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Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement

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DETERRENCE VS. COOPERATION AND THE EVOLVING THEORY OF ENVIRONMENTAL ENFORCEMENT

CLIFFORD RECHTSCHAFFEN*

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I. INTRODUCTION

The world of environmental enforcement is evolving and experiencing some profound changes. As with other aspects of environmental law, key assumptions established over the past twenty-five years are under assault by an array of critics, including governmental regulators, business

advocates, and scholarly commentators. For example, in 1996, the former manager of the Environmental Protection Agency's (EPA) Superfund enforcement program argued that "[i]t has become manifest that the manner in which [the EPA] imposes, implements, and enforces environmental requirements is in serious need of reform."¹ Likewise, Virginia's Secretary of Natural Resources recently told Congress that "[t]he truth is that enforcement action means 'failure' not success. . . . [P]olicies which focus on compliance with environmental laws are better for the natural resources than policies which focus on enforcement."² A New York deputy attorney general similarly wrote that "[d]ecades of experience have illustrated that traditional 'command and control' enforcement or punishment mechanisms have been unable to fully achieve the lofty goals of the major environmental statutes."³

In response, both the federal and state governments have been re-examining traditional enforcement systems, which focus on deterrence and punishing violations. For example, the Clinton Administration is experimenting with nonadversarial approaches, including greater reliance on self-enforcement and greater willingness to waive penalties in exchange for compliance. In 1996, with a unanimous Senate vote, Congress passed the Small Business Regulatory Enforcement Fairness Act (SBREFA),

1. Bruce M. Diamond, *Confessions of an Environmental Enforcer*, 26 *Env'tl. L. Rep.* (Env'tl. L. Inst.) 10,252, 10,252 (May 1996). Diamond contends that the EPA should shift from its traditional, deterrence-based, adversarial approach to enforcement to one emphasizing cooperative efforts and greater reliance on industry self-compliance. See *id.* at 10,252 to 10,256.

2. *The Relationship Between Federal and State Governments in the Enforcement of Environmental Laws: Hearings Before the Senate Comm. on Env't and Pub. Works*, 105th Cong. 190 (1997) [hereinafter *Hearings on the Relationship Between Federal and State Governments*] (prepared statement of Becky Norton Dunlop, Secretary of Natural Resources, Commonwealth of Virginia).

3. Dean S. Sommer, *Cooperative Approaches: Public Pollution/Public Resolution*, NAT'L ENVTL. ENFORCEMENT J., Aug. 1995, at 3, 3. See 142 CONG. REC. S5644 (daily ed. May 24, 1996) (statement of Sen. Lott) ("Better environmental compliance using a voluntary flexible approach: this is what we all—both Republicans and Democrats alike—believe to be the new environmentalism."); MALCOLM K. SPARROW, IMPOSING DUTIES—GOVERNMENT'S CHANGING APPROACH TO COMPLIANCE (1994) (arguing that traditional culture and strategies of environmental enforcement are changing); Marshall J. Breger, *Regulatory Flexibility and the Administrative State*, 32 TULSA L.J. 325, 325-26 (1996) ("[M]any in the Republican-controlled Congress have sought to shift from an adversary or enforcement paradigm for regulation to a cooperative partnership with the regulated community. . . . [M]any in Congress and government have stressed the need to promote flexibility in regulatory enforcement and policy making."); Michael M. Stahl, *Enforcement in Transition*, ENVTL. F., Nov.-Dec. 1995, at 19, 19 [hereinafter Stahl, *Enforcement in Transition*] ("For the past several years, practitioners of environmental enforcement, from Washington to state capitals to city halls, have begun to transform their philosophy and methods, redefining the roles of government, business, and the public in ensuring environmental compliance and thereby improving environmental protection."). See also Eric W. Orts, *Reflexive Environmental Law*, 89 NW. U. L. REV. 1227, 1333 (1995) (calling for model of "reflexive" environmental law that places greater reliance on self-critical analysis by businesses).

which mandates forgiveness for minor violations by small businesses.⁴ Legislators in the 104th Congress also attempted to dramatically reduce funding for EPA enforcement activities, limit the agency's ability to impose penalties, and take other steps to discourage traditional enforcement.⁵

It is the states, however, which carry out nearly ninety percent of all enforcement actions,⁶ that have been leading the charge to modify enforcement practices.⁷ They have championed a "compliance first" strategy that emphasizes working cooperatively with violators to obtain compliance, and eschewing penalties in favor of persuasion.⁸ Many states have cut funding for traditional enforcement activities, reduced the number of facility inspections, and greatly curtailed the penalties assessed for violations.⁹ In Virginia, for instance, a scathing audit by the State's General

4. See Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. No. 104-121, § 223, 110 Stat. 857, 862 (1996).

5. See Zygmunt J.B. Plater, *Environmental Law as a Mirror of the Future: Civic Values Confronting Market Force Dynamics in a Time of Counter-Revolution*, 23 B.C. ENVTL. AFF. L. REV. 733, 734-35, 754-56 (1996) (noting that the House sought to slash the EPA enforcement budget, prohibit enforcement of numerous environmental regulations, and limit imposition of penalties based on environmental audits); George S. Hawkins, *Compliance and Enforcement Changes in Congress and EPA*, NAT. RESOURCES & ENV'T, Spring 1997, at 42 (explaining how members of Congress tried to cut EPA's enforcement budget to forcibly limit the agency's "enforcement first" strategy and support other agency tools, such as outreach and assistance). As part of the SBREFA, moreover, Congress amended the Equal Access to Justice Act to allow small businesses to recover attorneys fees and costs when the federal government's enforcement efforts are determined to be excessive, and required the Small Business Administration to establish regional Small Business Regulatory Fairness Boards to hear compliants about excessive agency enforcement against small businesses. See Small Business Regulatory Enforcement Fairness Act § 222, 231-32. See also S.582, 104th Cong. (1995) (proposing discovery privilege for voluntary disclosure made pursuant to environmental audit).

6. See *Hearings on the Relationship Between Federal and State Governments*, supra note 2, at 188 (prepared statement of Mark Coleman, Executive Director, Oklahoma Department of Environmental Quality, and Chairman, Compliance Committee, The Environmental Council of States).

7. See *id.* at 199 (statement of Patricia S. Bangert, Director of Legal Policy, Attorney General's Office, State of Colorado) ("[T]here is general agreement that a 'command and control' approach to environmental protection, by itself, does not work. The States, as the laboratories of democracy, are trying out new approaches that may bring greater protection at lesser cost.").

8. See *id.* at 2 (statement of Sen. Chafee) ("States that are trying to attain better results in administering environmental programs increasingly are experimenting with more carrots and fewer 'sticks.'"); U.S. GEN. ACCOUNTING OFFICE, ENVIRONMENTAL PROTECTION: EPA'S AND STATE'S EFFORTS TO FOCUS STATE ENFORCEMENT PROGRAMS ON RESULTS, GAO/RCED-98-113, 21-29 (1998) [hereinafter GAO, EFFORTS TO FOCUS ON RESULTS] (describing more flexible enforcement approaches adopted by numerous states).

9. See *Hearings on the Relationship Between Federal and State Governments*, supra note 2, at 220-23 (prepared statement of Todd E. Robins, Environmental Enforcement, U.S. Public Interest Research Group) (documenting reductions in inspections, penalties, enforcement actions and spending on enforcement staff in numerous states); Keith Welks, *Voluntary Compliance Measures in the United States* 26 (Oct. 1996) (unpublished report for the Commission of Environmental Cooperation, on file with author) ("[S]tate regulatory officials have begun to raise a myriad of creative efforts to encourage

Assembly in 1996 found that the state failed to take meaningful enforcement action against persistent and serious violators. One investigator concluded that the state's regulators "work with industry [and] don't enforce the law."¹⁰

The enforcement reform movement is notable not only because of its potentially sweeping scope but also because of the exceptional speed with which it has been embraced.¹¹ Just a few years ago, for instance, the EPA completed two long-range planning documents about enforcement that barely considered the type of criticisms currently being levied against the traditional system. The EPA instead focused its attention on measures to strengthen its traditional enforcement approach.¹² When Congress reauthorized the Clean Air Amendments in 1990, it likewise was most concerned about enhancing all three legs of a deterrence-based enforcement approach: civil, citizen, and criminal enforcement.¹³ The movement to fundamentally change the traditional approaches to environmental enforcement has gained remarkable momentum in the last few years. Since 1993, twenty-three states have enacted bills that give businesses evidentiary privileges or immunity for environmental law violations discovered and corrected as a result of internal environmental audits. Businesses have

or assure compliance with environmental requirements. Many of these have as their common element less frequent resort to traditional enforcement responses.") (citations omitted).

10. Ellen Nakashima, *Report Pans Va. Efforts on Pollution; Agency Called Lax; Water Inspections, Fines Show Decline*, WASH. POST, Dec. 10, 1996, at A1. See also John H. Cushman, *Virginia Seen as Undercutting U.S. Environmental Rules*, N.Y. TIMES, Jan. 18, 1997, at 22 [hereinafter Cushman, *Virginia Seen*].

11. One commentator describes the quickness with which the reform movement has been accepted as follows:

Not very long ago, the observation that environmental regulatory systems in the United States appeared to be moving from traditional command and control instruments to a more inclusive "compliance" philosophy might be regarded as perceptive. The same observation today would merely be trite, so quickly has this movement taken hold.

Welks, *supra* note 9, at 1.

12. See U.S. ENVTL. PROTECTION AGENCY, ENFORCEMENT FOUR-YEAR STRATEGIC PLAN: ENHANCED ENVIRONMENTAL ENFORCEMENT FOR THE 1990'S (1991) [hereinafter ENFORCEMENT FOUR-YEAR STRATEGIC PLAN]; U.S. ENVTL. PROTECTION AGENCY, ENFORCEMENT IN THE 1990'S PROJECT: RECOMMENDATIONS OF THE ANALYTICAL WORKGROUPS (1991). James Strock, Assistant Administrator for Enforcement of the EPA, offered insight to the agency's enforcement approach: "For those who stumble off the road of responsible environmental citizenship, the message from EPA enforcement should be clear: The bear is hungry." James M. Strock, *EPA's Environmental Enforcement in the 1990s*, 20 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,327, 10,332 (Aug. 1990).

13. See George Van Cleve & Keith W. Holman, *Promise and Reality in the Enforcement of the Amended Clean Air Act Part II: Federal Enforceability and Environmental Auditing*, 27 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,151, 10,157 (Apr. 1997).

been aggressively lobbying for similar measures in virtually every other state, as well as in Congress.¹⁴

Although the reform movement has assumed an air of inevitability in many quarters, its speed and scope cry out for a close and systematic examination. This Article critically examines the assumptions underlying the reform movement, and concludes that we should ease the rush to dismantle traditional, deterrence-based civil enforcement.¹⁵ While some of the underlying critiques of traditional enforcement have merit, they do not demonstrate that a wholesale shift to a primarily cooperative-oriented approach will improve compliance with environmental law. In fact, a deterrence-based system of enforcement contains many attributes that are equally if not more essential to achieving compliance. Rather than discarding the current enforcement approach, we should move to a system of environmental enforcement that is grounded in deterrence theory but integrates the most constructive features of a cooperative model.

Part II of this Article describes the theoretical basis for the traditional approach to enforcing environmental law, and how this approach has evolved in practice. Part III assesses the major theoretical critiques of deterrence-based enforcement that underlie the current push for reform. Part IV discusses the positive elements of deterrence-based enforcement and why they should not be abandoned. Part V analyzes the wisdom of the most significant proposed reforms currently being considered or implemented, and suggests a better approach for improving enforcement of our nation's environmental laws.

II. THE CURRENT SYSTEM

The traditional practice of environmental enforcement is grounded in theory on a deterrence-based model of enforcement. It assumes that most regulated entities are rational economic actors that act to maximize profits. As such, decisions regarding compliance are based on self-interest. In short, businesses comply where the costs of noncompliance outweigh the benefits of noncompliance. The benefits of noncompliance consist of money saved by not purchasing pollution control equipment or taking other required measures. The costs of noncompliance include the costs of

14. See Kirk F. Marty, Note, *Moving Beyond the Body Count and Toward Compliance: Legislative Options for Encouraging Environmental Self-Analysis*, 20 VT. L. REV. 495, 495-98, 524-25 (1995).

15. There is a related debate about the need to change certain aspects of criminal environmental law, in particular the very liberal *mens rea* requirements of criminal environmental statutes. That subject is beyond the scope of this Article.

implementing control measures once a violation is detected, plus any additional penalties imposed for being found in violation, multiplied (discounted) by the probability that the violations will be detected.¹⁶ The task for enforcement agencies is to make penalties high enough and the probability of detection great enough that it becomes economically irrational for facilities to violate environmental requirements. The speed and the certainty with which sanctions are imposed are also important factors in obtaining compliance.¹⁷

Deterrence may be achieved through civil or criminal sanctions. Criminal sanctions may be more appropriate where the amount of civil penalties needed to constitute an economic deterrent is unrealistic.¹⁸ Many also believe that the unique moral stigma and threat of jail time from criminal enforcement constitute the most powerful incentives to obey the law.¹⁹ But whether the penalty is civil or criminal, the essential inquiry

16. A firm's cost-benefit evaluation can go beyond purely monetary losses and include damage to the business' reputation, potential tort liability, legal system costs, increased scrutiny by regulatory agencies, and other costs. See Colin S. Diver, *A Theory of Regulatory Enforcement*, 28 PUB. POL'Y 257, 263 (1980).

17. See TOM B. TYLER, *WHY PEOPLE OBEY THE LAW* 21 (1990).

18. Cf. Michael B. Metzger, *Corporate Criminal Liability for Defective Products: Policies, Problems, and Prospects*, 73 GEO. L.J. 1, 67 (1984) (suggesting that extraordinarily severe penalties, such as those that threaten corporate solvency, may be necessary for meaningful deterrence, especially for large corporations); Mark A. Cohen, *Environmental Crime and Punishment: Legal/Economic Theory and Empirical Evidence on Enforcement of Federal Environmental Statutes*, 82 J. CRIM. L. & CRIMINOLOGY 1054, 1057-58 (1992) (noting that a possible rationale of criminal enforcement may be the failure of civil and administrative law to deter violations).

19. See Cohen, *supra* note 18, at 1058. There are other important values served by imposing criminal sanctions on conduct that society considers morally blameworthy. In practice, most environmental statutes give enforcement agencies tremendous discretion in determining whether to prosecute a violation criminally or civilly (or administratively). Government officials consider a number of factors in determining how to proceed. Some of these relate to the nature of the violator, such as his or her culpability or past compliance history. Another consideration is the nature of the violation committed, which is determined by examining how serious a deviation from applicable requirements it was, the extent of harm it posed to the environment and public health, and the perceived deterrence value of a criminal prosecution on other regulated entities among other factors. The decision also turns on a number of strategic considerations. Some enforcement officials prefer criminal prosecution because it is generally quicker and less resource intensive than civil cases. Another factor is the strength of the evidence in a case. In criminal matters, the evidence must be sufficient to satisfy the higher burden of proof requirement (proof beyond a reasonable doubt versus preponderance of the evidence), as well as to make the greater showing of intent needed to establish liability for certain violations. Moreover, if certain evidence to prove a violation is lacking, civil discovery may be the only way to obtain it. Another consideration is the need to obtain injunctive relief, which is only available in civil cases. Finally, prosecutors consider the probability that a criminal conviction will lead to jail time or a more severe sanction than civil enforcement. If, for example, an individual corporate defendant has no prior record and other factors suggest that imprisonment is unlikely, the government will probably bring a civil action with its lower burden of proof. For a discussion of these issues, see Clifford Rechtschaffen, *Enforcement of Hazardous Waste Management Requirements, in*

turns on the same pleasure-pain calculus: Make the penalty sufficiently painful so that rational actors will be deterred despite the benefits of non-compliance.

As a theoretical construct, a deterrence-based system has a number of distinctive features.²⁰ A central concern regards the application of punishment for breaking a rule: If there is a breach of a legal requirement, it deserves punishment. Thus, there is a strong emphasis on detecting non-compliance and gathering evidence to prove it. Imposing fines is seen as a mark of success and serves notice that all violators will be treated similarly. Enforcement is also largely retrospective since it focuses on reacting to violations that have already occurred and penalizing violators as a means of deterring future violations.

By contrast, a "compliance" or cooperative system emphasizes securing compliance rather than sanctioning wrongdoing. Penalties are seen as threats rather than sanctions, and sanctions are typically withdrawn if compliance is achieved. Levying penalties is seen as a mark of the system's failure (to otherwise obtain compliance); compliance systems rely far more on rewards and incentives than penalties.²¹ Enforcement is primarily prospective, oriented toward inducing conditions that lead to conformity. The system focuses more on the underlying conditions or violations than on the violator.

Deterrence-based enforcement is the prevailing societal approach for controlling unlawful individual and corporate conduct.²² This theory underlies the EPA's current enforcement system.²³ The agency's enforcement approach is legalistic, and its extensive enforcement policies stress the use of formal enforcement actions. Since the mid-1980s, one of its guiding principles has been ensuring "timely and appropriate responses" to observed violations, which involves applying a series of escalating actions once noncompliance is detected. The agency has traditionally measured the success of its program by the number of inspections conducted, the number of enforcement actions initiated, and the number and size of penalties assessed—all indicators that some type of formal enforcement action

CALIFORNIA LAND USE AND ENVIRONMENTAL PRACTICE 54-40 to -43 (Kenneth Manaster & Daniel Selmi eds., 1995).

