is revolutionary for environmental awareness,”¹⁵⁹ another commenting that “this is a great tool to review other operations and their problems so that we can [sic]

153. Unaffiliated User, Public Comment regarding ECHO public database (Jan. 9, 2003), at http://www.epa.gov/echo/info/echo_comments_1_9_03.html. Another wrote:

Hooray for the EPA and their new Echo Web site. Citizen monitoring is an important element in protecting our communities from noxious poisons and other pollution. Easy access to information about what is going on in our communities is an important democratic principle. I applaud the EPA in providing a useful tool for protecting public health and safety. What we don’t know truly can hurt us.

Id. (Dec. 6, 2002), at http://www.epa.gov/echo/info/echo_comments_12_6_02.html.

154. Unaffiliated User, Public Comment regarding ECHO public database (Nov. 29, 2002), available at http://www.epa.gov/echo/info/echo_comments_11_29_02.html. Another commentator wrote: “I think the ability of citizens to access the kind of information is extremely important. Please continue this service, which lets community residents take action regarding their health and well being.” *Id.* (Mar. 13, 2003), at http://www.epa.gov/echo/info/echo_comments_3_13_03.html.

155. Unaffiliated User, Public Comment regarding ECHO public database (Jan. 30, 2003), at http://www.epa.gov/echo/info/echo_comments_1_30_03.html.

156. State Government User, Comment regarding ECHO public database (Jan. 9, 2003), at http://www.epa.gov/echo/info/echo_comments_1_9_03.html.

157. Local Government User, Comment regarding ECHO public database (Mar. 6, 2003), at http://www.epa.gov/echo/info/echo_comments_3_6_03.html.

158. Local Government User, Comment regarding ECHO public database (Dec. 6, 2002), at http://www.epa.gov/echo/info/echo_comments_12_6_02.html.

159. Regulated Entity User, Comment regarding ECHO public database (Mar. 13, 2003), at http://www.epa.gov/echo/info/echo_comments_3_13_03.html.

pro-active instead of re-active.”¹⁶⁰ The EPA found in its review of public comments that “industry reported that companies were finding ECHO to be an efficient and cost-saving way to monitor the compliance records of their facilities scattered around the country.”¹⁶¹

ECHO is very impressive as far as it goes, but it stops short of the full potential that can be achieved by spotlighting. While EPA has amassed a great deal of data in one place, it has not taken the next step of publicly evaluating and ranking the compliance records and performance of regulated firms. Spotlighting is at its most powerful and effective when it draws clear distinctions among firms. As Professor Shelley Metzenbaum has written, comparison has great power to embarrass and motivate, just as the spotlight of comparison shopping by consumers spurs firms to improve their products.¹⁶² Thus, the EPA (and eventually states as well, when they develop adequate capacity) should take the next step and begin publicly evaluating and comparing the compliance records of the best and worst regulated facilities. It should rank facilities based on factors such as number of violations, size of penalties assessed against them, length of time in significant noncompliance, frequency of repeat violations, degree to which discharges or emissions exceed permitted levels, absolute levels of excess emissions or discharges, and number of spills or accidental releases. These comparisons should be done both in tabular and graphic form so that they are visually compelling.¹⁶³ The EPA should begin with a few key priority sectors, as it did with the pilot SFIP that paved the way for ECHO.¹⁶⁴ While this type of analysis could in theory be performed by environmental organizations, it would involve considerable resources and, more importantly, lack the credibility and objectivity of a report generated by the government.

160. Regulated Entity User, Comment regarding ECHO public database (Dec. 12, 2002), at http://www.epa.gov/echo/info/echo_comments_12_12_02.html.

161. Press Release, *supra* note 148.

162. Shelley Metzenbaum, *Making Measurement Work: The Challenges and Promise of Building a Performance-Focused Environmental Protection System* 42 (Oct. 1998), at <http://www.brook.edu/dybdocroot/gscpm/metzenbaum.pdf>.

163. See Shelley H. Metzenbaum & Tiffin Shewmake, *Realizing the Value of the Permit Compliance System Upgrade, Environmental Compliance Consortium* 8 (2002), available at

<http://www.complianceconsortium.org/ECCArticles/Comments.asp> (arguing that agencies should generate and post graphs showing the top 20% of facilities with the greatest noncompliance or the facilities that exceeded their permit limits more than 20% of the time). Metzenbaum and Shewmake also suggest that agencies should routinely generate and post graphs showing a facility's discharge/emission trends in relation to its permit level, graphs that “make it easy to see which facilities have the most significant or enduring problems.” Shelley H. Metzenbaum & Tiffin Shewmake, *More Nutritious Beans*, ENVTL. F., at 18, 31 (Mar.-Apr. 2003), available at <http://www.complianceconsortium.org/ECCAuthored/MoreNutritiousBeans.pdf>.

164. The SFIP focused on five industrial sectors: petroleum refining; iron and steel production; primary nonferrous metals smelting and refining; pulp manufacturing; auto assembly, as well as some major federal facilities. See http://www.epa.gov/sfipmtnl/intro_and_overview.html.

B. EPA Spotlight on State Agency Performance

The public spotlight on environmental enforcement and compliance efforts should go beyond individual facilities. As discussed above, the EPA's traditional approaches for overseeing state programs have not been particularly effective. Thus, to promote better state performance, the EPA should evaluate and rank, and publicly disclose, how well state environmental agencies are performing—issue regular “report cards” on state performance.

There are several types of criteria that can be used to evaluate state environmental programs, including bottom-line environmental indicators or conditions, rates of compliance and other behavioral changes by regulated entities, and levels of agency enforcement activities (e.g., number of inspections carried out, enforcement actions initiated, penalties assessed, etc.), and a growing literature about the merits of these approaches.¹⁶⁵ While it is beyond the scope of this Article to discuss all of these strategies, levels of compliance should be very significant in judging the efficacy of enforcement programs. Although not without important limits,¹⁶⁶ compliance is a “bottom line” measure for state enforcement programs—reflecting the success of states in ensuring that regulated facilities adhere to the law.

The EPA's traditional guidance for oversight of state enforcement programs,¹⁶⁷ as well as more recent guidance developed under the National Environmental Performance Partnership System (“NEPPS”), a new EPA/state oversight initiative, identifies rates of compliance as one criterion for evaluating state program performance.¹⁶⁸ But historically, compliance rates have not played a central role in the EPA's evaluation of state programs, and many states have not measured them in a reliable manner.¹⁶⁹ There are any number of reasons for this, including the technical challenges and resources involved in calculating accurate compliance rates.¹⁷⁰ If, how-

165. For a discussion of these issues, see RECHTSCHAFFEN & MARKELL, *supra* note 77, at 296-312.

166. *Id.* Compliance rates do not tell the full story about the efficacy of a state's environmental program. If a state's underlying permit requirements are weak or outdated, for instance (and recent studies indicate that a distressingly high number of CWA permits are outdated), a high rate of compliance may not be particularly meaningful or informative about the condition of the state's environment.

167. Memorandum from James Barnes, Deputy Administrator to Assistant Administrator, et al., *Revised Policy Framework for State/EPA Enforcement Agreements* (Aug. 25, 1986), available at <http://www.epa.gov/compliance/resources/policies/planning/state/enforce-agree-mem.pdf>.

168. In 1995, the EPA and the states created a new, ostensibly more flexible framework to govern federal/state relations, the National Environmental Performance Partnership System (“NEPPS”). See U.S. ENVTL. PROT. AGENCY, JOINT COMMITMENT TO REFORM OVERSIGHT AND CREATE A NATIONAL ENVIRONMENTAL PERFORMANCE PARTNERSHIP SYSTEM, available at <http://www.epa.gov/ocirpage/nepps/ovrsight.htm> (last visited on May 10, 2002). As part of that framework, the EPA and the state agreed to a set of “core accountability measures” for evaluating state enforcement and compliance activities, which include rates of compliance. U.S. ENVTL. PROT. AGENCY, OFFICE OF STATE & LOCAL RELATIONS, OFFICE OF ENFORCEMENT & COMPLIANCE, FY 2000 ACCOUNTABILITY MEASURES FOR ENFORCEMENT AND COMPLIANCE ASSURANCE, available at <http://www.epa.gov/ocir/nepps/enflist.html>.

169. See RECHTSCHAFFEN & MARKELL, *supra* note 77, at 187 (noting that eighteen states were unable to provide any data on significant noncompliance with environmental laws to ECOS in its 2001 survey).

170. *Id.* at 302-04.

ever, states' authorization to implement federal programs or their access to federal funding were contingent on providing accurate and complete compliance information, the states would be spurred to calculate more reliable compliance rates.

Thus, the EPA should insist as a condition of granting NPDES program authorization to the states that states (1) develop a methodology for accurately measuring compliance rates, (2) annually calculate such rates, and (3) publicly report them. Some key compliance measures that should be reported include the overall rate of compliance and significant noncompliance among regulated facilities, the rate of compliance and significant noncompliance in priority sectors, the severity of noncompliance (i.e., how far in excess of permitted levels are unlawful discharges), and rates of repeat and recidivist violations.

The EPA should compile the information reported by states and present in comparative form the compliance rates achieved within each state, perhaps grouping states by region of the country. This data should be posted on the EPA's regional and national web pages, among other places, and otherwise widely disseminated to the public and media. As argued above, disclosure and comparison have great power to embarrass and motivate better performance.¹⁷¹

C. Expanding Securities Rules Governing Corporate Disclosure of Enforcement Information

In addition to the spotlighting approaches outlined above, the stock market also can create strong incentives for firms to improve environmental compliance as investors increasingly look to environmental performance as a relevant investment criterion.