20. For a comparison of the features of systems based on deterrence and compliance, see Albert J. Reiss, *Selecting Strategies of Social Control Over Organizational Life*, in ENFORCING REGULATION 23, 23-26 (Keith Hawkins & John M. Thomas eds., 1984).

21. See *id.* at 24.

22. See TYLER, *supra* note 17, at 3.

23. See JOEL A. MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES 102-03 (1995).

has been taken.²⁴ State environmental agencies have generally followed the EPA's lead, especially when implementing federally-delegated programs that entail EPA oversight of their enforcement activities.

Although the theoretical underpinning of the current enforcement system relies largely on deterrence, in practice the process is much more flexible. Most enforcers use a hybrid strategy that includes elements of both coercion and cooperation; few rely on a strictly legalistic model. Most enforcement activity, particularly state enforcement, is aimed at bringing violators back into compliance rather than punishing or deterring.²⁵ Most instances of noncompliance are met with either no sanctions or only minor, informal ones.²⁶ Moreover, most regulatory officials do not rigidly adhere to legalistic procedures. In their extensive study of enforcement of the Clean Water Act, for example, Professors Susan Hunter and Richard Waterman found a "pragmatic" EPA enforcement process in which agency staff were flexible and employed considerable discretion.²⁷

24. See *id.* at 119.

25. See CLIFFORD S. RUSSELL, WINSTON HARRINGTON & WILLIAM J. VAUGHAN, ENFORCING POLLUTION CONTROL LAWS 37 (1986).

26. See *id.* at 24-25, 37-43. See also ENFORCEMENT FOUR-YEAR STRATEGIC PLAN, *supra* note 12, at 27 (pointing out that the EPA's mobile source enforcement program resolves over 95% of its cases through an informal administrative Notice of Violation program); SUSAN HUNTER & RICHARD W. WATERMAN, ENFORCING THE LAW: THE CASE OF THE CLEAN WATER ACTS 53-54 (Kenneth J. Meier ed., 1996) (indicating that a study of Clean Water Act enforcement showed 70% of actions were at the three lowest levels of enforcement: level (0) no action warranted, comment, permit modification request; level (1) telephone calls, meetings, enforcement notice letters; and level (2) warning letters, notices of violations); PETER C. YEAGER, THE LIMITS OF LAW: THE PUBLIC REGULATION OF PRIVATE POLLUTION 278-79 (1991) (reporting that a study of Clean Water Act enforcement in EPA Region II showed that "the single most common agency response to [violations of effluent limits] is to take no formal action against [facilities]," and revealing there was no formal action in 42.3% of cases with warning letters issued in another 40.8% of cases); Paul Downing & James N. Kimball, *Enforcing Pollution Control Laws in the U.S.*, 11 J. POL'Y STUDIES 55, 59-60 (summarizing numerous studies showing that agencies resolve most violations through informal means and negotiations to bring violators back into compliance); Richard G. Kozlowski & Howard Bleichfeld, *Wetlands Enforcement: Lion or Lamb?*, NAT. RESOURCES & ENV'T, Winter 1996, at 62, 64 (noting that, over a five-year period in 8,000 cases where the Corps of Engineers found violation of wetlands requirements, over 90% were resolved without imposing any penalty, and that over a three-year period, the EPA completed 870 wetlands enforcement actions resulting in almost 90% resolved without any penalty and two-thirds resolved without formal enforcement action).

27. See HUNTER & WATERMAN, *supra* note 26, at 50-65. This flexibility and discretion is not unique to the EPA staff.

The performance of various enforcement agencies are remarkably similar They all attempt to maintain a cooperative relationship with each source. Sources are given repeated opportunities to comply without penalty for failure. The agency considers economic and technical feasibility in its enforcement even though in many cases this is prohibited by law. Past violations are forgiven if compliance is achieved or in the offing. Compliance is delayed, often several years. And economic penalties are almost never imposed.

Paul Downing, *Bargaining in Pollution Control*, 11 POL'Y STUD. J. 577, 581 (1983).

Hunter and Waterman concluded that, "[t]he intent of the enforcement process, therefore, was not to punish violators, but rather to coax them toward compliance. Most enforcement personnel explicitly informed us that a reliance on higher-level enforcement activity is not the best means of achieving compliance for a variety of reasons."²⁸ Likewise, a recent survey noted that "[m]any regulators argue that they have always employed a wide range of mechanisms to secure compliance, and that enforcement has seemed predominant only because it is publicized the most."²⁹

Even though the EPA's and the states' enforcement systems are much more flexible and compliance-oriented than their deterrence-based underpinning suggest, many of the current calls for reform attack the theoretical model of rigid deterrence-based enforcement.³⁰ Therefore, to some extent, these attacks are aimed at a strawman version of current enforcement. Nonetheless, critics have also raised important fundamental questions about how society should approach enforcement of its environmental laws.

III. THE PUSH FOR REFORM

The current effort to reform enforcement practices has many sources. Unquestionably, it originates in part from those who simply dislike effective environmental enforcement: businesses who want to be treated more leniently, political leaders with antipathy toward environmental regulation, and state regulators who wish to relax enforcement to create a more business-friendly climate.³¹ These constitute important political forces push-

28. HUNTER & WATERMAN, *supra* note 26, at 60. See also Christen Carlson White, *Regulation of Leaky Underground Fuel Tanks: An Anatomy of Regulatory Failure*, 14 UCLA J. ENVTL. L. & POL'Y 105, 116 (1996) (stating that regulators at the regional water board reported that "consultation and education is the best way for them to pursue their job and that issuing an enforcement order or a fine was both ineffective and unnecessary to achieve compliance"). In San Francisco, for example, the Bay Area Quality Management District imposed an average fine of \$625 against refineries for more than 1,000 air-quality violations from 1990 to 1996. See Jane Kay & Dick Rogers, *Tiny Fines for Refinery Air Law Violations*, S.F. EXAMINER, Feb. 9, 1997, at A1. According to the district enforcement manager, "'We're not here to be monetary collectors of civil penalties. . . . We're here to monitor facilities and make sure they're in compliance with rules.'" *Id.*

29. Welks, *supra* note 9, at 3 n.4.

30. One critic likened the EPA's enforcement methods to Gestapo tactics: [H]ow does the EPA enforce environmental statutes under its jurisdiction? . . . They act like the gestapo. . . . They come invading with terrorizing and threatening letters. They do not seek to solve problems but impose their will. . . . [T]heir problem is an absolute lack of common sense—a sort of [Bureau of Alcohol, Tobacco and Firearms] approach to regulatory enforcement.

139 CONG. REC. S5141 (daily ed. April 29, 1993) (statement of Sen. Wallop).

31. See John H. Cushman, *States Neglecting Pollution Rules, White House Says*, N.Y. TIMES, Dec. 15, 1996, at A1 [hereinafter Cushman, *States Neglecting*]; Cushman, *Virginia Seen*, *supra* note

ing for change. From a scholarly perspective, the more interesting arguments are those raised by serious and well-intentioned observers of the enforcement system—"well intentioned" in the sense that they support the goal of effective enforcement.

A. CHANGED CORPORATE ATTITUDES AND PRACTICES

One of the most vigorously asserted arguments is that the current enforcement system is based on an outdated model of corporate attitudes and behavior. The argument has several related components: (1) Most businesses try to comply with environmental laws because of a sense of social responsibility, and adherence to social and moral norms; (2) businesses are highly motivated to comply voluntarily because of external factors such as market forces, potential reputational harm, and third-party liability claims; and (3) many businesses have implemented sophisticated internal regulatory systems that parallel or exceed governmental requirements. As a result, a punitive enforcement approach is largely unnecessary. These issues are discussed below.

1. *Compliance and Social Responsibility*

A number of observers challenge the view of corporations as economic actors solely interested in maximizing profit or value, and contend that corporate actors instead are influenced by a mix of civic and social motives. Some argue that corporations perceive themselves as political citizens who are ordinarily inclined to comply with the law—partially because of their belief in the law, and partially as a matter of their long term self-interest.³² This is particularly true where corporations believe the law is reasonable.³³ For example, regulatory scholars Ian Ayres and John Braithwaite insist that corporate actors are "often concerned to do what is right, to be faithful to their identity as a law abiding citizen, and to sustain a self-concept of social responsibil-

10, at 22 (reporting EPA officials' consideration of Virginia as a leading example of widespread resistance by some states against vigorous enforcement of federal environmental laws).

32. See Robert A. Kagan & John T. Scholz, *The "Criminology of the Corporation" and Regulatory Enforcement Strategies*, in ENFORCING REGULATION, *supra* note 20, at 67. See also Cheryl E. Wasserman, *Federal Enforcement: Theory and Practice*, in INNOVATION IN ENVIRONMENTAL POLICY 21, 24-25 (T.H. Tietenberg ed., 1992) (suggesting an array of factors may explain compliance behavior, "only some of which are rational, reasonable, and economically motivated," including societal norms, moral values, and sense of professional conduct).

33. See Kagan & Scholz, *supra* note 32, at 67; Wasserman, *supra* note 32, at 25.

ity."³⁴ Others claim that corporate actors have internalized the general societal norms about environmental protection:

[Business] leaders tend to see themselves comfortably in the mainstream, cherishing and reflecting society's values and norms. More specifically, today's business leaders grew up during decades when their culture affirmatively espoused protection of the environment as an inherently positive goal, and held up for censure conduct which jeopardized our natural world simply to increase profits. Accordingly, the argument goes, today's business leaders bring a fundamentally different attitude about environmental regulations, and their obligation to meet them, than their predecessors who made decisions and ran facilities at the dawn of the environmental age.

The normative rationale for a broader compliance approach to environmental regulation is ultimately based on the belief that regulators and regulatees now share—perhaps for the first time—the same goals and value systems.³⁵

The critics of deterrence-based enforcement correctly reject an economically deterministic model as the only explanation for voluntary compliance. Corporate motivations are undoubtedly more complex, and, as the critics accurately point out, the current level of sanctions imposed by most enforcement agencies is probably an insufficient incentive for businesses to comply purely on grounds of economic self-interest.³⁶ Pro-

34. IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE* 22 (1992). The authors find that

business informants repeatedly argued that the common characterization of them as motivated only by money was a simplistic stereotype. Conceding that their primary motivations were economic, they claimed that they and their colleagues took seriously business responsibility, ethics, and obligations to abide by the law and to be responsive to nonshareholding stakeholders in the corporation.

Id.

35. Welks, *supra* note 9, at 5. See also Michael R. Harris, *Promoting Corporate Self-Compliance: An Examination of the Debate Over Legal Protection for Environmental Audits*, 23 *ECOLOGY L.Q.* 663, 711 (1996) ("American businesses often argue that years of command and control regulation, increased public scrutiny due to environmental reporting requirements, liability under CERCLA, and intense pressure to conform to international standards have fostered a commitment among some firms toward voluntary environmental compliance.").

36. See AYRES & BRAITHWAITE, *supra* note 34, at 96 (explaining that regulatory agencies rarely have the resources to detect, prove and punish cheating with sufficient consistency for it to be economically rational not to cheat); RUSSELL ET AL., *supra* note 25, at 43 (noting that even in states with the largest penalties, sanctions for noncompliance are unlikely to be sufficient to induce continuous compliance). *But see* Winston Harrington, *Enforcement Leverage When Penalties Are Restricted*, 37 *J. PUB. ECON.* 29 (1988) (suggesting that firms comply with environmental laws despite the small size of penalties assessed, because enforcement agencies and regulated entities behave according to a dynamic repeated-game model in which, among other things, agencies adjust inspection frequency and penalties based on past performance of firms); Downing & Kimball, *supra* note 26, at 60-63 (suggesting that corporations comply despite low penalties because compliance costs relatively low,

fessors Ayres and Braithwaite are closer to the mark in arguing that firms have different "lexical orderings" of money and responsibility: The behavior of regulated entities ranges from those exclusively motivated by money to those for whom this goal is constrained to a greater or lesser degree by ideals of social responsibility. For example, some firms will insist on satisfying a minimum level of care before pursuing maximum profits; others will engage in as much socially responsible activity as they can before it affects profitability.³⁷

However, many critics also understate the role that ideological resistance to regulation plays in undermining compliance. Absent deterrence, corporate actors are far more likely to adhere to laws that in their eyes are legitimate, particularly when compliance is expensive.³⁸ As Peter Yeager notes, corporations violate environmental protection laws more frequently than laws designed to protect the integrity of the marketplace such as tax, securities, and unfair trade laws, because these laws do not enjoy the same legitimacy in the eyes of businesses.³⁹ This is hardly a novel proposition; individuals are much more likely to comply with laws that are consonant with their own moral and political values.⁴⁰ Indeed, many law-abiding individuals ignore rules inconsistent with their beliefs if there is little or no risk of getting caught.⁴¹ There is no question

allows firms to argue for strict enforcement of regulations against competitors, may reduce the frequency of future government monitoring and inspections, and may help firms maintain a positive corporate image).

37. See AYRES & BRAITHWAITE, *supra* note 34, at 27-29. Analyzing the issue from a more psychological perspective, the authors argue that corporations are "bundles of contradictory commitments to values of economic rationality, law abidingness, and business responsibility." *Id.* at 31. Professor Christopher Stone also argues that within corporations there are a variety of goals associated not only with different corporate types but also with different stages of corporate development. In particular, once a corporation's basic survival is assured, it is more likely to seek a *satisfactory* level of profits rather than be entirely profit-oriented; at later stages of corporate development, it is likely to become more social-oriented in its objectives. See CHRISTOPHER D. STONE, *WHERE THE LAW ENDS: THE SOCIAL CONTROL OF CORPORATE BEHAVIOR* 38-39 (1975).

38. See Kagan & Scholz, *supra* note 32, at 67 (acknowledging that among businesses which act like "political citizens," some noncompliance will result from principled disagreement with the law).

39. See YEAGER, *supra* note 26, at 8-10. He adds that "where laws lack legitimacy, violation rates are likely to be relatively high, other factors held constant." *Id.* at 9. See also STONE, *supra* note 37, at 228 (noting that laws regulating corporate behavior run into the widely held business view that the conduct they forbid is not morally reprehensible).

40. See TYLER, *supra* note 17, at 37-38, 64; Douglas C. Michael, *Cooperative Implementation of Federal Regulations*, 13 YALE J. ON REG. 535, 543 (1996) (arguing that individuals will voluntarily comply with rules only so long as rules are perceived as reasonable).

41. Consider laws governing minor drug use or requiring all income earned under the table to be reported to the IRS. See David C. Johnston, *Despite an Easing of Rules, Millions Evade 'Nanny Tax,'* NY TIMES, April 5, 1998, at A1 (reporting that the IRS estimates that fewer than 1 in 13 persons are complying with federal law for reporting wages paid to nannies, maids and other servants, and for

that many businesses are philosophically opposed to some substantial portion of the current regime of environmental regulation and consider it illegitimate. This opposition has been fueled over the past five to ten years by a drumbeat of intense criticism of the EPA and other regulatory agencies. Members of Congress have repeatedly referred to EPA inspectors as part of an "environmental Gestapo."⁴²

During the early days of the 104th Congress, when the political climate seemed most sympathetic to corporate concerns, regulated entities proposed to radically weaken the major environmental statutes.⁴³ Their rush to overthrow basic environmental regulation is hardly consistent with an internalization of environmental protection values. Given this strong hostility to environmental regulation, the belief that a deterrence orientation should be abandoned because businesses will comply with these laws because of their identity as law-abiding citizens is naive. Thus, theorists who argue that predominant reliance on voluntary compliance is the answer because "regulators and regulatees now share—perhaps for the first time—the same goals and value systems"⁴⁴ are overly optimistic.⁴⁵

2. *Compliance and Market Forces*

Other adherents of the "changed corporate attitude" school rely less on the civic-mindedness of businesses, and emphasize instead that other

paying the employer's share of Social Security, Medicare and federal unemployment taxes to household help).

42. See Hawkins, *supra* note 5, at 42. See also 139 CONG. REC. S5142 (daily ed. April 29, 1993) (statement of Sen. Wallop) (describing the EPA as a "Gestapo-like agency" and as an "untethered agency arrogantly imposing itself on the people of America, not to resolve the problems of the environment, but to assert its own power"); 141 CONG. REC. H4952 (daily ed. May 15, 1995) (statement of Rep. Shuster) ("[I]n western Maryland there are hundreds of people who are furious about the environmental Gestapo which is there and which is attempting to tell them how to live their lives . . .").

43. Among other things, members of Congress sought to drastically rewrite the Clean Water Act and the Endangered Species Act, repeal the 1990 Clean Air Act Amendments, and attach numerous riders to the EPA's appropriations bill severely restricting the agency's ability to enforce existing laws. The House also passed a moratorium on new regulations and a comprehensive regulatory reform bill that would have required federal agencies to prepare risk assessments and cost-benefit analyses for every major regulation, greatly increasing the analytic burdens on agencies and delaying new rulemaking. Finally, the House cut the overall EPA budget by 30% and the budget for its enforcement activities by 50%. See Plater, *supra* note 5, at 742-60.