There is an expanding socially responsible investment movement that evaluates the social records of companies, including their record of environmental compliance and performance, when making investment decisions in the stock market. Approximately \$2.16 trillion of professionally managed assets in the United States is invested according to social criteria—approximately 11% of all such assets. This number has been steadily growing over the past decade.¹⁷² A Gallup poll in 2000 found that 9% of the pub-

171. For the reasons discussed above, there also should be a bigger spotlight on the EPA's own enforcement record, including its success in achieving compliance with CWA permit requirements. The performance record of EPA regional offices should be compared to other regional offices, as well as to that of the states. Notably, the EPA has been working over the past few years to improve its methodology for measuring compliance rates and otherwise measure the bottom line success of its enforcement program. *See id.* at 182-83.

172. SOC. INV. FORUM, 2003 REPORT ON SOCIALLY RESPONSIBLE INVESTING TRENDS IN THE UNITED STATES, at i-ii (Dec. 2003), available at http://www.socialinvest.org/areas/research/trends/sri_trends_report_2003.pdf. According to the Social Investment Forum, assets in socially-screened portfolios increased by 7% from 2001 to 2003, while assets in all professionally managed portfolios fell 4%. *Id.*

lic had bought or sold stocks based on the environmental record of the companies in the previous year.¹⁷³

Beyond this socially responsible segment of the market, information about environmental performance can be quite relevant to other investors. A number of studies show that stock prices rise and fall in response to the release of either positive or negative environmental information about firms' performances.¹⁷⁴ Events that have been shown to trigger significant reductions in the market value of firms include disclosures relating to the compliance record of firms, such as the initiation of enforcement actions against a company, or oil or chemical spills, as well as such as disclosures of high levels of routine emissions. For example, a study of stock market reactions to 730 EPA judicial actions for a sample of publicly-traded firms from 1972 to 1991 found that the market value of the average affected firm dropped 0.43% during the week of settlement of the enforcement action. The estimated market penalty was larger for more recent actions and for repeat offenders.¹⁷⁵ Another recent investigation looked at the impact on stock prices of firms in three industrial sectors in India after a leading environmental group published ratings about their environmental performance, which generally showed poor performance. It found that in two of the three sectors examined, stock prices declined significantly after the ratings were published. The losses were more significant for firms with lower rankings; declines were as high as 43% for those identified as the worst performers.¹⁷⁶ Similarly, another study found that the public announcement of penalties by the Occupational Safety and Health Administration ("OSHA") led to a significant drop in stock prices.¹⁷⁷ There are numerous reasons why the disclosure of noncompliance or poor environmental performance may lead to stock losses. Investors may view it as a signal that the firm is more likely to face future enforcement actions, compliance and remedial costs, third-party

173. See GUBER, *supra* note 36, at 50.

174. Paul Lanoie et al., *Can Capital Markets Create Incentives for Pollution Control?*, 26 *ECOLOGICAL ECON.* 1, 35-36 (1998) (providing a discussion of various studies that reach this conclusion). For example, Professor James Hamilton found that firms suffered statistically significant negative stock returns of between 0.2% and 0.3%, an average loss per firm of \$4.1 million in stock value, when TRI data was first disclosed in 1989. James T. Hamilton, *Pollution as News: Media and Stock Market Reactions to the Toxics Release Data*, 28 *J. ENVTL. ECON. & MGMT.* 98, 109 (1995). A later study looking at chemical firms reported similar results following disclosure of TRI data in the years 1990 to 1994. Firms with more releases had more negative returns. Madhu Khanna et al., *Toxic Release Information: A Policy Tool for Environmental Protection*, 36 *J. ENVTL. ECON. & MGMT.* 243, 244 (1998).

175. S.G. Bandrinath & P.J. Bolster, *The Role of Market Forces in EPA Enforcement Activity*, 10 *J. REG. ECON.* 165, 167 (1996).

176. Shreekant Gupta & Bishwanath Goldar, *Do Stock Markets Penalise Environment-Unfriendly Behaviour? Evidence from India*, Center for Development Economics Working Paper No. 116, at 16 (Mar. 2003) (copy on file with author).