44. See *supra* note 35 and accompanying text.

45. See Joel Mintz, *Rebuttal: EPA Enforcement and the Challenge of Change*, 26 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,538, 10,540 (Oct. 1996) (arguing that there is insufficient evidence to support the notion that "the 'regulated sector' has gradually altered its attitude toward regulatory compliance and environmental protection").

market factors make it a matter of self-interest for businesses to voluntarily comply with environmental requirements. Thus, in enacting its law providing a grace period for certain environmental violations, the New Jersey legislature recently found that

the economic dynamics of pollution control . . . have changed since the inception of environmental regulatory and enforcement programs; that considerable market forces now exist which substantially influence the economics of compliance; that the threat or imposition of monetary sanctions is no longer the dominant force driving corporate compliance decisions and investments.⁴⁶

The fact that environmental performance is now viewed as a criterion for product quality and firm reputation has become the biggest such market force.⁴⁷ Corporations see important benefits from being publicly perceived as environmentally responsible entities. The rush by business to market environmentally-friendly products over the past decade is perhaps the most obvious, but certainly not the only example of this.⁴⁸ The National Academy of Public Administration characterized the new business thinking as follows: “[C]hanging attitudes . . . have dramatically altered the operating environments faced by businesses and industries. Many firms have found that becoming ‘environmental leaders’ is good for business because a good corporate image can appeal to consumers and improve relations between factories and host communities.”⁴⁹

Other external forces also motivate voluntary compliance measures. One is the desire to avoid tort liability.⁵⁰ Another is the recognition that doing so saves money through reduced waste management and disposal

46. N.J. STAT. ANN. § 13:1D-125 (West 1995). See also Welks, *supra* note 9, at 41 (explaining the impetus behind compliance assurance reforms in Minnesota: “Minnesota feels that it can encourage change from inside organizations, by helping leaders understand that conscientious environmental performance can translate into risk reduction, enhanced efficiency and, ultimately, savings and increased profits.”).

47. See Tony Lent & Richard P. Wells, *Corporate Environmental Management Survey Shows Shift from Compliance to Strategy*, in ENVIRONMENTAL TQM 13 (John T. Willig, ed., 1994).

48. See John M. Church, *A Market Solution to Green Marketing: Some Lessons from the Economics of Information*, 79 MINN. L. REV. 245, 277 (1994).

49. NATIONAL ACADEMY OF PUB. ADMIN., SETTING PRIORITIES, GETTING RESULTS 25 (1996) [hereinafter NATIONAL ACADEMY]. See also Marianne Lavelle, *Environmental Vise: Law, Compliance*, NAT’L L.J., Aug. 30, 1993, at S1 (“A nationwide survey of more than 200 corporate general counsel . . . revealed . . . that vast majority believe that investment in environmentally sound practices and products will improve profitability over the long run.”).

50. EUGENE BARDACH & ROBERT A. KAGAN, GOING BY THE BOOK—THE PROBLEM OF REGULATORY UNREASONABLENESS 60-62 (1982).

expenses, purchases of raw materials, energy costs, and other ways.⁵¹ Moreover, firms realize that superior environmental performance can lead to competitive advantages, that "[t]he result of excellence in environmental management is higher productivity."⁵²

While market forces have changed the dynamics of environmental compliance,⁵³ critics are mistaken in suggesting that these considerations by themselves will result in widespread compliance with environmental laws.⁵⁴ Reputation benefits are important for firms that directly market consumer products; indeed, consumers report that they consider the environmental reputation of a product or manufacturer to be an important purchasing factor.⁵⁵ However, there are significant limits to relying on the consumer product marketplace as a way to reward positive environmental performance. For example, for some products there are no readily available substitutes consumers can purchase if they are dissatisfied with the record of a manufacturer.⁵⁶ Additionally, many consumers will not have the time or interest to seek out product information; and even if they do, judging among competing claims of compliance/noncompliance by firms may depend upon information that is complex, uncertain, and difficult to obtain.⁵⁷ Moreover, for most regulated entities—those that do not sell consumer products—there are relatively few tangible gains that come from being perceived as an environmental leader.⁵⁸ Few commercial purchasers

51. See NATIONAL ACADEMY, *supra* note 49, at 25. See also Testimony of Donald E. Huffman, Chairman of the American Textile Manufacturers Institute Environmental Excellence Task Force, before U.S. Environmental Protection Agency's Workshop on National Performance Measures Strategy for Enforcement and Compliance Assurance 6 (March 17, 1997) ("[W]e are confident that a high percentage of companies realize that compliance does affect the bottom line and treat environmental compliance as an important part of doing business."); Lent & Wells, *supra* note 47, at 14 (noting that pollution prevention results in firms spending fewer resources buying, storing, tracking and managing pollutants, and spending more on the product).

52. Lent & Wells, *supra* note 47, at 13.

53. See, e.g., BARDACH & KAGAN, *supra* note 50, at 60 ("In many areas of protective regulation, voluntary compliance is prevalent because economic pressures and the threat of private lawsuits compel enterprises to institute safety measures that parallel the content of government regulations.")

54. See STONE, *supra* note 37, at 88-92.

55. See Church, *supra* note 48, at 252 & n.18, 253-54 (1994); Terri Shaw, *The Selling of "Green"; Labels Use All the Buzz Words, But What Do They Mean*, WASH. POST, Feb. 28, 1991, at T9.

56. See Clifford Rechtschaffen, *The Warning Game: Evaluating Warnings Under California's Proposition 65*, 23 ECOLOGY L.Q. 303, 316 (1996).

57. Cf. Howard A. Latin, *Environmental Deregulation and Consumer Decisionmaking Under Uncertainty*, 6 HARV. ENVTL. L. REV. 187 (1982) (noting these as difficulties in determining whether products are environmentally beneficial in decentralized consumer decisionmaking context).

58. See STONE, *supra* note 37, at 90-91 (pointing out that many corporations produce too few consumer products, even indirectly, to submit them to classic market pressures). See also Naomi Roht-Arriaza, *Shifting the Point of Regulation: The International Organization for Standardization*

or suppliers use a firm's environmental record as a criteria for doing business. Likewise, few government programs provide direct rewards to businesses for achieving environmental compliance.⁵⁹ Thus, many private firms will not be driven by market forces to comply with the law. Additionally, these market forces will have no impact on compliance by government entities, which face totally different incentives than private businesses but are nonetheless responsible for a substantial share of pollution.

Likewise, while the occasional large tort damages award may have some deterrent value, the fear of tort litigation in the environmental context is a highly imperfect means of ensuring compliance with environmental requirements. Private lawsuits alleging environmental harm from routine, continuous environmental discharges, as opposed to catastrophic accidents or releases, are very difficult to win for a host of reasons. Causation is difficult to prove because of long latency periods and the problem of confounding causes for most environmental harms.⁶⁰ The cases are lengthy and expensive, requiring a great deal of expert testimony. In the workplace, the effectiveness of tort claims is further limited by workers' compensation.⁶¹ These and other factors make these cases economically unattractive to litigate, particularly on behalf of individual plaintiffs, and corporations understand the very small likelihood of their being sued, successfully or not, for routine emissions or discharge. Moreover, for some regulatory requirements, such as training, record-keeping, or reporting obligations, there is almost no likelihood that failure to comply will increase a corporation's risk of tort liability since these violations often do not re-

and Global Lawmaking on Trade and the Environment, 22 *ECOLOGY L.Q.* 479, 531 (1995) ("[T]he 'compliance pull' of voluntary standards may be limited to consumer goods and other highly visible sectors, or to large enterprises where brand-name recognition is important."). See generally Jennifer Nash & John Ehrenfeld, *Code Green: Business Adopts Voluntary Environmental Standards*, 38 *ENV'T*, Jan.-Feb. 1996, at 16 (reporting that companies participating in private environmental codes tend to maintain direct sales relationships with the public or to hold corporate values that are strongly consistent with code requirements).

59. There is a growing socially responsible investment movement that evaluates the environmental record of companies as a basis for investment in the stock market. See STEVEN J. BENNETT, RICHARD FREIERMAN & STEPHEN GEORGE, *CORPORATE REALITIES & ENVIRONMENTAL TRUTHS—STRATEGIES FOR LEADING YOUR BUSINESS IN THE ENVIRONMENTAL ERA* 13 (1993) (estimating that \$625 billion is invested in products that are selected on the basis of ethical, environmental and political criteria). The size and impact of this movement is uncertain, but in any case it is not relevant to the majority of regulated facilities, which are not publicly-traded corporations.

60. See Daniel Farber, *Toxic Causation*, 71 *MINN. L. REV.* 1219, 1227-29 (1987); *Developments in the Law—Toxic Waste Litigation*, 99 *HARV. L. REV.* 1458, 1617-30 (1986). *Accord* Rubanick v. Witco Chem. Co., 593 A.2d 733, 739 (N.J. 1991) ("[W]e have recognized the extraordinary and unique burdens facing plaintiffs who seek to prove causation in toxic-tort litigation.").

61. See 82 *AM. JUR.* 2d *Workers Comp* § 62 (1997) (explaining that workers' compensation is generally the exclusive remedy for injuries suffered by employees against employers).

sult in direct environmental harm. Arguably in fact, corporations have an incentive *not to comply* with reporting requirements out of fear that disclosure of releases might trigger tort liability by exposed individuals.⁶² Most likely then, the primary deterrent effect of potential tort liability is to stimulate prophylactic measures aimed at avoiding accidents, since litigation stemming from these occurrences is the most worrisome to businesses. These prophylactic steps lead to compliance with some underlying environmental requirements, but there is little reason to believe it will lead to compliance with all or even most of them.

It is harder to assess whether the prospect of improved profitability will motivate most companies to voluntarily obey regulations. In many instances, firms will save money, often substantial amounts, from environmental compliance, particularly if they invest in pollution prevention or other measures that translate into improved productivity. But some of these benefits are counterbalanced by the economic savings realized from noncompliance. Not all compliance measures translate into economic gains; likewise, some may result in savings in five to ten years but cause short-term financial losses that cash-poor companies are hesitant to incur.

3. *Internal Regulatory Systems*

Commentators also argue that traditional enforcement approaches should be modified to account for corporations' increasingly sophisticated internal regulatory schemes, the content of which parallels government rules. Scholars have for some time urged that greater attention be paid to corporate self-regulation.⁶³ Some contend that internal regulatory programs are, in many cases, more comprehensive and effective than government enforcement efforts.⁶⁴ Over the past decade, in response to stepped-

62. These record-keeping and reporting requirements are nonetheless considered essential for agency and public review, and oversight of the activities of regulated entities.

63. See JOSEPH V. REES, *REFORMING THE WORKPLACE—A STUDY OF SELF-REGULATION IN OCCUPATIONAL SAFETY 6-8* (1988) (emphasizing importance of internal regulatory systems and arguing that “[t]aken as a whole, the American regulatory system can be viewed in terms of the proverbial iceberg, the tip being government’s regulatory bureaucracy, while the massive body represents society’s great array of private regulatory systems”).

64. See AYRES & BRAITHWAITE, *supra* note 34, at 2. According to Ayres and Braithwaite, studies show that internal corporate rules cover a wider range of hazards and corporate abuses than government regulations. They also suggest that persons found violating regulatory requirements are more likely to be disciplined by internal compliance groups. See also BARDACH & KAGAN, *supra* note 50, at 99-109; James M. Weaver, Robert J. Martineau, Jr. & Michael K. Stagg, *State Environmental Audit Laws Advance Goal of a Cleaner Environment*, 11 NAT. RESOURCES & ENV’T, Spring 1997, at 6, 11 (“Environmental regulators simply do not have the financial resources or personnel to perform the type of detailed inspections being performed by companies in their efforts to self-police, nor can the regulators inspect every permitted business with the frequency self-policing provides.”).

up government enforcement activity, liability concerns, and other economic forces, U.S. companies have greatly enhanced their self-policing efforts in the environmental area.⁶⁵ Many firms now regularly conduct environmental audits to assure compliance with regulatory requirements.⁶⁶ Others have implemented more complex environmental management systems,⁶⁷ and a considerable number have adopted private, voluntary codes of conduct.⁶⁸ EPA officials note that most reports of problems with Clean Water Act permits come from permittees themselves.⁶⁹ Accordingly, as two state enforcement officials suggest, environmental agencies "must retool [their] policies to address the reality of the highly professional, sophisticated nature of environmental management currently underway in many quarters of the regulated community."⁷⁰

The growth in environmental auditing and other environmental management systems undoubtedly has improved compliance among regulated

65. See Mary Ellen Kris & Gail L. Vannelli, *Today's Criminal Environmental Enforcement Program: Why You May Be Vulnerable and Why You Should Guard Against Prosecution Through an Environmental Audit*, 16 COLUM. J. ENVTL. L. 227, 240 (1991); Lucia Ann Silecchia, *Ounces of Prevention and Pounds of Cure: Developing Sound Policies for Environmental Compliance Programs*, 7 FORDHAM ENVTL. L.J. 583, 584-594 (1996).

66. See Lavelle, *supra* note 49, at S1 (noting that 65% of 200 corporate counsel surveyed indicated that they have audit programs; of the remaining firms, about half indicated they had plans to implement such programs in the future). A 1995 survey by Price Waterhouse found that 75% of the 369 companies that responded reported performing environmental audits. See Price Waterhouse LLP, *The Voluntary Environmental Audit Survey of U.S. Business* 1, 5 (Mar. 1995) [hereinafter *Voluntary Environmental Audit*]. See also Craig N. Johnston, *An Essay on Environmental Audit Privileges: The Right Problem, the Wrong Solution*, 25 ENVTL. L. 335, 336 (1995) (noting that a survey by Investor Responsibility Research Center found that 85% of the 249 companies surveyed had established voluntary audit programs and that a 1992 Arthur Anderson survey of 257 companies, including 38 companies with revenues less than \$100 million, found that 59.2% had conducted compliance audits between 1989 and 1991).

67. For discussion of environmental management systems, see *infra* Part V.C.2.

68. See Nash & Ehrenfeld, *supra* note 58. Among these private codes are (1) the Chemical Manufacturer Association's (CMA) Responsible Care program, (2) the Coalition for Environmentally Responsible Economies' (CERES) (formerly the Valdez) principles, and (3) the International Chamber of Commerce (ICC) Business Charter for Sustainable Development. To varying degrees, these codes encourage companies to conduct life-cycle management, addressing the "cradle to grave" environmental impacts of business activities; to engage in environmentally sustainable practices; and to involve outside groups, including suppliers, customers, and community groups, in their environmental programs. Each calls on businesses to implement environmental management systems. To differing degrees, these systems require businesses to assess the environmental impacts of their activities; to establish environmental goals, targets and timetables for meeting these goals; to audit their progress toward realizing these objectives; and to provide appropriate employee training. The CERES principles also require companies to complete and make public an annual report containing detailed information on corporate environmental practices.

69. See HUNTER & WATERMAN, *supra* note 26, at 61.

70. Gary L. Spielman & Frank V. Biferia, *DEC Enforcement in the Modern Day Environmental Management System*, 1 ALB. L. ENVTL. OUTLOOK, Summer 1995, at 46, 47.

firms, although there is little hard data demonstrating this effect or to what degree it has occurred, and as discussed further below, it should be a factor in enforcement decisions. This development, however, does not justify discarding the current system. For one thing, many firms cannot afford environmental audits and do not have sophisticated internal regulatory programs.⁷¹ Moreover, merely because a firm conducts an environmental audit does not ensure that it will correct any violations detected, or of greater concern, take appropriate measures to prevent a violation from recurring.⁷² In addition, and perhaps most fundamentally, self-policing efforts are not infallible, underscoring the need for regulatory oversight. This was dramatically illustrated recently by a major enforcement case involving the flawed self-monitoring efforts of Pacific, Gas & Electric (PG&E) at its nuclear power plant in Diablo Canyon, California, which resulted in a \$14 million Clean Water Act settlement and undetermined damage to the marine environment.⁷³

71. The size of a company and its available resources impact the likelihood that a company will have an auditing program. See *Voluntary Environmental Audit*, *supra* note 66, at 66. For example, Price Waterhouse found in its survey that every company with sales over \$1 billion conducted audits, and less than half of companies with sales under \$50 million maintain auditing programs. See *id.* See also Harris, *supra* note 35, at 719 (“[S]mall businesses have limited technical and financial resources to comply with the law, let alone engage in proactive environmental management strategies like environmental auditing.”); Tom Arrandale, *Can Polluters Police Themselves?*, GOVERNING MAG., June 1997, at 36 (quoting a senior EPA enforcement official who states that “[s]mall business doesn’t do audits. This is coming from big companies that have been targets of enforcement action . . .”). See, e.g., Donald A. Carr & William L. Thomas, *Devising a Compliance Strategy Under the ISO 14000 International Environmental Management Standards*, 15 PACE ENVTL. L. REV. 85, 149 & n.154 (1997) (citing estimates that ISO 14000 certification costs may range from \$100,000 to \$1 million for large multinational companies and as much as \$10,000 to \$100,000 for medium-size businesses, and concluding that “[i]t is yet unclear whether small and medium-sized firms will find the hurdles to certification insurmountable”).

72. See generally CHRISTOPHER BEDFORD, ENVTL. ACTION FOUND., DIRTY SECRETS: THE CORPORATIONS’ CAMPAIGN FOR AN ENVIRONMENTAL AUDIT PRIVILEGE (Feb. 1996) <<http://www.envirolink.org/orgs/gnp/dirty1.html>> (pointing to several instances in which corporations failed to correct environmental violations revealed to them by internal environmental audits or failed to act on repeated recommendations by environmental, health and safety staff to remedy unsafe conditions that later resulted in serious accidents). Accord Sanford Lewis, *Analysis of ISO 14000 Management Systems: A Community Environmental Perspective* (Sept. 25, 1996) (evolving paper, on the Good Neighbor Project for Sustainable Industries website) <<http://www.envirolink.org/orgs/gnp/iso1/html>> [hereinafter Lewis, *Analysis of ISO 14000*] (using example of Rhone-Poulenc facility in Institute, West Virginia, to illustrate that environmental audits can fail to diagnose and rectify underlying problems—in this case, underinvestment in preventive maintenance at a facility—and that as a result, audits can fail to prevent the recurrence of chemical leaks). See generally RICHARD WELFORD, ENVIRONMENTAL STRATEGY AND SUSTAINABLE DEVELOPMENT—THE CORPORATE CHALLENGE FOR THE TWENTY-FIRST CENTURY 56 (1994) (“Seeing a single audit as a panacea would not only be wrong but is likely to lead to more problems than it solves.”).

73. There, PG&E’s Clean Water Act permit required it to monitor the impacts of its massive cooling water intake system on the adjacent marine environment. In 1988, PG&E omitted sampling data from a key report that showed the possibility of up to a 90% loss of larval fish between cooling

Likewise, many environmental management systems are designed not to evaluate compliance with regulatory requirements but to ensure that regulated entities have appropriate training, decisionmaking, and other management systems.⁷⁴ Similarly, none of the existing voluntary industry codes include specific performance standards or prescribe specific operational practices, and none explicitly require compliance with environmental requirements. Nor do any require third-party verification of firms' environmental systems.⁷⁵ Additionally, participation in the voluntary schemes has been relatively limited thus far, and most of the participants have been large firms.⁷⁶ At least some preliminary results suggest that compliance with voluntary standards may falter during difficult economic times.⁷⁷

B. THE COMPLEXITY OF ENVIRONMENTAL REGULATION

Another motivation underlying current reform efforts is the complexity of environmental law.⁷⁸ Professor Richard Lazarus has recently provided one of the most detailed analyses of the sources of environmental law's complexity.⁷⁹ First, he argues, environmental law is highly technical, requiring sophistication and expertise to understand because of its de-

water system intake and discharge points, indicating a possible significant impact on the marine environment. PG&E produced additional reports and took additional samples following government agency questions raised by the data actually submitted by the company, but PG&E continued to withhold the original results. Eventually, after years had passed, PG&E biologists "rediscovered" the omitted data and requested internally that PG&E management turn it over to the regulatory agencies. PG&E failed to do this for another two years. In 1997, 10 years after the original studies were carried out, regulators ordered PG&E to redo the initial two-year study since the omitted data rendered the original study invalid. Throughout this 10-year period, PG&E maintained control over the study and data generated; government agencies relied entirely on the company's entire control and audits. See Chris Bowman, *Big PG&E Settlement Over Nuclear Plant*, SACRAMENTO BEE, May 28, 1997, at A3; Telephone Interview with Ken Alex, Deputy Attorney General, State of California (Aug. 8, 1997).

74. See discussion *infra* Part V.C.2.

75. See Nash & Ehrenfeld, *supra* note 58, at 16.

76. This is not true for members of the CMA; adherence to the Responsible Care program is mandatory. The members' degree of commitment to meeting code requirements has varied, however. See *id.* See also WELFORD, *supra* note 72, at 76 (noting that the pilot program of the British Standards Institution's voluntary environmental management system showed that firms were generally strong on drawing up environmental policies but weak on providing training and resources).

77. See Alastair T. Iles, Letter to Editor, ENV'T, Sept. 1996, at 4 (commenting on and quoting Welford's work, which notes that a report of the British Responsible Care program for 1993 showed that many firms failed to follow standards and concludes that "voluntary approaches often slip down a list of priorities when other pressing issues arise. It is perhaps not surprising that the lack of response from the chemical industry over Responsible Care occurred during a particularly bad economic recession."). See also WELFORD, *supra* note 72, at 36-37.

78. See Diamond, *supra* note 1, at 10,254.

79. See Richard Lazarus, *Meeting the Demands of Integration in the Evolution of Environmental Law: Reforming Environmental Criminal Law*, 83 GEO. L.J. 2407 (1995).

pendence on science, engineering, and economics.⁸⁰ Second, the law is relatively indeterminate: Outcomes are hard to predict, and legal categories do not necessarily turn on differences that are significant in the real world.⁸¹ Third, the law is obscure: It can be difficult for regulated entities to locate all the "law" applicable to them because, among other things, regulations are densely worded, and rules are made through informal agency documents, regulatory preambles, or other materials difficult to access.⁸² Finally, environmental law is considerably differentiated; regulatory authority is fragmented among federal agencies, and between federal and state (and sometimes local) agencies.⁸³

Although Lazarus' critique does not describe all environmental regulation, it does highlight genuine difficulties faced by regulated entities. One local prosecutor's guide candidly acknowledges that "[n]o facility of moderate complexity which handles hazardous materials or wastes . . . can be expected to be in full compliance at all times."⁸⁴ Likewise, a survey of general corporate counsel at major firms found that two-thirds believed their businesses had operated, at least some time in the prior year, in violation of environmental laws. Nearly seventy percent indicated that they did not believe absolute compliance was achievable because of the law's complexity, varying interpretations by regulators, the role of human error, and cost considerations.⁸⁵ Numerous other observers have likewise noted the difficulty of maintaining perfect, continuous compliance with all environmental rules.⁸⁶ Small businesses face particularly great challenges in dealing with complicated environmental regulations.⁸⁷ The widespread

80. *See id.* at 2429-31.

81. *See id.* at 2431-36.

82. *See id.* at 2436-38.

83. *See id.* at 2438-39. Other scholars argue that modern regulations are complex because regulated entities seek to exploit the slightest ambiguity in simple, generally-worded rules, forcing government agencies to draft exquisitely detailed provisions. *See* ROBERT REICH, *TALES OF A NEW AMERICA* 212-21 (1987).

84. CALIFORNIA DISTRICT ATTORNEYS ASS'N, *THE COMPLETE GUIDE TO HAZARDOUS MATERIALS ENFORCEMENT AND LIABILITY I-1* (1992).

85. *See* Lavelle, *supra* note 49, at S1.

86. *See* Harris, *supra* note 35, at 710; Silecchia, *supra* note 65, at 590 & n.14 (citing multiple sources).

87. For an illustrative discussion, see ILLINOIS ENVTL. PROTECTION AGENCY & ILLINOIS DEP'T OF COMMERCE AND COMMUNITY AFFAIRS, *GOVERNOR'S SMALL BUSINESS ENVIRONMENTAL TASK FORCE REPORT & RECOMMENDATIONS 5* (1994) [hereinafter *GOVERNOR'S SMALL BUSINESS ENVIRONMENTAL TASK FORCE*] (copy on file with author). In summarizing its findings, the Task Force noted:

a widespread and pervasive 'fear factor' among small businesses . . . [This includes] a fear by small businesses that they cannot determine whether they need a permit or multiple permits from the [Illinois EPA]. They cannot understand how to determine what regulations

concern with these burdens explains the overwhelming Congressional support for mandating grace periods for environmental violations committed by small businesses.⁸⁸

The complexity of environmental law suggests a number of things. It points out the need for agencies to spend considerably more resources on education and compliance promotion, particularly with smaller businesses. It highlights the need for agencies to be flexible and pragmatic in their enforcement of many requirements, which is how most environmental agencies operate in practice. It also indicates the need to re-examine the very liberal *mens rea* requirements of criminal environmental statutes, as Professor Lazarus recommends. But the law's complexity is not a justification for a wholesale dismantling of the enforcement system. Other areas of law that are highly complex—tax law, for example—have not gone in this direction. Thus, while the Internal Revenue Service has recently embarked on an important effort to increase voluntary compliance through a variety of service-oriented initiatives, it has not discarded deterrence-based enforcement.⁸⁹

C. THE DETERRENCE-IS-COUNTERPRODUCTIVE ARGUMENT

Critics charge that a cooperative approach to enforcement is the best way to achieve compliance and that sanction-oriented enforcement is counterproductive.⁹⁰ The basic argument proceeds from the assumption that corporations have a generalized commitment to abiding by the law. Under this mind-set, persuasion works better than punishment; essentially, carrots are superior to sticks. Thus, John Braithwaite explains:

Punishment is the best strategy when good will is wanting. We apply this common sense psychology in educating our children, in management, and in our everyday lives. . . . Punishment is something we resort

apply to them. And they cannot understand the multitude of regulations that may apply to them.

Id.

88. See discussion *infra* Part V.B.

89. See SPARROW, *supra* note 3, at 15. The IRS' initiatives include tax simplification, taxpayer assistance programs, customer-oriented total quality management, community volunteer programs to help those who need it preparing their returns, and other measures. See *id.* See generally NATIONAL COMM'N ON RESTRUCTURING THE INTERNAL REVENUE SERV., A NEW VISION FOR A NEW IRS (1997) (outlining initiatives to improve the IRS' public image). Likewise, very recent IRS reform legislation was enacted to rectify perceived over zealotness in the IRS enforcement system. See Richard W. Stevenson, *Senate Votes 96-2 on Final Approval for Changing IRS*, NY TIMES, July 10, 1998, at A1.

90. See Sommer, *supra* note 3, at 8 (noting that enforcement attorneys should realize that litigation is "expensive and delay-ridden, and frequently rewards no one but the professional litigator," and that it fosters an "unproductive dynamic" between the community and industry and government).

to only when we confront a spouse, a student or a colleague at work to whose better nature we cannot appeal for compliance with the goals we have in mind. . . . Every schoolteacher knows that in some circumstances a child who would have been alienated by punishment can be given a greatly enhanced will to behave by saying, "That's not like you, Johnny Brown," and then forgiving the transgression.⁹¹

The same psychology applies to businesses. Therefore, the argument goes, if they are found in violation of regulatory requirements, they should be treated like a partner, and they will respond positively to suggestions and advice about how to achieve compliance. If, however, the response to noncompliance is inflexible, sanction-oriented enforcement, regulated entities will become resentful and hostile. They will feel as though they have been treated unfairly and that their efforts to comply have gone unrecognized and unrewarded by regulators. The result will be resistance: Corporations will be less forthcoming with information, more apt to exploit regulatory loopholes, more likely to contest agency conclusions, and more likely to expend resources litigating citations. In short, they will become less cooperative. The job of agencies in turn will become more difficult. They will have a harder time detecting violations, since companies will be less likely to voluntarily disclose problems to them. They will have to spend more resources litigating cases, as well as more time and effort gathering competent evidence for enforcement actions. The net impact is less compliance by regulated entities (or, at the least, more instances of minimal compliance) at greater cost to enforcement agencies.⁹²

Supporters of this view cite favorably to the less adversarial approach of enforcement agencies in European countries. In Great Britain, for instance, Keith Hawkins found that water pollution inspectors rarely impose sanctions on firms found to be in violation, relying instead on a system of informal negotiation and persuasion to achieve compliance. The central assumption of enforcement personnel is that their efforts will be more productive if they are conciliatory rather than coercive, and that they will

91. JOHN BRAITHWAITE, *TO PUNISH OR PERSUADE: ENFORCEMENT OF COAL MINE SAFETY* 99 (1985).

92. See BARDACH & KAGAN, *supra* note 50, at 99-117; BRAITHWAITE, *supra* note 91, at 100 ("The problem with the punitive model of man as essentially bad is that we dissipate the will of well-intentioned people to comply when we treat them as if they were ill-intentioned."). Professors Ayres and Braithwaite argue that the psychological theories of minimal sufficiency and positive attribution demonstrate that long-term internalization of a commitment to compliance is more likely to occur when triggered by positive incentives rather than punishment. See AYRES & BRAITHWAITE, *supra* note 34, at 49-50.

achieve the most compliance by maintaining good relations with regulated entities.⁹³

The argument that cooperation works better than deterrence to achieve compliance with environmental law is unconvincing. Most fundamentally, it is largely untested.⁹⁴ As two researchers conclude:

[S]cholarly attention has focused much more on building credible arguments for particular points of view than on evaluating their effectiveness based on actual experience in the field. As a result, there is little in the way of empirical evidence that can be used in deciding which enforcement techniques [approaches based on deterrence or cooperation] are most likely to achieve regulatory goals.⁹⁵

Likewise, in 1991, the EPA noted that although the states and federal government had tried different enforcement philosophies over the prior two decades, “[l]ittle systematic research or program evaluation has been conducted to help understand what techniques are effective under what circumstances.”⁹⁶ Six years later, the EPA reiterated the need for a national compliance study designed to better characterize compliance with federal environmental laws, including developing a better understanding of the motivation for compliance or noncompliance.⁹⁷

There are several reasons for skepticism about the argument that deterrence-based enforcement is counterproductive. First, this contention rests on certain suppositions about enforcement behavior—most notably that inspectors are rigid and legalistic, and respond to all violations with formal sanctions.⁹⁸ These assumptions, however, are belied by studies showing that enforcement personnel in fact eschew formal, legalistic ac-

93. See KEITH HAWKINS, *ENVIRONMENT AND ENFORCEMENT: REGULATION AND THE SOCIAL DEFINITION OF POLLUTION* 110-54 (1984).

94. See Mintz, *supra* note 45, at 10,541 (noting that there is no persuasive evidence that cooperative approaches are more likely to produce environmental compliance than a deterrent-based regime).

95. Raymond J. Burby & Robert G. Paterson, *Improving Compliance with State Environmental Regulations*, 12 J. POL’Y ANALYSIS & MGMT. 753, 757 (1993). See Kathryn Harrison, *Is Cooperation the Answer? Canadian Environmental Enforcement in Comparative Context*, 14 J. POL’Y ANALYSIS & MGMT. 221, 223 (1995) (“[P]ast studies that have hailed the merits of cooperative enforcement have offered surprisingly little by way of empirical support.”). See also Wasserman, *supra* note 32, at 30 (asserting that there is need for research to determine the efficiency of dollars spent promoting compliance versus enforcing requirements).

96. ENFORCEMENT FOUR-YEAR STRATEGIC PLAN, *supra* note 12, at 19.

97. See U.S. ENVTL. PROTECTION AGENCY, *MEASURING THE PERFORMANCE OF EPA’S ENFORCEMENT AND COMPLIANCE ASSURANCE PROGRAM, DRAFT REPORT OF THE NATIONAL PERFORMANCE MEASURES STRATEGY* (Sept. 1997) [hereinafter *DRAFT REPORT OF THE NATIONAL PERFORMANCE MEASURES STRATEGY*].

98. See BARDACH & KAGAN, *supra* note 50, at 72-80, 99-114.

tions and rely heavily on informal negotiations (while using traditional sanctions as a backup) to achieve compliance.⁹⁹ Second, advocates of cooperative enforcement presuppose that most corporations are inclined to generally comply with law. As detailed above, this assumption is problematic with respect to environmental regulations.¹⁰⁰ Third, the cooperative model under emphasizes the economic pressures for noncompliance. Coaxing and persuasion may be productive when firms make good-faith efforts to comply and have the resources to do so. It is far less likely to work when compliance has significant financial consequences for a firm.¹⁰¹ A North Carolina enforcement study discussed below illustrates this point: Researchers found that deterrence-oriented enforcement was more effective than cooperation when substantial cost savings could be realized by noncompliance.¹⁰²

Finally, there is little hard evidence to support the claim that deterrence is counterproductive. To be fair to critics of existing practice, the current state of compliance with environmental regulations does not provide definitive evidence that deterrence-based enforcement is more effective. In fact, rather surprisingly, we do not have a good idea about what the overall state of compliance with environmental requirements is. On

99. See HUNTER & WATERMAN, *supra* note 26, at 53-56, 72-73; YEAGER, *supra* note 26, at 280 (stating that the study of EPA enforcement found that agency "stayed well away from nitpicking enforcement").

100. See HUNTER & WATERMAN, *supra* note 26, at 60. Some argue that a portion of companies fail to comply because of organizational incompetence, and that for these firms, a strategy of education and persuasion will be most effective in stimulating compliance. See Kagan & Scholz, *supra* note 32, at 67-69 (observing that where violations are attributable to organizational failures, the appropriate regulatory strategy should be education, not sanctions; enforcers should act like consultants). But as other scholars point out, the threat of sanctions can be a strong deterrent to lack of organizational care in the first place. See Harrington, *supra* note 36, at 51 ("A firm has considerable discretion in the care with which abatement equipment is operated and maintained. It stands to reason that its diligence would be the greater during those times when violations were likely to be costly."); Johnston, *supra* note 66, at 338 ("Most violations result from a mere simple lack of care—a lack of sufficient attention being paid to environmental matters. Vigorous enforcement programs can and do have a dramatic impact on the amount of attention that regulated entities pay to environmental compliance matters.").

101. See White, *supra* note 28, at 151-53 (suggesting that the cost of compliance was the most important factor explaining low compliance rates of regulated entities where the local agency adopted conciliatory enforcement style). See also JOSEPH F. D'IMENTO, ENVIRONMENTAL LAW AND AMERICAN BUSINESS: DILEMMAS OF COMPLIANCE 86-87 (1986) ("We find sufficient examples of cost-benefit calculations in the toxic dumping cases to support the conclusion that in some areas of environmental control the 'rational man' [i.e., deterrence-based enforcement] model may be useful for devising control policies.").

102. See Burby & Paterson, *supra* note 95, at 759, 765 (estimating that noncompliance with the requirement that sedimentation and erosion plans be installed and maintained could save \$8,000 for a typical project). See also RUSSELL ET AL., *supra* note 25, at 107-16 (suggesting that modeling exercise demonstrates that voluntary compliance will work poorly for firms wishing to skimp on maintenance of pollution control equipment).

the one hand, the evidence generally suggests that presently there are relatively high levels of compliance, particularly in those areas where enforcement has been systematic, aggressive and targeted.¹⁰³ New Jersey's deterrence-oriented Clean Water Act Enforcement Act,¹⁰⁴ to cite one very recent illustration, has significantly improved compliance since it was adopted in 1990.¹⁰⁵ Even advocates for change concede that the traditional approach has worked effectively in achieving compliance with many regulatory requirements.¹⁰⁶

On the other hand, a host of studies, most notably a series of reports by the General Accounting Office and EPA's Inspector General, demonstrate considerable levels of noncompliance by regulated entities.¹⁰⁷ In one recent report, for instance, the GAO found that one in six major facili-

103. See Mintz, *supra* note 45, at 10,539 to 10,540; HUNTER & WATERMAN, *supra* note 26, at 46 (indicating that some EPA officials state that 95% of all NPDES permittees in their region are in compliance at any given time).