177. Wallace N. Davidson III et al., *The Effectiveness of OSHA Penalties: A Stock-Market Based Test*, 33 *INDUST. REL.* 283 (1994). The size of the market decline, however, did not depend on the size of the penalties imposed. Other researchers found in a study of developing countries that stock values rise when positive environmental performance is publicized by the government and fall in response to citizen complaints about firms. Susmita Dasgupta et al., *Capital Market Responses to Environmental Performance in Developing Countries*, The World Bank, Working Paper #1909 (1998), available at http://www.worldbank.org/nipr/work_paper/index.htm.

litigation, or loss of future governmental contracts. Likewise, they may think that the firm will be perceived by government regulators and the public as a bad actor, making it more difficult for the company to obtain permits and regulatory approvals, subject to more enforcement scrutiny, or likely to face more community opposition. Or investors may regard this data as an indication that the firm is poorly managed or operating inefficiently.

At the same time, there is a growing body of evidence demonstrating that firms with superior environmental records perform better financially than their counterparts with weaker records—that environmental performance can serve as a partial proxy for the risk of investing in a firm. In a review of the literature in 2000, the EPA concluded that “[a] significant body of research shows a moderate positive correlation between a firm’s environmental performance and its financial performance, regardless of the variables used to represent each kind of performance, the technique used to analyze the relationship, or the date of the study.”¹⁷⁸ In their study of 652 manufacturing firms, for example, Professors Andrew King and Michael Lenox found that firms that had lower levels of emissions (both in an absolute sense and relative to other firms in their industry) had higher levels of financial performance.¹⁷⁹ Another recent analysis looked at the performance of close to 200 firms and found a positive relationship between environmental and economic performance, as measured by annual industry-adjusted stock returns. (The study also found that superior environmental performers disclose more pollution-related environmental information than do poor performers¹⁸⁰ and that there was a positive relationship between past disclosure and current performance.¹⁸¹) Innovest, a financial advisory firm, has developed investment risk ratings for 1500 corporations based on their environmental performance and viability. According to its grading system, investing in firms with high environmental ratings will yield returns from 1.5 to 3 points higher than investing in firms across the stock market.¹⁸²

178. ENVTL. CAPITAL MARKETS COMM., U.S. ENVTL. PROT. AGENCY, GREEN DIVIDENDS? THE RELATIONSHIP BETWEEN FIRMS’ ENVIRONMENTAL PERFORMANCE AND FINANCIAL PERFORMANCE (May 2000), available at http://www.epa.gov/ocem/nacept/green_dividends.pdf.

179. Andrew A. King & Michael J. Lenox, *Does it Really Pay to Be Green? An Empirical Study of Firm Environmental and Financial Performance*, 5 J. INDUS. ECOL. 105, 110-11 (2001). The authors cautioned that they could not conclude what caused the higher financial returns—whether it was because more profitable firms invest more in environmental performance or because better environmental performance leads to greater profits.

180. Sulaiman A. Al-Tuwaijri et al., *The Relations Among Environmental Disclosure, Environmental Performance, and Economic Performance: A Simultaneous Equations Approach* 3 (2003), available at <http://ssrn.com/abstract=405643>. The authors measured disclosure based on information reported in SEC Forms 10-K relating to oil and chemical spills, penalties, toxic waste generated and transferred or recycled, and designation as a responsible party for cleanup of hazardous waste sites.,.

181. *Id.* at 24-25. The authors posit that prior disclosure establishes a lower bound for performance that if breached might challenge the expectations of investors.

182. Innovest has also found that the financial performance of the top rated chemical companies is 16% higher than those in the bottom half. See William Greider, *The Greening of American Capitalism*, 25 ONEARTH 20, 22 (Fall 2003). Likewise, a study by the Alliance for Environmental Innovation concluded that superior performing environmental firms outperformed their peers on the stock market by as much as two percent. See Claudia Deutsch, *Investing it: For Wall Street, Increasing Evidence that Green Begets Green*, N.Y. TIMES, July 19, 1998, at 3-7.

Thus, environmental performance information is important to both socially responsible and ordinary investors. Notably, a national survey of investors in 2000 found that 79% of respondents believed that information about corporate responsibility, including compliance with environmental standards, was necessary to make investment decisions.¹⁸³ As discussed below, this interest can and should be leveraged to encourage better environmental compliance by publicly-traded firms by requiring greater disclosure of environmental compliance-related information.¹⁸⁴

Currently, securities law requires that publicly-traded firms disclose a range of information when companies first issue securities and on a regular basis thereafter. The disclosure requirements are contained in one omnibus regulation issued by the Securities and Exchange Commission ("SEC"), Regulation S-K.¹⁸⁵ Unfortunately, the current rules bearing most directly on disclosures about environmental enforcement and compliance related issues are unduly narrow. Item 103 requires companies to disclose any material environmental, legal, or administrative proceedings, either pending or known to be contemplated, including actions involving the government which involve potential monetary sanctions that are likely to exceed \$100,000, and any claims for damages or sanctions that exceed 10% of the company's assets.¹⁸⁶ Firms are also required by Item 101 to make "appropriate disclosure" about the material effects that complying with environmental requirements may have upon the firm's capital expenditures, earnings, and competitive position.¹⁸⁷ Item 303 also requires firms to disclose any known trends or uncertainties that the company *reasonably expects* will have a material impact on the company, which can include potential en-