104. N. J. STAT. ANN. § 58:10A-14.1 (West 1995).

105. See *Hearings on the Relationship Between Federal and State Governments*, *supra* note 2, at 227 (prepared statement of Todd E. Robins). Among other provisions, the statute provides for mandatory minimum penalties for serious violations and significant noncompliance, requires that penalties recover the economic benefit resulting from violations, and enhances citizen enforcement. According to the New Jersey Department of Environmental Protection, the number of Clean Water Act violations in the state has dropped by 78% since 1992. See *id.* (quoting NEW JERSEY DEP'T OF ENVTL. PROTECTION, 1996 ANNUAL REPORT OF THE CLEAN WATER ENFORCEMENT ACT (March 1997); NEW JERSEY DEP'T ENVTL. PROTECTION, 1995 ANNUAL REPORT OF THE CLEAN WATER ENFORCEMENT ACT (March 1996)). Moreover, enforcement actions have declined by 67% since 1992, and penalties have declined by 92% since 1994, suggesting that the law's strong deterrent effect has prompted much of the increased compliance. See *id.*

106. See Hawkins, *supra* note 5, at 47. The critics argue, however, that this method is not appropriate for the more complex compliance challenges regulatory agencies currently confront. See *id.*

107. See, e.g., U.S. GEN. ACCOUNTING OFFICE, AIR POLLUTION: IMPROVEMENTS NEEDED IN DETECTING AND PREVENTING VIOLATIONS, GAO/RCED 90-155 (1990) (observing that in more than 50% of significant violator cases under the Clean Air Act over a two-year period, no penalties were imposed, and when they were assessed, they were often insufficient to recover the economic benefit gained from noncompliance); U.S. GEN. ACCOUNTING OFFICE, WATER POLLUTION: IMPROVED MONITORING AND ENFORCEMENT NEEDED FOR TOXIC POLLUTANTS ENTERING SEWERS, GAO/RCED-89-101, 3 (1989) [hereinafter GAO, WATER POLLUTION: IMPROVED MONITORING] (indicating that a survey found that 41% of industrial users were not complying with publicly owned treatment works' pretreatment discharge limits under the Clean Water Act); U.S. GEN. ACCOUNTING OFFICE, WATER POLLUTION: OBSERVATIONS ON COMPLIANCE AND ENFORCEMENT ACTIVITIES UNDER THE CLEAN WATER ACT, GAO/T-RCED-91-90 (1991) (statement of Richard L. Hembra, Director of Environmental Protection Issues, before the Senate Subcommittee on Environmental Protection) (reporting that a series of GAO and EPA evaluations have revealed the widespread and continuing pattern of noncompliance with water quality programs, and a reluctance on the part of the EPA and states to take strong enforcement action); U.S. GEN. ACCOUNTING OFFICE, WATER POLLUTION: STRONGER ENFORCEMENT NEEDED TO IMPROVE COMPLIANCE AT FEDERAL FACILITIES, GAO/RCED-89-13, 3 (1988) (stating that over a two-year period in the late 1980s, 20% of major federal facilities violated priority Clean Water Act requirements, and more than 40% of those violating facilities did not comply for a year or more).

ties was in "significant noncompliance" of the discharge limits in their NPDES permits,¹⁰⁸ and that the actual number could be twice as high.¹⁰⁹ Moreover, during fiscal year 1994, fifty percent of major dischargers violated their permits at some time during the year (including both lesser infractions and significant violations).¹¹⁰ Other observers have reached similar conclusions.¹¹¹ These latter studies do not tell us, however, whether noncompliance resulted from flaws in the deterrence-based model, or, as others argue,¹¹² from a *lack of* meaningful deterrence-based enforcement.

The limited empirical data actually comparing deterrence and cooperative-oriented strategies is mixed. Some studies indicate improvements in compliance rates after cooperative strategies were substituted for traditional practices. For example, a pilot cooperative compliance program conducted by the California Occupational Safety and Health Administration (Cal/OSHA) in the early 1980s resulted in significantly lower accident rates at the participating job sites than at comparable company projects or comparable projects by other firms in California.¹¹³ Under the program,

108. See U.S. GEN. ACCOUNTING OFFICE, WATER POLLUTION: MANY VIOLATIONS HAVE NOT RECEIVED APPROPRIATE ENFORCEMENT ATTENTION, GAO/RCED-96-23, 1-2 (1996) [hereinafter GAO, WATER POLLUTION: ENFORCEMENT ATTENTION]. The EPA defines "significant noncompliance" as "(1) for toxic pollutants as exceeding an average monthly limit by 20 percent or more in any 2 months of a 6-month period and (2) for conventional pollutants as exceeding an average monthly limit by 40 percent in any 2 months of a 6-month period." *Id.* at 3.

109. See *id.* at 2.

110. See *id.* at 3.

111. Most recently, a study by the U.S. Public Interest Research Group (PIRG) found that during a 15-month period from 1995 to early 1996, close to 20% of the major industrial, municipal and federal dischargers nationwide were listed by the EPA in significant noncompliance with their Clean Water Act permits in at least one quarter. The study additionally found that 21% of major industrial dischargers exceeded their discharge limits by 50% or more during the first quarter of 1996. See Todd Robins, U.S. PUB. INTEREST RESEARCH GROUP, DIRTY WATER SCOUNDRELS: STATE-BY-STATE VIOLATIONS OF THE CLEAN WATER ACT BY THE NATION'S LARGEST FACILITIES (1997) (visited July 16, 1997) <<http://www.pirg.org/pirg/enviro/water/dws97>> [hereinafter DIRTY WATER SCOUNDRELS]. See also David R. Hodas, *Enforcement of Environmental Law in a Triangular Federal System: Can Three Not Be a Crowd When Enforcement Is Shared by the United States, the States, and Their Citizens?*, 54 MD. L. REV. 1552, 1603-09 (1995) (discussing the erratic enforcement record of government agencies and significant levels of noncompliance by regulated entities).

112. Professor Hodas, for instance, attributes the documented rate of significant noncompliance with the Clean Water Act to a combination of the relaxed enforcement efforts by states (to create favorable business conditions), and the reluctance of the federal government (due to politics) to meaningfully supervise state enforcement efforts. See Hodas, *supra* note 111, at 1572-75, 1585-89, 1615-17. See also Joseph F. DiMento, *Can Social Science Explain Organizational Noncompliance with Environmental Law?*, 45 J. SOC. ISSUES 109, 112 (1989) (stating that traditional literature finds that efforts to achieve compliance with environmental law fail because of a weak enforcement approach: "Not enough violators are identified; when identified, not enough are sanctioned; and when they are sanctioned, penalties are too weak to communicate that violations will not be tolerated.").

113. See REES, *supra* note 63, at 1-6.

Cal/OSHA largely refrained from traditional enforcement activities at selected construction sites in favor of self-regulation by a joint labor-management safety committee. Cal/OSHA stopped its routine compliance inspections of these sites and instead assigned a compliance officer to assist the safety committee in devising solutions to problems at the sites. The author of this study, however, cautions against broadly applying this model: The firms involved already had stellar safety records; there was broad agreement between labor and management as to the nature of the safety problems at the sites; and the beneficiaries of self-regulation were directly involved at the site where the violations occur.¹¹⁴ As he points out, the experience may be very different in other regulatory contexts, like environmental protection, where the affected constituents are not present at the firm.

In another example, the federal OSHA has found benefits in its Voluntary Protection Program (VPP). Employers who have outstanding safety records and a program to identify and correct workplace hazards assume primary responsibility for monitoring compliance and are thereby exempted from routine agency inspections.¹¹⁵ In 1992, with 150 worksites participating in the program, injury incidence rates averaged from thirty-five percent to sixty-five percent below the expected average for similar industries, and workday injury rates were sixty percent below the expected average in similar industries.¹¹⁶ Likewise, a study of occupational safety

114. See *id.* at 237.

115. OSHA conducts a pre-approval review of all participating worksites before they qualify for the VPP. OSHA also conducts a review similar to the pre-approval review, including a site visit, every three years. See Michael, *supra* note 40, at 559. There are three levels of VPP participation. For those companies that have the most comprehensive health and safety programs and have achieved the highest level ("star status"), minor violations reported to OSHA or detected during recertification inspections are resolved by requiring prompt correction or revoking the company's star status. Only cases involving knowing misconduct or serious injury at a star facility are referred to OSHA's enforcement staff. See Breger, *supra* note 3, at 330.

116. See Michael M. Stahl, *Promoting Voluntary Compliance: A Valuable Supplement to Environmental Enforcement*, in CONFERENCE PROCEEDINGS, THIRD INTERNATIONAL CONFERENCE ON ENVIRONMENTAL ENFORCEMENT 551, 554 (1994) [hereinafter THIRD INTERNATIONAL CONFERENCE]. In 1996, OSHA reported that in the prior three years participation in the program had doubled, and that injury rates at participating companies were 45% below the industry average. See Occupational Safety and Health Admin., U.S. Dept. of Labor, *Head Says Programs of "New OSHA" Are Successful Ways to Improve Worker Safety and Health*, Sept. 16, 1996, available in 1996 WL 536220 (D.O.L.) (news release). For criticism that the VPP has not in fact promoted better compliance, see Kenneth A. Kovach, Nancy G. Hamilton, Thomas M. Alston & Judith A. Sullivan, *OSHA and the Politics of Reform: An Analysis of OSHA Reform Initiatives Before the 104th Congress*, 34 HARV. J. ON LEGIS. 169, 179-80 (1997) (noting that according to the AFL-CIO, industries in which compliance has been voluntary have shown little improvement in the death and injury rates of workers since 1970, and that a study by the Associated Press reviewing 778,000 OSHA inspections found that lack of inspections

and health enforcement suggests that the level of cooperation employed by enforcement agencies increases the effectiveness of their enforcement efforts, as measured by lower injury rates among workers.¹¹⁷

A compliance incentive program implemented with the auto repair industry in Santa Rosa, California, also reported positive results. In place of traditional enforcement practices, local regulators began an intensive program of providing information and technical assistance to businesses. In addition, the regulators awarded recognizable stickers to complying businesses, and attempted to raise consumer awareness about the program.¹¹⁸ Whereas before the campaign the compliance rate hovered near zero, nearly three-quarters of the repair shops were fully compliant after two inspections.¹¹⁹

On the other hand, a comparative study between the pulp and paper industries in the United States and Canada, where regulators follow the cooperative school, found that rates of compliance with effluent limitations in Canada are significantly lower than in the United States.¹²⁰ In particular, the study found that rates of compliance with Biological Oxygen Demand requirements for Canadian mills were around sixty-nine percent, compared to an average in the United States ranging from eighty-six percent to ninety-eight percent, and that compliance with Total Suspended Solids (TSS) requirements was fifty-nine percent, compared to an estimated ninety-two percent compliance in the United States.¹²¹ Noting that the regulatory systems of the two countries are very similar except for the

since 1990 correlated with 75% of the worksites reporting serious worker accidents in 1994 and early 1995).

117. See John T. Scholz, *Cooperative Regulatory Enforcement and the Politics of Administrative Effectiveness*, 85 AM. POL. SCIENCE REV. 115, 128 (1991) [hereinafter Scholz, *Cooperative Regulatory Enforcement*]. Scholz developed a rough "cooperation index" based on the percentage of citations issued that included serious violations and the percentage of penalties imposed for serious violations. High percentages mean a high concentration of agency activities on egregious violators, which is consistent with a cooperative strategy. See *id.* at 120.

118. See John W. Garn, Martin L. Grimsrud & Dean C. Paige, *The Compliance Incentive Experience in Santa Rosa, California*, in THIRD INTERNATIONAL CONFERENCE, *supra* note 116, at 527, 529.

119. See *id.* at 544. The study's results should be viewed with some caution, however. First, the low rate of prior compliance may be attributable to the fact that the auto repair shops had rarely been inspected in the past. See *id.* Second, a key factor motivating compliance was market pressure stemming from publicly designating facilities as being in compliance. See *id.* at 544-46. This same type of pressure can be deployed in a deterrence-based system.

120. See Harrison, *supra* note 95, at 237-38.

121. See *id.* at 238. The evidence also suggests that the U.S. firms would have a substantially higher rate of compliance with toxicity standards.

divergent approaches to implementation,¹²² the author concluded that “[t]he findings thus constitute prima facie evidence that cooperative enforcement is less effective than the more prosecution-oriented approach, at least in North America.”¹²³

The EPA and states also proved singularly unsuccessful in bringing municipalities into compliance with safe drinking water and municipal-treatment plan violations through a compliance promotion approach.¹²⁴ In the mid-1980s, close to 1,500 publicly-owned treatment works (POTWs) were not in compliance. One important reason was that many industrial users were exceeding their limits on discharges to POTWs, and the efforts of POTWs to coax compliance from these dischargers through a voluntary approach were unsuccessful.¹²⁵ Regulators then initiated a major enforcement effort against the municipalities and filed judicial or administrative actions against almost eighty percent of noncomplying facilities, resulting in dramatic increases in compliance.¹²⁶

Another study of local environmental enforcement in North Carolina found that both deterrence-based and cooperative strategies were necessary to ensure adequate compliance with environmental standards. The study examined compliance with the state’s sedimentation and erosion control program by private developers. It concluded that deterrence-based aspects of the enforcement system, including more frequent and lengthier inspections, were key factors in ensuring greater compliance with the more expensive requirements that approved plans be installed and maintained.¹²⁷ On the other hand, a cooperative approach worked better at ensuring compliance with the performance standard of the regulations—that all sediment be retained on site.¹²⁸

In the end, in the absence of more supporting evidence, those advocating a wholesale departure from a deterrence-based approach bear some burden of persuasion—namely, explaining why the basic theory of deterrence that predominates so many other areas of law enforcement (the Benthamite utilitarian notion that behavior is based on a pleasure-pain cal-

122. “Canadian regulators have been more inclined to bend the rules when they perceive that regulated firms are making good faith efforts, and to negotiate informal compliance schedules when firms fail to comply.” *Id.*

123. *Id.* at 238-39.

124. See Wasserman, *supra* note 32, at 30.

125. See GAO, WATER POLLUTION: IMPROVED MONITORING, *supra* note 107, at 25-31.

126. See Robert I. Van Heuvelen & Peter Rosenberg, *Successful Compliance and Enforcement Approaches*, in THIRD INTERNATIONAL CONFERENCE, *supra* note 116, at 163, 164-65.

127. See Burby & Paterson, *supra* note 95, at 763.

128. See *id.* at 763, 765-66.

ulation) is inappropriate for environmental regulation.¹²⁹ Americans still regard economic sanctions against business as one of the most potent, if not the most potent, means to shape corporate behavior and achieve compliance. A striking illustration is the recent global tobacco settlement reached by the states and the tobacco industry. A key part of that agreement provides that if underage use of tobacco products fails to meet certain specified reduction targets, the tobacco companies will be penalized billions of dollars based on a percentage of the profit earned from product sales in excess of the stipulated levels.¹³⁰ Notably, among many groups reviewing the settlement, the question is not the appropriateness of this approach, but whether the sanctions are high enough to prompt the desired industry response.¹³¹

D. THE INEFFICIENCY ARGUMENT AGAINST DETERRENCE

The argument about the superior effectiveness of a cooperative approach is often joined with the contention that such an approach is more efficient, both because it is less costly to administer and because its flexible nature allows facilities to use the most efficient methods to achieve compliance.¹³²

129. See HUNTER & WATERMAN, *supra* note 26, at 3-5. Hunter and Waterman note the dichotomy in attitudes toward general criminal enforcement and enforcement of environmental regulations among some politicians:

Should enforcement of environmental standards be strict and severe? The message that is so emphatic in the area of law enforcement [that enforcement should be strict and severe] does not seem to resonate as clearly when we turn our attention to the behavior of federal regulatory agencies. . . . Whereas most politicians today voice similar opinions about the need for vigorous criminal enforcement, opinion is widely distributed on the issue of regulatory enforcement.

Id.

Likewise, in New York, Assemblyman Richard Brodsky commented on the results of an EPA audit showing a lack of enforcement by the New York Department of Environmental Conservation: "It shows a pattern of lawbreaking gone unpunished. If these were petty street thieves, (officials in the [Governor George] Pataki administration) would be pounding their fists on the table and demanding law and order. But when it comes to corporate polluters, they look the other way." Sarah Metzgar, *Federal Audit Faults DEC on Pollution Laws*, TIMES ALBANY UNION, May 1, 1997, at B2.

130. See *Excerpts from Agreement Between States and Tobacco Industry*, reprinted in N.Y. TIMES, June 25, 1997, at A7.

131. See Neil A. Lewis, *Citing Flaws, Health Panel Rejects Deal on Tobacco*, N.Y. TIMES, June 26, 1997, at D26 (reporting that a panel of leading public health experts established to advise Congress on the proposed tobacco settlement claimed the proposed penalties were far too small to have an impact).

132. See Diamond, *supra* note 1, at 10,254; John T. Scholz, *Voluntary Compliance and Regulatory Enforcement*, 6 L. & POL'Y 385, 390-92 (1984) [hereinafter Scholz, *Voluntary Compliance*] (arguing net social benefits will be higher if enforcement and compliance costs are minimized through cooperation between agencies and regulated entities).