183. AM. INST. OF CERTIFIED PUB. ACCT., FINDINGS OF NATIONAL INVESTOR POLL ON AUDITING AND FINANCIAL REPORTING (2000), at http://www.aicpa.org/auditor_independence/report.htm, quoted in Michelle Chan-Fischel, *After Enron: How Accounting and SEC Reform Can Promote Corporate Accountability While Restoring Public Confidence*, 32 ENVTL. L. REP. 10,965, 10,968, n.37 (2002); see also *id.* at 10,969 ("Many [Socially Responsible Investors] monitor companies' social and environmental performance with the belief that good management of environmental or 'soft' issues is a proxy of good overall management capacity, which is a driver of financial out-performance"), and 10,975 (noting that large institutional investors use nonfinancial data as a basis of up to 35% of their asset allocation decisions).

184. It is beyond the scope of this Article to examine the extent to which broader environmental disclosures, such as a firm's use and generation of toxic chemicals, use of recycled materials, the effects that their activities may have on the environment, etc., should be required.

185. 17 C.F.R. §§ 229.10-.702.

186. *Id.* § 229.103. Companies must disclose the court or agency where the proceedings are pending, the date instituted, the principal parties involved, a description of the alleged facts, and the relief sought. For government enforcement actions, a company must disclose any proceeding unless it "reasonably believes" that such proceeding will result in no sanctions or sanctions less than \$100,000. See *id.*, Instruction 5(C). For claims for damages or sanctions in excess of 10% of current assets, multiple actions that present in large degree the same factual and legal issues should be considered together. *Id.*, Instruction 2. The Supreme Court has ruled that information is material if there is a "substantial likelihood that the disclosure of the omitted fact would have been viewed by the investor as having significantly altered the 'total mix' of information." See *TSC Indus., Inc. v. Northway, Inc.*, 426 U.S. 438, 449 (1976).

187. 17 C.F.R. § 229.101(c)(1)(xii). This would include the costs of installing pollution control equipment, cleanup costs under CERCLA or other statutes, and other costs of noncompliance. See John W. Bagby et al., *How Green Was My Balance Sheet?: Corporate Liability and Environmental Disclosure*, 14 VA. ENVTL. L.J. 225, 289-90 (1995).

forcement actions or future regulatory compliance costs.¹⁸⁸ The rules do not, however, mandate disclosure of other information about a firm's environmental compliance record that may be equally relevant to investors.

The SEC should expand Item 103 in three ways. First, it should include in the category of legal proceedings with sanctions likely to exceed \$100,000 citizen-initiated enforcement actions, as well as government proceedings.¹⁸⁹ (Under current rules, citizen actions for penalties that exceed 10% of a company's assets would have to be disclosed, but in many instances this is a much higher threshold.) As Professor Jim May has documented, citizen actions to enforce the CWA have grown dramatically in size and significance over the past two decades; between 1995 and 2003, for example, citizen enforcers filed 1428 sixty-day notices of intent to sue under the CWA.¹⁹⁰ Second, *any* criminal enforcement action for violation of environmental laws should be considered "per se" material and subject to disclosure, regardless of the amount. Criminal actions may not lead to significant monetary sanctions but may reflect far more serious and deep-seated corporate misbehavior than civil actions over \$100,000. Third, "sanction" should be interpreted to include not merely penalties but remedial clean-up costs, environmentally beneficial projects, and other expenditures that result from government actions. (Under current rules, these costs have to be disclosed if they exceed the 10% threshold of a company's assets.) For investors seeking to evaluate the environmental performance of a company, information about such expenditures may be as consequential as sanctions prompted by enforcement actions.

Beyond amending Item 103 to reflect the above changes, there are larger questions of what enforcement-related data should be subject to mandatory disclosure given the heightened investor interest in environmental performance. Reformers have persuasively argued for the adoption of broader disclosure rules that go well beyond current requirements. These include requiring firms to disclose the total number of private and government enforcement actions filed against the firm; the total value of penalties, Supplemental Environmental Projects ("SEPs") and other payments assessed against the firm or paid pursuant to civil settlements; and summaries of compliance and monitoring reports that firms are required to prepare under various environmental statutes.¹⁹¹ Some major institutional investors, in-

188. 17 C.F.R. § 229.303(a)(3)(ii). The rule also requires disclosure of any "unusual events" that materially affect a company's income. *Id.* § 229.303(a)(3)(i).

189. I thank Golden Gate University LLM student Terra Pfund for bringing this suggestion to my attention in a paper on this topic. See Terra Pfund, *Corporate Environmental Accountability: Expanding SEC Disclosures to Promote Market-Based Environmentalism* (on file with author).