Many critics note that government agencies lack the resources necessary to enforce environmental law according to the traditional model. The traditional model requires agencies to monitor and detect violations, inspect facilities, and timely and appropriately respond to each observed violation. Responses range from informal warnings to civil or administrative penalty actions. This is a highly resource-intensive approach. By contrast, a system that places greater reliance on self-policing and self-enforcement would allow a government to concentrate its limited resources on the most serious instances of noncompliance.¹³³ It would also allow increased government spending on outreach and education efforts that commentators suggest can reach a larger audience and educate regulated entities at a lower cost to enforcement agencies.¹³⁴

One such critic, political scientist John Scholz, contends that a game theory model of enforcement also demonstrates the superior efficiency of a cooperative approach, and that the standard deterrence model fails to account for the strategic interactions that occur between regulated firms and enforcement agencies.¹³⁵ Based on this model, he claims that whenever an agency adopts a strict deterrence approach, firms are better off evading the law rather than complying. Scholz argues that agencies will expend resources pursuing insignificant violations; firms will be required to achieve compliance in one prescribed manner. A cooperative approach, in which regulators overlook minor violations in recognition of efforts to do more than the law requires, avoids these inefficiencies. Firms can comply with regulations in a more cost-effective way, while agencies can conserve scarce enforcement resources.¹³⁶

133. Thus, the New Jersey legislature concluded that [e]xpanding the use of grace (compliance) periods will promote compliance by allowing those members of the regulated community who are committed to working diligently and cooperatively toward compliance, to invest private capital in pollution control equipment and other measures which will yield long-term environmental benefits, instead of in costly litigation and the payment of punitive monetary sanctions [T]his will enable the [Department] to more sharply focus limited public resources on serious violations of environmental law.

N.J. STAT. ANN. § 13:1D-125 (West 1995). See also Michael, *supra* note 40, at 554.

134. See Diamond, *supra* note 1, at 10,254.

135. See Scholz, *Voluntary Compliance*, *supra* note 132. Broadly speaking, game theory is a branch of economic theory holding that, in markets consisting of just a few participants, the behavior of a participant is explained by how she believes other participants will react to her actions rather than by standard economic assumptions. See Kirsten H. Engel, *State Environmental Standard-Setting: Is There a "Race" and Is It "To the Bottom"?*, 48 HASTINGS L.J. 271, 299-300 (1997) (quoting sources). The teachings of game theory have been extended to other situations where participants interact strategically so that each participant's action is influenced by the anticipated reaction of others to her own measures.

136. In Scholz's view, cooperation is not an altruistic strategy but one which helps both regulated entities and enforcers maximize their utility over the long term. The contingent nature of en-

It is certainly true that government resources are constrained, forcing the government to depend to a considerable degree on the self-policing efforts of firms. Indeed, enforcement agencies have never had sufficient staff to inspect more than a fraction of regulated facilities nor the resources to pursue more than a small percentage of violations in court or through the administrative hearing process.¹³⁷ From 1979 to 1994, for example, the EPA's budget remained frozen, despite the passage of numerous new statutes.¹³⁸ The problem recently has become even more severe as budget battles have caused sharp reductions in the EPA's enforcement budget,¹³⁹ while the universe of regulated facilities has become larger and more dispersed.¹⁴⁰

forcement, however, results in a type of prisoners' dilemma when a cooperative strategy is used. Firms will be tempted to cheat to avoid compliance costs, since instances of noncompliance are less likely to be detected in a cooperative scheme. Conversely, agencies uncertain that all firms are complying are tempted to retreat from cooperation because deterrence-based enforcement is more likely to detect noncompliance. Firms then have no guarantee that if they act exceptionally and do more than the law requires, the agency still will not enforce the law strictly against them. The result is that, while mutual cooperation is in the long-term interest of both sides, it is unlikely to occur in a single encounter because of the short-term temptation to cheat. Thus, agencies are always safer in choosing deterrence, and firms are safer in choosing to cheat. Scholz suggests a cooperative "Tit for Tat" strategy in which the agency sets a *minimal* level of compliance, uses less rigorous enforcement routines against firms that meet this level in the prior period, and reserves its more severe enforcement procedures for firms that fail to meet these minimal compliance standards. To maximize the effectiveness of this approach, the agency should seek to maximize sanctions against violators, but also be willing to forgive rapidly when the firm decides to cooperate. See Scholz, *Voluntary Compliance*, *supra* note 132, at 393.

137. See E.S. Schaeffer, *Encouraging Voluntary Compliance Without Compromising Enforcement: EPA's 1995 Auditing Policy*, in CONFERENCE PROCEEDINGS, FOURTH INTERNATIONAL CONFERENCE ON ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT 451, 453 (1996) [hereinafter FOURTH INTERNATIONAL CONFERENCE] (indicating that "[b]y one estimate, at least 700,000 facilities are subject to one or more federal environmental laws, while the federal government and states together conduct fewer than 100,000 inspections per year"); HUNTER & WATERMAN, *supra* note 26, at 62 (noting that EPA officials rely on a flexible approach to enforcement because it does not have the fiscal or personnel resources necessary to implement a strict enforcement approach, which would require a radical increase in the number of enforcement personnel).

138. See Robert I. Van Heuvelen & Peter J. Fontaine, *Planning and Executing Strategic Environmental Enforcement Initiatives: Maximizing Enforcement Impact*, in THIRD INTERNATIONAL CONFERENCE, *supra* note 116, at 309, 310; Michael P. Vandenberg, *An Alternative to Ready, Fire, Aim: A New Framework to Link Environmental Targets in Environmental Law*, 85 KY. L.J. 803, 912 (1997).

139. See Silecchia, *supra* note 65, at 622 & n.124 (documenting how EPA enforcement resources have been greatly constrained).

140. Federal and state environmental statutes have swept increasingly more, and increasingly smaller, entities into the net of liability In short, the original view that environmental degradation could be solved by changing the behavior of a few, easily identified and large-volume polluters has given way to a new perception that the universe of culprits is substantially more diffuse and atomistic.

Welks, *supra* note 9, at 3-4 (citations omitted).

A cooperative approach, however, may or may not save agencies money, depending on its structure.¹⁴¹ Agencies will be spared some of the costs of monitoring, detecting, and proving violations, which will shift to private corporations. On the other hand, agencies will have to devote considerably more resources to providing technical advice and cooperative assistance to regulated facilities. In addition, the government oversight of regulated firms in a cooperative scheme may be just as costly as the traditional inspection model it is replacing. For example, inspectors in Cal/OSHA's Cooperative Compliance Program stopped most routine compliance inspections and were assigned to assist the joint labor-management safety committee in improving safety at construction sites. This new role for OSHA staff was expensive as inspectors spent up to ten times more time inspecting these sites than they did at other facilities.¹⁴² Likewise, as the General Accounting Office recently reported, measuring the results of cooperative enforcement strategies can be quite expensive.¹⁴³

The fact that agencies will never have sufficient resources to adequately monitor, detect, remedy, and sanction all instances of noncompliance does not necessarily mean that an overhaul of the current system is the answer. Limited resources may suggest that any actions brought should have the most widespread deterrent effect, such as by generating the maximum penalties. They also suggest the need for enforcement activities to be strategically targeted. Others cite the lack of adequate agency resources as demonstrating not the wisdom of greater self-regulation but the need for more vigorous private enforcement of environmental laws.

Scholz's game theory model suffers from a number of flaws. First, it posits a model of deterrence-based enforcement in which enforcement agencies lack discretion, each violation is met with maximum enforcement, and all firms are treated randomly. Such a model is greatly over-

The Illinois Environmental Protection Agency, for example, reports that small businesses collectively add up to a major source of pollution, but the agency lacks enforcement staff and resources to force them to comply. See *Small Businesses Encouraged to Make "Clean Break" with Polluting Practices*, 4 ILL. ENVTL. L. LETTER, May 1995, available in LEXIS, Envirn Library, Allnws File.

141. See Wasserman, *supra* note 32, at 40 ("[W]e do not have a good feel for the impact or cost-effectiveness of the various types of enforcement responses.").

142. See REES, *supra* note 63, at 234. See also BARDACH & KAGAN, *supra* note 50, at 160 (suggesting that a flexible enforcement approach requires time, knowledge, and money); Welks, *supra* note 9, at 32 (noting that compliance-assistance programs are resource intensive). Welks, who examined the Illinois Clean Break Program, found that the agency still may have to spend substantial resources on enforcement because one-third of the original participants remained out of compliance. See Welks, *supra* note 9, at 32. Welks concluded that "[e]ven with carefully controlled studies, which do not presently exist, it may be impossible to gauge whether small business programs like Clean Break realize a greater compliance return on resource investments." *Id.*

143. See GAO, EFFORTS TO FOCUS ON RESULTS, *supra* note 8, at 39.

simplified, and in practice, minor infractions are frequently overlooked or met with minimal response.¹⁴⁴ Second, it assumes that as a trade-off for overlooking minor violations, firms take steps to reduce even greater hazards not addressed by the law or to comply more efficiently. But firms that deviate from strict compliance may not be doing more in other areas; they may simply be skirting the law. Third, the model downplays the concern that a cooperative approach will lead to agency capture by regulated entities.¹⁴⁵ Lastly, the critique that cooperative enforcement leads to more cost-effective compliance strategies by firms is in many ways an argument for greater flexibility in the underlying, substantive environmental standards, not pliancy in how these standards are enforced. These issues are distinct, and it is important for them to be treated as such so that they can rise and fall on their own merits.¹⁴⁶

E. SOCIETY'S AMBIVALENCE TOWARD POLLUTION

Another important argument for a nonadversarial enforcement approach, developed in detail by Keith Hawkins, is that society has ambivalent attitudes toward polluting activity. This ambivalence is due in part to the fact that most pollution results from otherwise productive, economically desirable activity that contributes to the material well-being of society.¹⁴⁷ Thus, "the [typical] conduct prohibited by economic regulatory laws is not immediately distinguishable from modes of business behavior that are not only socially acceptable, but affirmatively desirable in an economy founded upon an ideology . . . of free enterprise and the profit motive."¹⁴⁸

Second, the lines between what is or is not permitted by environmental regulation are often only a matter of degree and are not intuitively obvious. Pollution frequently falls in the category of conduct that is *malum prohibitum* rather than *malum se*—conduct that is illegal because it is proscribed by law, not because it is morally reprehensible.¹⁴⁹

144. See *supra* notes 25-29 and accompanying text.

145. See *infra* Part IV.B.1.

146. The difference is reflected, for example, in the distinction between (1) the EPA's Environmental Excellence and Leadership (XL) initiative, which gives facilities discretion to vary from some environmental standards in exchange for realizing environmental improvements in other areas, and (2) its Environmental Leadership Program, which encourages innovative approaches to achieving compliance. See discussion *infra* Part V.E.

147. See HAWKINS, *supra* note 93, at 10-13, 203. See also REES, *supra* note 63, at 178.

148. Sanford H. Kadish, *Some Observations on the Use of Criminal Sanctions in Enforcing Economic Regulations*, 30 U. CHI. L. REV. 423, 436 (1963).

149. See HAWKINS, *supra* note 93, at 10-13, 203. Hawkins also notes that societal ambivalence about environmental enforcement exists because environmental regulation is relatively new, regulat-

Analyzing societal attitudes toward pollution-generating activity and pollution is a complex undertaking, and a subject well beyond the scope of this Article. While much of the underlying activity that generates pollution is socially beneficial, it is an oversimplification to argue that the public therefore is ambivalent about the resulting pollution or about enforcing pollution control requirements. Rather, much of the public apparently wants economic activity to proceed so long as it accommodates environmental concerns. Thus, solid majorities of the public (sixty-three percent in 1996) consistently say that environmental protection and economic development can go hand in hand. Where a conflict between the environment and development is unavoidable, the public favors protecting the environment by a three-to-one ratio, sixty-three percent to twenty-one percent.¹⁵⁰ These findings suggest that public attitudes are more complex than Hawkins indicates, and that the public's desire to protect economic activity may not greatly temper its concomitant wish to sanction pollution resulting from that activity, regardless of whether in fact these two desires are incompatible.

Hawkins also overstates matters by suggesting that the public clearly distinguishes unlawful pollution from other inherently evil conduct. For some segments of the population, protection of the environment has a decidedly moral character, and pollution, even that which results from economically desirable activity, is morally wrong. As Mark Sagoff explains, "Americans have moral convictions about the environment that have nothing to do with economic 'common sense.'"¹⁵¹ Thus, the public may

ing behavior that for decades or centuries has been permissible or even encouraged, and because the harms associated with regulatory violations are more amorphous and delayed than those resulting from other laws. The relative "newness" of environmental law, however, does not justify relaxing enforcement. As with any area of law, environmental requirements have changed in response to perceived changes in social conditions, and businesses must adapt to these changes. In any event, modern environmental law is no longer novel, having been introduced 25 years ago. Likewise, the delayed nature of environmental harms is not a reason to enforce environmental requirements less rigorously. In fact, because it is more difficult to win tort actions for such harms, environmental requirements arguably should be enforced even more strictly.

150. See NATIONAL ENVTL. EDUC. AND TRAINING FOUND., REPORT CARD: ENVIRONMENTAL ATTITUDES AND KNOWLEDGE IN AMERICA 10-14 (1996). A plurality of Americans (45%) believe that environmental laws generally have not gone far enough, and substantial majorities believe this to be true with respect to water pollution (73%) and air pollution (64%). See *id.* at 31-33. See also John H. Cushman, *Public Backs Tough Steps for a Treaty on Warming*, N.Y. TIMES, Nov. 28, 1997, at A36 (reporting that 61% of Americans favor protecting the environment even if it costs jobs in their community, and 57% believe environmental improvements must be made regardless of costs); EVERETT C. LADD & KARLYN H. BOWMAN, ATTITUDES TOWARD THE ENVIRONMENT—TWENTY-FIVE YEARS AFTER EARTH DAY 7-8, 20-23 (1995).

151. Mark Sagoff, *Economic Theory and Environmental Law*, 79 MICH. L. REV. 1393, 1398 (1981).

believe that companies are morally blameworthy for conduct such as skimping on compliance expenditures to increase profits, exposing individuals to avoidable risks, using unknown chemicals, burdening communities that do not benefit from the polluting activity, and so forth. Such moral judgments may be derived from the deeply held values that some scholars suggest underlie much of the public's support for environmental protection.¹⁵² These values include religious and spiritual values, concern for the preservation of a healthy environment for future generations, and fidelity to the idea that nature has rights and deserves justice.¹⁵³ Clearly, societal attitudes about polluting activity are not sufficiently ambivalent to justify treating violations of environmental requirements differently than other unlawful conduct.

F. THE FIXATION ON BEAN COUNTING

Critics charge that the current system results in a preoccupation with numerical indicators: counting the number of inspections carried out, complaints filed, criminal convictions obtained, and the size of penalties collected. They contend that this focus is inherent in a deterrence-based enforcement system because deterrence theory holds that the best way to promote compliance is to enforce the law. Thus, all enforcement activities are seen as contributing to the effectiveness of the deterrent threat; more actions mean more deterrence, and larger penalties have a more powerful deterrent impact than weaker sanctions.

According to the critics, bean counting fails to accurately measure the success of enforcement efforts. They maintain that "a focus on enforcement statistics measures the number of problems encountered, not avoided. Each violation and resulting case is a failure to achieve the goal of eliminating harms to human health and the environment."¹⁵⁴ Moreover, critics argue, bean counting distorts the priorities of enforcement agencies, which

152. See WILLET KEMPTON, JAMES S. BOSTER & JENNIFER A. HARTLEY, ENVIRONMENTAL VALUES IN AMERICAN CULTURE 87-115 (1996). The authors found that most Americans share a common set of environmental beliefs and values (in favor of environmental protection) and that there was no coherent or consistent "anti-environmental position." *Id.* at 211-12.

153. See *id.*

154. Hawkins, *supra* note 5, at 46. Virginia Wetherell, secretary of the Florida Department of Environmental Protection, warns that stressing the "beans" risks losing focus on the real concern of environmental quality:

People assume that a drop in penalty orders means a state has gone soft on polluters. But how can one make that assumption without information on compliance rates? . . . If we don't move beyond the beans, we will miss what is really important: the quality of our environment.

Virginia Wetherell, *Counting Results*, ENVTL. F., Jan.-Feb. 1998, at 21, 26.

concentrate as a result on concluding a greater number of easy-to-prove but insignificant infractions (inflating their numerical indicators) rather than on more threatening but time-consuming violations.¹⁵⁵

Few are satisfied with or interested in defending bean counting as the sole means of measuring the effectiveness of an enforcement program.¹⁵⁶ Few also would disagree that an excessive focus on bean counting has at times skewed agency activities. Indeed, the EPA, which until very recently relied almost exclusively on numerical indicators to evaluate its program, has acknowledged that it needs to go beyond these traditional measures, and has been involved in a major effort to develop and implement an enhanced set of performance measures for its enforcement program.¹⁵⁷ The more fundamental question is whether a bean counting approach is inevitable with deterrence-oriented enforcement. The answer is no. Bean counting has been relied upon because it is much more convenient than tackling the difficult problems of measuring compliance and environmental outcomes,¹⁵⁸ and because it makes it far easier to evaluate the performance of enforcement personnel,¹⁵⁹ not because it represents the ends of enforcement activity. Indeed, compliance-based enforcement could easily fall into the identical trap of using the number of consultations or advice visits carried out to evaluate the success of the program. One advocate of compliance-based approaches, for instance, calls for EPA to substitute counting the number of training sessions and compliance-

155. Colin Diver points out that using the volume of citations as a measure of performance will induce inspectors to concentrate, in their selection of targets to inspect, evidence to examine, and conditions to report, on readily identifiable violations at the cost of less obvious violations. Since readily observable violations are more amenable to self-policing and very frequently less serious in nature, this tendency will produce suboptimal performance.

Diver, *supra* note 16, at 296.

156. See ENFORCEMENT FOUR-YEAR STRATEGIC PLAN, *supra* note 12, at 6; Stahl, *Enforcement in Transition*, *supra* note 3, at 19 (counting activities "reveals little, if anything about the actual state of compliance or even the actual impact of enforcement actions, much less the state of the environment").

157. The project is known as EPA's National Performance Measures Strategy. See Environmental Protection Agency, Notice of Public Meeting on the National Performance Measures Strategy for Enforcement and Compliance Assurance, FRL-5691-9, 62 Fed. Reg. 8014 (Feb. 21, 1997) (announcing and describing the project). The EPA has issued a draft report summarizing its conclusions. See generally DRAFT REPORT OF THE NATIONAL PERFORMANCE MEASURES STRATEGY, *supra* note 97.

158. "Outputs, by their nature, are inherently easier to measure, report, and understand than outcomes and environmental results." GAO, EFFORTS TO FOCUS ON RESULTS, *supra* note 8, at 33.

159. See David W. Ronald, *The Role of the CEC in Balancing Free Trade with Environmental Protection*, 12 NAT'L ENVTL. ENFORCEMENT J. 3, 6 (1997) ("Measuring effective enforcement and levels of environmental protection has bedeviled environmental regulators in the United States for years . . ."). Accord SPARROW, *supra* note 3, at 144 (suggesting it is much easier to evaluate employee performance when the measure of success is enforcement outputs rather than results).

assistance inspections conducted for its traditional enforcement outputs.¹⁶⁰ The bottom line in both systems is achieving compliance and better environmental outcomes; beans are counted as a very imperfect proxy for those results. If better measures are developed to evaluate performance, there will be less focus on inflating beans and more emphasis on those activities that clearly lead to greater compliance and improved environmental quality.

G. SUMMARY

As the above discussion illustrates, the critiques of traditional environmental enforcement advance a number of legitimate points. The criticisms do not, however, justify a radical altering of traditional enforcement, nor do they demonstrate that a primarily or exclusively cooperative-oriented scheme is a superior way to improve compliance with our nation's environmental laws.

IV. THE BENEFITS OF DETERRENCE-BASED ENFORCEMENT

While the rush to dismantle traditional environmental enforcement may seem a welcome shift in some sectors, a heavy axe approach is shortsighted and detrimental to the country's long-term interest in effective environmental enforcement. A deterrence-based system contains many positive attributes that are essential to an effective system of enforcement. First, strong enforcement serves an important expressive function. Second, deterrence-based enforcement better guards against agency "capture" by regulated entities and ensures more consistent treatment of regulated facilities. Finally, and most fundamentally, a deterrence-based system provides a strong and credible threat of vigorous enforcement that is needed for widespread voluntary compliance. This includes a strong system of citizen enforcement to supplement government enforcement efforts.

A. THE EXPRESSIVE FUNCTION OF ENVIRONMENTAL ENFORCEMENT

Environmental regulation, like other areas of law, serves important expressive functions. The underlying notion is that when the government acts, it conveys ideas and attitudes in addition to the tangible consequences

160. See Diamond, *supra* note 1, at 10,255. An audit of 10 states by the GAO recently found that most compliance-assistance programs were assessed on the basis of outputs, such as the number of facilities participating in a program or the number of workshops conducted, rather than on results. See GAO, *EFFORTS TO FOCUS ON RESULTS*, *supra* note 8, at 6.

resulting from its action.¹⁶¹ As Professors Richard Pildes and Richard Niemi explain: "Actions of all sorts—public and private, collective and individual—express certain values as well as bring about certain consequences. Actions both 'do' something and 'mean' something; at the same time that they bring about certain consequences, they also express some set of values and normative attitudes."¹⁶²

The meaning of the government's action can thus be as important as what the government actually does.¹⁶³ Moreover, when the government acts, it does not merely reflect what it interprets as the collective public understanding about the values underlying certain areas of law; it also "shapes and reconstitutes them."¹⁶⁴

Thus, when the government enforces the law, it gives voice to the public's desire to regulate and sanction undesirable behavior. Criminal law most forcefully expresses collective moral values by conveying condemnation and shame about unlawful activity.¹⁶⁵ But civil sanctions also give symbolic representation to moral values. These sanctions can be punitive in character, they can convey moral outrage, and they can result in significant negative publicity and its attendant negative consequences for violators.

The current debate over the future of environmental enforcement, with its emphasis on the efficiency and relative efficacy of various approaches, obscures the important expressive values served by deterrence-based enforcement. Deterrence-based enforcement, with its reliance on sanctions and enforcement orders, conveys a set of meanings about environmental violations that is very different from that communicated by a cooperative-oriented approach, with its emphasis on negotiation and conciliation. The message imparted by deterrence reaffirms for the public that

161. See Richard H. Pildes & Richard G. Niemi, *Expressive Harms, "Bizarre Districts," and Voting Rights: Evaluating Election-District Appearances After Shaw v. Reno*, 92 MICH. L. REV. 483, 506-07 (1993); Richard H. Pildes, *The Unintended Cultural Consequences of Public Policy: A Comment on the Symposium*, 89 MICH. L. REV. 936, 938 (1991) (explaining that in addition to direct consequences, public policy has significant impacts on social understandings, norms, and meanings).

162. Pildes & Niemi, *supra* note 161, at 511 (citation omitted).

163. See *id.* at 507.

164. *Id.* ("Governmental actions can express—and therefore perhaps sustain—a reaffirmation or a rejection of these norms"). Professor Cass Sunstein explains that

[a] society might identify the kind of valuation to which it is committed and insist on that kind, even if the consequences of the insistence are obscure or unknown. A society might, for example, insist on an antidiscrimination law for expressive reasons even if it does not know whether the law actually helps members of minority groups.

Cass R. Sunstein, *Incommensurability and Valuation in Law*, 92 MICH. L. REV. 779, 823 (1994).

165. See Susan Hedman, *Expressive Functions of Criminal Sanctions in Environmental Law*, 59 GEO. WASH. L. REV. 889, 896 (1991); Cohen, *supra* note 18, at 1060.

environmental statutes are important and that transgressions are to be taken very seriously. This message is consistent with the public's expressed strong disapproval of noncompliance with environmental requirements—a desire evidenced by the harsh sweeping penalties for noncompliance and the potent enforcement tools contained in all of the major environmental statutes.

B. THE DANGERS OF AGENCY CAPTURE AND INCONSISTENT TREATMENT

1. *Agency Capture*

A fundamental tenet of a cooperative-based system is that regulators work closely and in alliance with regulated facilities; they act more as educators and consultants than inspectors or punishers, seeking to solve problems jointly and bring facilities into compliance. While this approach can be highly beneficial, it raises an important countervailing concern: Regulators who become so cozy and closely identified with regulated entities will overlook important violations and bend over too far in the direction of lenient treatment. In short, the agency staff will be captured by those they are ostensibly regulating.¹⁶⁶

The concern with agency capture is certainly not novel,¹⁶⁷ and agencies have often sought to deal with it by limiting the discretion and flexibility of agency staff.¹⁶⁸ But eliminating agency flexibility has its own serious drawbacks, such as forcing regulators to sometimes punish trivial violations or act unreasonably, and in turn provoking resentment on the part of regulated entities.¹⁶⁹ Other approaches may hold more promise,

166. See Welks, *supra* note 9, at 33 (stating that the cooperative-based approach is vulnerable to capture because it "reserves enforcement authority for certain circumstances about whose existence reasonable people could (and may be forced to) disagree").

167. See MARVER H. BERNSTEIN, *REGULATING BUSINESS BY INDEPENDENT COMMISSION* 90, 270-71 (1955). Welks describes the regulators' concern to maintain objectivity or the appearance of objectivity as follows:

Regulators have generally felt it essential that they avoid the perception, or the reality, that they are so closely affiliated with a facility or company that they have lost the ability to respond impartially and in a manner consistent with the treatment of other facilities. This unhealthy closeness can occur on the personal level of an inspector who is too identified with a facility or on the institutional level, as when an agency appears to endorse the actions of a facility.

Welks, *supra* note 9, at 12.

168. See BARDACH & KAGAN, *supra* note 50, at 44-46 (citing concern with agency capture as the primary motivation for legislation that limited discretion of regulatory enforcement officials).

169. See *id.* Professors Bardach and Kagan conclude that concerns of potential capture are outweighed by the importance of providing regulators with the additional flexibility necessary to avoid regulatory unreasonableness. They offer a number of administrative management recommendations for keeping regulatory discretion in check. See *id.*

such as having separate inspectors carry out the more "cooperative" (advice and consultation) functions of regulatory agencies as opposed to the agencies' traditional inspection and enforcement activities. Some recently developed state compliance-assistance programs are structured this way.¹⁷⁰ Another thoughtful solution suggested by Professors Ayres and Braithwaite is a republican form of tripartism in which relevant public interest groups become the third player in the game traditionally played between regulators and regulated entities only. These public interest groups would have the power to sanction regulators who fail to punish noncompliance by firms, access to all information available to regulators, a seat at the negotiating table with regulators and firms, and the same standing as regulatory agencies to bring enforcement actions.¹⁷¹

2. *Inconsistent Treatment*

One of the most desired features of any enforcement system is consistency—similarly situated enterprises should be treated consistently. Such consistency is essential to ensuring the credibility of an enforcement program and widespread voluntary compliance.¹⁷² An oft-quoted and sagacious maxim of enforcement practice coined by Chester Bowles, a member of the 1941 wartime Office of Price Administration, holds that "20 percent of the regulated population will automatically comply with any regulation, 5 percent will attempt to evade it, and the remaining 75 percent will comply as long as they think that the 5 percent will be caught and punished."¹⁷³

In environmental law, consistent treatment is particularly crucial so that regulated entities believe they are competing on a level playing field. Thus,

[I]aws such as the [Clean Air Act] often require facilities to make large investments in pollution-control equipment. These investments can be large enough that they may materially affect decisions concerning the construction of new facilities; the sale or purchase of businesses; the decision to continue or discontinue a line of business; the competitive position of a company within an industry; and so on. . . . If, however, only some companies within an industry are permitted to evade such control

170. See *infra* note 231 and accompanying text.

171. Professors Ayres and Braithwaite further propose that the right to participate as a public interest guardian should be contestable among public interest organizations in a market created for this purpose. See AYRES & BRAITHWAITE, *supra* note 34, at 54-60.

172. See DiMENTO, *supra* note 101, at 100-02.

173. BARDACH & KAGAN, *supra* note 50, at 65-66 (quoting CHESTER BOWLES, PROMISES TO KEEP: MY YEARS IN PUBLIC LIFE 1941-1969, 25 (1971)).

requirements, . . . the evaders can unfairly obtain an advantage over their competitors, who will in response quickly resist making continued or additional pollution control investments themselves.¹⁷⁴

As a recent study concludes, many firms have invested heavily in meeting strict standards and want their competitors to be forced to do the same.¹⁷⁵ They worry that inadequate enforcement can lead to a competitive disadvantage for firms that comply.¹⁷⁶

To be sure, under the current system there is substantial variability in the way regulated entities are treated, since many inspectors take a pragmatic approach to enforcement, and since different EPA regional offices and the states respond differently to similarly situated violators.¹⁷⁷ But in a truly cooperative regime in which all compliance and enforcement issues are open to negotiations, there is a much greater likelihood that firms will be treated differently by individual inspectors.¹⁷⁸ Moreover, the perception of disparate treatment is likely to increase considerably without uniform policies governing enforcement, thus undermining the extent of voluntary compliance.

174. Van Cleve & Holman, *supra* note 13, at 10,157. See also ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF INSPECTOR GEN., FURTHER IMPROVEMENTS NEEDED IN THE ADMINISTRATION OF RCRA CIVIL PENALTIES 6 (1997) [hereinafter EPA, FURTHER IMPROVEMENTS NEEDED] ("Managing hazardous waste in accordance with regulations can be expensive. Therefore, facilities may have a strong economic incentive to violate regulations. As a result, without effective enforcement, facilities in compliance may be vulnerable to competitors who avoid the high costs of compliance.").

175. See NATIONAL ACADEMY, *supra* note 49, at 25.

176. See *Government Has Too Many Rules, Too Little Enforcement, Not Enough Prevention, Environmental Managers Report in BNA Survey*, 22 *Env't Rep.* (BNA) 2386, 2387 (Feb. 14, 1992). See also White, *supra* note 28, at 136-37 (noting that disparate treatment by regulatory agency bred resistance by facilities against compliance).

177. See Letter from Joel A. Mintz, Professor, Nova Southeastern University, to author (Sept. 22, 1997) (on file with author).

178. See Downing, *supra* note 27, at 581-82, 584 (arguing that bargaining between regulatory sources and agencies about pollution control requirements undermines enforcement and compliance). Larger, more politically powerful sources are likely to obtain delays in compliance, lower levels of control, and a greatly diminished likelihood of penalty for noncompliance. See *id.* See also MINTZ, *supra* note 23, at 104 (suggesting that varying types of enforcement can lead to inconsistent treatment by regulatory officials); Breger, *supra* note 3, at 336 ("The difference between two hypothetical settlement agreements may depend as much upon the attitude of the EPA negotiator or the persuasive ability of industry officials as on the objective characteristics of each site. The danger, then, is that flexibility could mean relaxed standards rather than adapting compliance to circumstances.") (citations omitted).

C. A STRONG, CREDIBLE THREAT OF ENFORCEMENT

Environmental enforcement, like other areas of regulatory enforcement, is highly "leveraged."¹⁷⁹ Because regulators lack the resources to systematically inspect and monitor every entity, their enforcement actions must provide a big bang for their buck. The actions must send a credible signal to other regulated entities that their noncompliance will also result in meaningful and certain penalties, including recovery of any economic gain realized from noncompliance.¹⁸⁰ Without this general deterrent effect, widespread voluntary compliance is unlikely.¹⁸¹

The perception of enforcement consequences is as important as the reality in achieving compliance.¹⁸² Publicity about enforcement efforts can lead to enhanced compliance by increasing an individual or corporation's subjective belief about the likelihood of being caught.¹⁸³ As one EPA official relates: "The annals of military history are filled with stories of military battles won where few in number created an effective image of a formidable fighting force, thereby successfully competing against snpe-

179. See Hodas, *supra* note 111, at 1609.

180. See EPA, FURTHER IMPROVEMENTS NEEDED, *supra* note 174, at 10. The significant economic benefits a facility can reap from some violations may result in a facility paying a sizable penalty without paying back "the full economic benefit it gained from noncompliance." *Id.* The penalty in such a case would be ineffective because the facility would have no incentive to comply since it "would be better off economically by remaining out of compliance." *Id.* Thus, "[r]ecovering economic benefit is essential to deter facilities from violating regulations." *Id.*

181. See HUNTER & WATERMAN, *supra* note 26, at 60 (noting that EPA inspectors report that "without the . . . deterrence [provided by EPA enforcement and the threat of citizen suits] many permittees would clearly violate the law"); *Promoting Voluntary Compliance: Environmental Auditing, Outreach, Incentive Programs*, in FOURTH INTERNATIONAL CONFERENCE, *supra* note 137, at 399, 400 (noting agreement of participants at an international environmental enforcement conference that "there [will be no] such thing as voluntary compliance without regulation or requirements with which all must comply"). See generally Diver, *supra* note 16, at 297 ("Enforcement is necessary not only to control the aberrant lawbreaker, but also to defend the legitimacy of governmental intervention that sustains voluntary compliance. This is particularly true of the typical business regulation, which cannot readily be identified with widely held moral values.").

182. See Michael, *supra* note 40, at 548; Wasserman, *supra* note 32, at 25-26.

183. In one experiment, regulators in the Netherlands warned drivers through media announcements in advance that there would be speed traps on certain highways. The drivers were subsequently much better about observing speed limits on the affected stretches of highways. See J.C.M. Veenman, *The Role of Communication for Implementing Enforcement Policy*, in THIRD INTERNATIONAL CONFERENCE, *supra* note 116, at 295. Other research shows that public education campaigns about drunk driving decrease the rate of drunk driving (albeit temporarily) even though they have little or no influence on the likelihood that a person will be punished. Researchers suggest this occurs because the publicity campaigns lead citizens to overestimate the probability of being caught and punished. See TYLER, *supra* note 17, at 22-23.

rior forces. So must enforcement actions, including inspections, be well placed and well publicized for maximum impact."¹⁸⁴

A fundamental problem with relying primarily on cooperative enforcement is that it threatens to significantly weaken the general deterrent effect of individual enforcement actions. Punitive enforcement may remain as a backstop for noncompliance, but it is likely to be used far less frequently, which regulated entities will understand. The public message will be that noncompliance is far more likely to be met with conciliation than sanctions, at least for most first-time violations. Experience has demonstrated that efforts to promote compliance are often ineffective alone.¹⁸⁵ Moreover, having the opportunity to remedy noncompliance without the threat of penalty greatly reduces the incentive to comply. As one analyst explains:

[I]t is now generally recognized that if the polluter expects no consequence from noncompliance (except having to meet with government officials to agree to do what was required in the first place), he has little incentive to undertake any costs of compliance before getting caught. This has proven to be true even when it is broadly understood that cleanup costs will increase substantially if violations are not corrected early and where actual cost savings from compliance activities has been realized.¹⁸⁶

Likewise, the General Accounting Office has concluded that penalties play a key role in environmental enforcement by deterring violators and by ensuring that regulated entities are treated fairly and consistently so

184. Cheryl E. Wasserman, *An Overview of Compliance and Enforcement in the United States: Philosophy, Strategies and Management Tools*, in CONFERENCE PROCEEDINGS, FIRST INTERNATIONAL CONFERENCE ON ENVIRONMENTAL ENFORCEMENT 7, 10 (1990).