190. James R. May, *Now More Than Ever: Environmental Citizen Suit Trends*, 33 ENVTL. L. REP. 10,704, 10,712 (2003).

191. See Chan-Fischel, *supra* note 183, at 10,977 (quoting Corporate Sunshine Working Group recommendations); Cynthia Williams, *The Securities and Exchange Commission and Corporate Social Transparency*, 112 HARV. L. REV. 1197, 1300-02 (1999). Some firms may fail to disclose liabilities because of uncertainty about how to estimate environmental liabilities and potential risks. As a recent report by the Rose Foundation for Communities and the Environment argues, to address this problem,

cluding state treasurers, have also begun calling for the SEC to broaden its disclosure requirements.¹⁹²

In the past, the SEC has resisted efforts to mandate disclosure of this type of information on the grounds that it was not material to investors. As discussed above and as articulated by Michelle Chan-Fischel, “the same argument clearly cannot be justified today . . . [B]oth traditional and socially responsible investors seek and incorporate nonfinancial information as an essential part of their investment analysis and decisionmaking.”¹⁹³ Indeed, the bottom line “[e]vidence that information about compliance with the law is material is found in the typical stock market reaction to a company’s announcement of illegality: the stock price drops.”¹⁹⁴

One final but critical point is that no matter what rules are in place, they will have little impact if they are not followed. Even the limited disclosures currently required by SEC rules seem to be ignored by most companies, as documented saliently by a 1998 EPA investigation. The study looked at disclosure in firms’ 10-K statements of legal proceedings involving three types of monetary sanctions in excess of \$100,000: (1) penalties, (2) SEPs,

the SEC should adopt voluntary industry guidelines for estimating environmental liabilities that have been developed by the American Society for Testing and Materials International (“ASTM”). The guidelines set forth standard methodologies and also require disclosure when cumulative environmental liabilities, penalties, settlements, fines, and violations exceed regulatory thresholds. The report notes that the guidelines would “help to close one of the biggest loopholes in environmental reporting today—piecemeal accounting of environmental liabilities—[and] to show companies how they *can* estimate and report environmental liabilities despite uncertainty.” THE ROSE FOUND. FOR CMTYS. & THE ENV’T, THE ENVIRONMENTAL FIDUCIARY: THE CASE FOR INCORPORATING ENVIRONMENTAL FACTORS INTO INVESTMENT MANAGEMENT POLICIES 56 (2002).

192. See Statement of Denise L. Nappier, Connecticut State Treasurer, Congressional Symposium, Securities and Exchange Commission Social and Environmental Disclosure: Meeting the Information Needs of Today’s Investors (July 10, 2003) (urging the SEC to create a Blue Ribbon Task Force to formally review its existing disclosure rules and enforcement policies related to social and environmental issues and recommend changes to ensure that shareholders receive the information necessary to make informed investment decisions) [hereinafter Nappier Statement], *available at* <http://www.corporatesunshine.org/sympresstate.pdf>; see also Letter from Jill Ratner, President, Rose Foundation for Communities and the Environment, to Jonathan G. Katz, Secretary, U.S. Securities and Exchange Commission (noting support of California Treasurer and New York City Controller for Rose Foundation petition urging SEC to adopt ASTM guidelines for estimating environmental liabilities), *available at* <http://www.corporatesunshine.org/sympall.pdf>.

193. Chan-Fischel, *supra* note 183, at 10,975. In rulemaking proceedings in the mid 1970s, the SEC rejected various proposals to broaden required environmental disclosures, including disclosure of non-compliance with environmental regulations and disclosure of all environmental litigation. Bagby et al., *supra* note 187, at 276-78. The SEC argued, in part, that its discretion to regulate disclosures was limited to information that bears on the economic value of investments. *Id.*; Williams, *supra* note 191, at 1263-69. Professor Williams has argued that in light of the rapidly expanding social investment movement, a significant portion of investors would find information of this type material. She additionally argues that even if that were not true, the social goals underlying the federal securities acts empower the SEC to require disclosure of matters that do not bear directly on the economic value of an investment. The underlying goals of the acts include providing investors with full and fair information necessary to make informed investment decisions and to cast well-informed votes about management, and to pressure management to adopt new strategies. Professor Williams argues that each of these goals is advanced by providing investors with a full range of important information on the way companies are being managed, including what environmental practices are being followed that may have negative ramifications in the future or be of ethical concern. *Id.* at 1265-68, 1272. See also Chan-Fischel, *supra* note 183, at 10,974-77 (refuting arguments against expanded disclosure).

194. See Williams, *supra* note 191, at 1278-79.

and (3) corrective actions under the RCRA.¹⁹⁵ Over a two-year period, non-disclosure rates were high: 74% for proceedings involving penalties; 84% for proceedings involving SEPs; and 96% for RCRA corrective actions. Even fewer companies *accurately* disclosed the required information (i.e., correctly identified the statute violated and the amount of the sanction).¹⁹⁶ In another study of twenty-six firms involved in initial public offerings who were known potentially responsible parties under the federal Superfund law, only twelve made any sort of disclosure about potential environmental liabilities, and even among those firms, the information disclosed was quite limited. The authors chose to examine this group because of the heightened scrutiny surrounding firms when they first go public. They concluded:

[T]he empirical evidence is unequivocal: the same relatively low level of disclosure by companies already admitted to the public securities markets is mimicked by those firms that are “going public” for the first time. The more intense scrutiny, the higher stakes involved in an [Initial Public Offering] and the enhanced due diligence procedures apparently are of no consequence in prompting a greater amount or quality of environmental disclosure.¹⁹⁷

Complaints filed with the SEC and investor lawsuits have alleged that in numerous other instances, companies have failed to disclose material environmental matters, including government enforcement actions.¹⁹⁸

Thus, it is essential for the SEC to more vigorously police its disclosure rules with respect to environmental enforcement and compliance matters, to systematically screen public filings by firms to ensure that they disclose environmental matters, and even more importantly, to take enforcement action against violators.¹⁹⁹ The SEC appears to acknowledge to at least

195. Form 10-K statements refer to annual reports that publicly-traded companies are required to file.

196. The study found that firms correctly disclosed the required information in only 16% of proceedings involving penalties, 4% of cases involving SEPS, and 1% of RCRA corrective actions. Nicholas Franco, *Corporate Environmental Disclosure: Opportunities to Harness Market Forces to Improve Corporate Environmental Performance*, American Bar Association Section on Environment, Energy, and Resources, Conference on Environmental Law, Keystone, Colorado (Mar. 8-11, 2001), available at <http://www.corporatesunshine.org/epaaba.pdf>.

197. MARTIN FREEDMAN & A.J. STAGLIANO, *ENVIRONMENTAL DISCLOSURE OF COMPANIES INVOLVED IN INITIAL PUBLIC OFFERINGS* 19 (1996), available at <http://panopticon.csustan.edu/cpa96/papers.htm/freedman.htm>. (last visited Dec. 19, 2003). See also ROBERT REPETTO & D. AUSTIN, *COMING CLEAN: CORPORATE DISCLOSURE OF FINANCIALLY SIGNIFICANT ENVIRONMENTAL RISKS* 13, 23-24 (2000) (study of thirteen pulp and paper companies found that most failed to disclose or adequately discuss the impacts of known pending environmental issues, although many did report prospective Superfund liabilities).

198. These are discussed in Chan-Fischel, *supra* note 183, at 10.971-73. See also Nappier Statement, *supra* note 192 (“[W]e find that many companies either fail to report material information or underreport information important to shareholders.”) The General Accounting Office is currently preparing a report that examines corporate compliance with the SEC’s environmental disclosure requirements. See Proposed Agenda & Background Materials, Congressional Symposium, Securities and Exchange Commission Social and Environmental Disclosure: Meeting the Information Needs of Today’s Investors (July 10, 2003), available at <http://www.corporatesunshine.org./sympagenda.pdf>.

199. See Nappier Statement, *supra* note 192 (“[T]he SEC should adopt clear and definite conse-

some degree that environmental disclosure is an issue worthy of closer attention. It indicated in 2001 that it would devote more resources to this issue,²⁰⁰ and in comments issued on the annual reports of Fortune 500 companies filed in 2002, the SEC reported that a number of companies had not adequately disclosed their environmental liabilities and that the SEC had asked them to enhance their disclosures.²⁰¹

Nonetheless, the agency almost never brings enforcement actions against firms based on failure to disclose environmentally-related information. According to a study by Robert Repetto and Duncan Austin of the World Resources Institute, out of over 5000 administrative enforcement actions initiated by the SEC from 1975 to 2000, only three were based on inadequate disclosure of environmental risks or liabilities.²⁰² Over the same period, the SEC brought only one civil enforcement case for insufficient environmental disclosure rules. Three of these four actions were brought before 1980.²⁰³ Repetto and Austin conclude that “[s]uch a small number of enforcement actions does not suggest vigorous enforcement activity . . . [e]xamples of incomplete disclosure brought to the SEC’s attention have not resulted in any discernible enforcement action.”²⁰⁴ As one EPA enforcement lawyer remarked, “the SEC’s non-enforcement . . . undermines EPA operations to encourage corporate compliance with U.S. environmental laws . . . it sets a disincentive for others to comply if competitors aren’t.”²⁰⁵

For its part, the EPA should be more proactive in trying to encourage SEC vigilance and firm compliance with disclosure rules. The agency has expressed its view that “[i]ncreased scrutiny of corporate environmental information, particularly legal proceedings, by the public, shareholders, and investors will likely provide an incentive for companies to handle environmental problems in a more expeditious manner, and provide a deterrent to future noncompliance.”²⁰⁶ In early 2001, the EPA began notifying parties

quences for incomplete or inaccurate compliance with its disclosure rules, regardless of the stringency of the requirements While I believe that strengthened reporting is necessary, at a minimum the SEC must take steps to ensure that current reporting requirements are met.”)

200. See Chan-Fischel, *supra* note 183, at 10,973 (noting that in 2001, SEC representatives announced that the SEC would begin screening company 10-K filings for compliance with a number of different criteria, including environmental disclosure, and that the SEC had created a dedicated telephone helpline to assist firms to properly report environmental issues).

201. See SEC. & EXCHANGE COMM’N, SUMMARY BY THE DIVISION OF CORPORATION FINANCE OF SIGNIFICANT ISSUES ADDRESSED IN THE REVIEW OF THE PERIODIC REPORTS OF THE FORTUNE 500 COMPANIES, available at <http://www.sec.gov/divisions/corpfin/fortune500rep.htm>. The SEC indicated that it had issued comments about inadequate disclosure of environmental liabilities to a number of oil and gas and mining companies, as well as to several manufacturing companies. *Id.*

202. See REPETTO & AUSTIN, *supra* note 197, at 11.

203. *Id.*

204. *Id.*

205. Donald Sutherland, *Beyond Enron: The Next Scandal*, 17 EARTH ISLAND J. 21 (Summer 2002) (quoting Shirin Venus, attorney with EPA’s Office of Planning, Policy Analysis and Communications).

206. U.S. ENVTL. PROT. AGENCY, OFFICE OF COMPLIANCE & ASSURANCE, GUIDANCE ON DISTRIBUTING THE “NOTICE OF SEC REGISTRANTS’ DUTY TO DISCLOSE ENVIRONMENTAL LEGAL PROCEEDINGS” IN EPA ADMINISTRATIVE ENFORCEMENT ACTIONS (Jan. 19, 2001), available at <http://www.epa.gov/compliance/resources/policies/incentives/programs/sec-guid-distributionofnotice.pdf#page=6> (last visited Dec. 17, 2003).

subject to EPA-initiated administrative enforcement actions of their potential duty to disclose the proceeding in accordance with SEC rules.²⁰⁷ But the EPA does not regularly provide information to the SEC about its enforcement actions²⁰⁸ Nor does the EPA follow up with the SEC to see if firms subject to enforcement actions have complied with the SEC's disclosure rules. Indeed, after a period of considerable interest and activity in this area in the late 1990s,²⁰⁹ the EPA has done relatively little since then to promote greater corporate disclosure.

CONCLUSION

Three decades of experience under the CWA have demonstrated both the CWA's strengths and deficiencies. One important shortcoming is the persistently high level of noncompliance among regulated entities, with rates of significant noncompliance around 25%. In an era of scarce resources and growing program needs, new cost-effective approaches to improving compliance are needed. Spotlighting—the mandatory disclosure of enforcement and compliance-related data by regulated entities and environmental agencies—is one such approach. Although spotlighting has grown in popularity over the past two decades as a means to achieve environmental goals, it has yet to be fully exploited in the enforcement context. As described in this Article, spotlighting strategies, in conjunction with other enforcement tools, have the potential to significantly enhance enforcement programs and improve compliance with the CWA's requirements. It is time for these strategies to be moved to center stage in the effort to meet the statute's ambitious objectives.

207. *Id.*; U.S. ENVTL. PROT. AGENCY, OFFICE OF COMPLIANCE & ASSURANCE, ENFORCEMENT ALERT, U.S. EPA NOTIFYING DEFENDANTS OF SECURITIES AND EXCHANGE COMMISSION'S ENVIRONMENTAL DISCLOSURE REQUIREMENTS (Oct. 2001), available at <http://www.epa.gov/Compliance/resources/newsletters/civil/enfalert/2001eds.html>.

208. According to one EPA enforcement attorney, EPA shares information about enforcement proceedings with the SEC "from time to time, as appropriate." Telephone Interview with Fran Jonesi, Office of Enforcement and Compliance Assurance (Dec. 12, 2003).

209. This is reflected, among other things, in the *Green Dividends* report that EPA commissioned, *see supra* note 178; the EPA investigation of compliance by firms subject to enforcement actions with the SEC's disclosure rules, *see supra* note 196; and the EPA policy of notifying firms subject to enforcement actions of their potential disclosure obligations under SEC rules, *see supra* note 207 206.