185. See Cheryl E. Wasserman, *The Principles of Environmental Enforcement and Beyond: Building Institutional Capacity*, in THIRD INTERNATIONAL CONFERENCE, *supra* note 116, at 15, 29; Wesley A. Magat & W. Kip Viscusi, *Effectiveness of the EPA's Regulatory Enforcement: The Case of Industrial Effluent Standards*, 33 J.L. & ECON. 331, 343 n.20 (1990) (observing that in a well-functioning regulatory system, it is not necessary for an agency to issue fines frequently, but rather only for firms to believe they will be sanctioned if they fail to comply).

186. Wasserman, *supra* note 32, at 40-41. See also RUSSELL, ET AL., *supra* note 25, at 38-39 (concluding that "it is not clear that voluntary compliance provides any compliance incentives until after a violation has been discovered because a plant knows that it will have a chance to return to compliance before sanctions are imposed," and noting that this is consistent with fragmentary evidence that rates of continuing compliance with environmental requirements are only fair). The Supreme Court recognized the need for sanctions to ensure compliance when it interpreted the Federal Coal Mine Health and Safety Act in *National Independent Coal Operators' Ass'n v. Kleppe*, 423 U.S. 388 (1975). The Supreme Court noted that "the deterrence provided by monetary sanctions is essential" to achieving the statutory objectives: "If a mine operator does not . . . face a monetary penalty for violations, he has little incentive to eliminate dangers until directed to do so by a mine inspector." *National Indep. Coal Operators' Ass'n*, 423 U.S. at 401.

that no one gains a competitive advantage. . . . [T]he Clean Water Act and other environmental statutes have been violated repeatedly when penalties have not been applied.¹⁸⁷

On the other hand, enforcement without the threat of meaningful sanctions often directly translates into noncompliance. Absent a targeted enforcement effort against municipal dischargers in the 1980s, for instance, the great majority of municipal facilities violated the Clean Water Act.¹⁸⁸ A study of enforcement of underground fuel tank laws in northern California found that the conciliatory style of the local agency failed to bring most regulated facilities into compliance.¹⁸⁹ In Virginia, the legislative auditor recently concluded that lackadaisical enforcement by state regulators resulted in serious noncompliers thumbing their noses at regulatory requirements.¹⁹⁰ In one highly publicized instance where Virginia officials failed to assess sanctions against a recurrent violator, the U.S. Justice Department eventually filed criminal and civil actions against a company that committed more than 5,000 violations of its discharge permit from 1991 to 1996. These violations contributed to the closure of shellfish harvesting in the Pagan River in Virginia.¹⁹¹ Most recently, envi-

187. GAO, WATER POLLUTION: ENFORCEMENT ATTENTION, *supra* note 108, at 12-13. See also DIMENTO, *supra* note 101, at 110-121 (arguing that enforcement activity perceived as equitable, imminent, continuous, consistent, and carried out in a professional manner is likely to result in greater compliance by regulated entities).

188. See GAO, WATER POLLUTION: IMPROVED MONITORING, *supra* note 107, at 4 (describing high levels of noncompliance by industrial users with discharge limits to sewage treatment plants and concluding that "GAO's review suggests that the absence of aggressive enforcement by treatment plants against violators may be an important underlying cause for discharge limit violations"). Anecdotal evidence also suggests that during the mid- and late 1990s, in the absence of meaningful enforcement efforts, there has been widespread noncompliance with the Clean Water Act's industrial storm water discharge requirements, at least in California. See Telephone Interview with Laurie Kermish, Assistant Regional Counsel, Region IX, U.S. Environmental Protection Agency (Dec. 18, 1997).

189. See White, *supra* note 28, at 112-13, 117. Of the more than 1,000 instances of unauthorized releases from underground fuel tank (UFT) sites between 1985 and 1990 in Alameda County, California, the agency failed to take enforcement action at 834 sites. See *id.* at 113. Of these 834 sites, 726 had not taken any voluntary steps to remediate the release four to nine years after its occurrence. See *id.* The agency determined that the spill had affected or threatened groundwater in 512 of the unremediated releases. See *id.* at 112-13. The author of this study explained that because of the lack of enforcement,

a rational UFT owner or operator will make only token efforts to comply. They have no incentive to pursue costly remediation knowing that the most a [local] regulator will do is issue a formal letter requesting a preferred course of action . . . with no follow-up or substantial likelihood of further enforcement action.

Id. at 145.

190. See Nakashima, *supra* note 10, at A1.

191. See *Hearings on the Relationship Between Federal and State Governments*, *supra* note 2, at 67-68 (prepared statement of Lois J. Schiffer, Assistant Attorney General, Environment and Natural Resources Section, U.S. Dep't of Justice). Another high-profile instance in which weak sanctions

ronmental groups have assembled considerable anecdotal evidence suggesting that weak enforcement and a shift to compliance-assistance activities by state agencies have contributed to significant rates of industry non-compliance.¹⁹²

Strong enforcement strengthens the internal regulatory systems of many companies, and it provides credibility and resources to internal company compliance officers.¹⁹³ Thus, the EPA has concluded that its enforcement efforts contributed to the recent dramatic expansion in environmental auditing. More than ninety percent of corporate respondents in one survey, for example, reported that they conducted audits at least in part to find and correct violations before agency inspectors discovered them.¹⁹⁴ Another recent EPA study found that environmental enforcement actions were among the most important factors in getting businesses to consider environmental issues in the performance of their duties.¹⁹⁵ State officials reported similar findings.¹⁹⁶

failed to deter a company involves Fancy Cutt Farms, Inc., a lettuce company in Hollister, California, whose contaminated produce may have caused more than 60 cases of serious food poisoning in 1996. State health officials failed to fine or shut down the company, despite repeated inspections showing violations of state food safety laws, based on its policy of trying to work cooperatively with industry. As a result, the company failed to correct the violations, and the company's president cited the state's low-key approach as a reason for its slow response. See Pam Belluck & Christopher Drew, *Tracing Bout of Illness to Small Lettuce Farm*, N.Y. TIMES, Jan. 5, 1998, at A1.

192. See *Hearings on the Relationship Between Federal and State Governments*, *supra* note 2, at 219-24 (prepared statement of Todd E. Robins). Robins cites a host of states in which the number of inspections conducted, enforcement actions taken, and penalties collected by environmental departments have declined noticeably in the mid-1990s. See *id.* at 220-23. At the same time, approximately 20% of Clean Water Act permit holders were in significant noncompliance in 1995 and 1996. See DIRTY WATER SCOUNDRELS, *supra* note 111.

193. See REES, *supra* note 63, at 225-27. See also Jeff Johnson, *Enforcement Cuts Hit by Corporate Attorney*, 30 ENVTL. SCI. & TECH. NEWS, 1996, at 109A (quoting a corporate environmental attorney who asserted that cutbacks in EPA enforcement will undermine corporate willingness to comply with environmental laws by diminishing the authority of a company's environmental health and safety officer). Some believe that, without the threat of a strong federal hand in enforcement, the internal company compliance official's role would return to a lowly part of the corporate hierarchy and be staffed by a person "close to retirement, with no real power base in the organization, and no staff—just window dressing." *Id.*

194. See Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations, FRL-5400-1, 60 Fed. Reg. 66,706, 66,707 (1995) [hereinafter Incentives for Self-Policing] (quoting 1995 Price-Waterhouse survey).

195. See Manik Roy & Ohad Jehassi, Env'tl. Protection Agency, Study of Industry Motivation for Pollution Prevention (April 23, 1997) (unpublished manuscript, draft on file with author).

196. See David A. Ronald, *The Case Against an Environmental Audit Privilege*, NAT'L ENVTL. ENFORCEMENT J., Sept. 1994, at 3, 4. According to James Morgerster, Chief of the Compliance Division of the California Air Resources Board, the number of companies conducting environmental audits has increased in direct proportion to the level of civil and criminal enforcement. See *id.*

Moreover, moving toward a primarily cooperative approach overlooks evidence that the level of traditional enforcement activity tends to increase the rate of industry compliance.¹⁹⁷ In their study of Clean Water Act enforcement in the pulp and paper industry, for example, Professors Wesley Magat and Kip Viscusi found permanent improvements in discharge levels as a consequence of regulatory inspections and associated enforcement activities. These activities substantially reduced discharges of Biological Oxygen Demand chemicals after about three months and helped permanently reduce an individual firm's future pollution levels. They also had a major impact on compliance rates; firms not subject to inspections and enforcement activities were twice as likely to be in non-compliance as those subject to the activity.¹⁹⁸ Professor Evan Ringquist in his detailed study of state and federal environmental programs likewise concluded that the strength of enforcement programs made a significant difference in reducing pollutant emissions. He specifically found that federal enforcement efforts, which generally tend to be more aggressive than state efforts, and state enforcement efforts that were "consistent, focused and well-supported" resulted in greater reductions than weaker and inconsistent state programs.¹⁹⁹ An examination of OSHA enforcement demonstrated that between 1979 and 1985, inspections imposing penalties resulted in a twenty-two percent decline in injuries in the inspected plants

197. The evidence is not unambiguous, however. Professors Hunter and Waterman concluded that higher levels of Clean Water Act enforcement activity did *not* translate into improved water-quality outcomes, as measured by the percentage change in average pollutant concentrations of phosphorous, dissolved oxygen, and dissolved solids between 1973 to 1975 and 1986 to 1988. See HUNTER & WATERMAN, *supra* note 26, at 199-205. Moreover, there is relatively little experience with environmental inspections and enforcement activity conducted in a nondeterrence-based system. For example, a recently completed pilot project in Washington found that, one year after state inspectors made compliance-oriented visits to auto repair shops, the great majority of the facilities had complied with at least some (and in many instances most) of the inspectors' recommendations. See Environmental Protection Agency, Briefing Materials for Public Meeting, Workshop on National Performance Measures Strategy for EPA's Enforcement and Compliance Assurance Program (Mar. 17, 1997) <<http://es.epa.gov/oeca/perfmeas/march17/meeting.html>> [hereinafter Workshop on National Performance Measures Strategy] (on file with author) (testimony of Brian Dick, Wash. State Department of Ecology). The range of compliance issues identified by state inspectors was broad, however, and the agency did not attempt to analyze compliance with significant as opposed to minor recommendations. See Electronic Mail Communication with Darin Rice, Wash. State Dep't of Ecology (Apr. 2, 1997).

198. See Magat & Viscusi, *supra* note 185, at 353-54.

199. See EVAN J. RINGQUIST, ENVIRONMENTAL PROTECTION AT THE STATE LEVEL: POLITICS AND PROGRESS IN CONTROLLING POLLUTION 135-50 (1993). See also DiMento, *supra* note 101, at 136-37 (citing a study showing a direct link between the level of enforcement resources and the level of local compliance with the Clean Air Act).

during the following few years.²⁰⁰ Other studies have found that pollutant emissions have declined as the probability of detection and the size of fines levied for a violation increase.²⁰¹ A California study found that stepped-up enforcement by the State Department of Toxic Substances Control successfully fostered compliance with hazardous waste requirements. The study found that over a five-year period the average number of violations per facility inspection dropped two-thirds, from 3.3. to 1.1, and that the percentage of facility inspections finding multiple violations dropped from sixty-three percent to thirty-three percent.²⁰² Most recently, the Indiana Department of Environmental Management found that in sixty-five percent to seventy percent of cases in which enforcement actions were taken against facilities, follow-up inspections showed the facilities complied with environmental requirements.²⁰³

Thus, shifting too far toward cooperative enforcement threatens to seriously undermine the threat of enforcement that is essential for widespread voluntary compliance.

D. A STRONG SYSTEM OF CITIZEN ENFORCEMENT

Currently, citizen enforcement is a feature in all the major federal environmental statutes.²⁰⁴ As a general matter, these statutes allow citizens to sue companies for violations when the government fails to do so and various, often strict, procedural conditions are met.²⁰⁵ Traditionally, Congress has viewed citizen enforcement as an important supplement to

200. See Wayne B. Gray & John T. Scholz, *Does Regulatory Enforcement Work? A Panel Analysis of OSHA Enforcement*, 27 LAW & SOC'Y REV. 177, 199 (1993). The authors posit that "[i]nspections that impose a penalty appear to focus managerial attention on safety issues in a way that leads to broader efforts to reduce hazards." *Id.* See also Kovach, et al., *supra* note 116, at 179 (noting a high correlation between worksites where the majority of serious accidents occurred and worksites that were not inspected by OSHA).

201. See RUSSELL, ET AL., *supra* note 25, at 95 (citing studies). *Cf. id.* at 98 (noting studies that show monitoring and enforcement efforts led to more accurate reporting of discharges by firms when an emission tax policy was in place).

202. See Evaluation of Changes and Patterns in RCRA Violation Rates for Treatment, Storage and Disposal Facilities in California, Report prepared for U.S. EPA, Contract No. 68-W9-0009, Dec. 7, 1993 (on file with author).

203. See Workshop on National Performance Measures Strategy, *supra* note 197 (testimony of Michael O'Connor, Commissioner, Indiana Department of Environmental Management).

204. See, e.g., Clean Water Act § 505, 33 U.S.C. § 1365 (1995) (citizen suit provision); Clean Air Act § 304, 42 U.S.C. § 7604 (1995).

205. See 33 U.S.C. § 1365.

agency enforcement and an important prod to agency regulators.²⁰⁶ Congress therefore has repeatedly sought to strengthen it. In the 1990 Clean Air Act Amendments, for example, Congress expanded citizen suits by authorizing private actions for repeated past violations.²⁰⁷

Citizen enforcement has played an extremely valuable role in achieving compliance with environmental law, including spurring EPA and state agency enforcement efforts.²⁰⁸ Citizen enforcement has been especially instrumental in helping to bring government facilities into compliance.²⁰⁹ It also has played a significant enforcement role in the private sector. Citizen groups are not dissuaded from enforcement by political pressure, nor are they subject to capture like regulatory staff.²¹⁰ Citizen action thus provides an important deterrent to noncompliance when government agencies fail to act either because of lack of resources or political will. As Professor David Hodas has convincingly demonstrated, government agencies by themselves cannot ensure widespread compliance: Many states have weakened enforcement efforts to attract economic growth, and

206. See Wendy Naysnerski & Tom Tietenberg, *Private Enforcement of Federal Environmental Law*, 68 LAND ECON. 28, 30-31 (1992) ("A pervasive recognition that the government had neither the time nor resources to provide sufficient enforcement led Congress to authorize citizen suits.")

207. This was in direct response to the Supreme Court's decision in *Gwaltney of Smithfield Ltd. v. Chesapeake Bay Foundation*, 484 U.S. 49 (1987), holding that citizens could only sue for ongoing violations under the Clean Water Act.

208. See 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, 206-07 (1987); ROBERT V. PERCIVAL, ALAN S. MILLER, CHRISTOPHER H. SCHROEDER & JAMES P. LEAPE, ENVIRONMENTAL REGULATION: LAW, SCIENCE & POLICY 1078 (2d ed. 1996) (quoting Environmental Law Institute study of citizen enforcement); Naysnerski & Tietenberg, *supra* note 206, at 35, 41.

209. See Naysnerski & Tietenberg, *supra* note 206, at 42, 46. Unlike citizens who are willing to pursue violations by government entities, enforcement agencies have been historically reluctant to do so:

The track record for public enforcement actions against public facilities has been rather poor, not because of any statutory or constitutional barriers to enforcement, but rather because of a lack of will. Private enforcers have no such lack of will to pursue public polluters and therefore would presumably be able to produce compliance faster.

Id.

210. See generally AYRES & BRAITHWAITE, *supra* note 34 (arguing for citizen enforcement to prevent agency capture); PERCIVAL ET AL., *supra* note 208, at 932 (noting that EPA officials acknowledge that they virtually never obtain economic benefits when they file enforcement actions against municipal sewage treatment facilities). For an interesting recent illustration of how citizen enforcement can guard against sweetheart deals with regulators, see *Citizens for a Better Environment v. Union Oil Co.*, 83 F.3d 1111 (9th Cir. 1996), *cert denied* 117 S. Ct. 789 (1997). In that case, the local regulatory agency, succumbing to political pressure, granted a lengthy extension on stricter discharge limits to several refineries. It did so by resolving an enforcement action through a settlement agreement that did not impose any penalties on the refineries. The Ninth Circuit ruled that the agency settlement did not preclude a citizen suit to enforce the stricter permit limits.

the federal government lacks the resources and political will to fill the gap left by this lax state enforcement.²¹¹

A system of enforcement that relies primarily on cooperative methods would have difficulty co-existing with vigorous citizen enforcement, which has always been unpopular with businesses for obvious reasons. Under existing law, citizen enforcement is largely unsupervised by the government. Private enforcers do not need agency approval before initiating actions, and agencies generally are quite reluctant to file enforcement actions merely to contain or preempt citizen enforcement.²¹² Some statutes require private settlements to be reviewed by the Department of Justice before they are judicially approved, but the scope of this review is rather limited.²¹³ Thus, citizens largely are able to set their own enforcement priorities.

Citizen enforcers do not adhere to the cooperative school. They generally believe that noncompliance with environmental laws is significant, and that the central failings in current enforcement are too many unsanctioned violators and lenient treatment of violators.²¹⁴ They believe that more stringent enforcement is necessary to increase compliance, and they are likely to continue aggressively to seek sanctions in enforcement actions.

211. See Hodas, *supra* note 111, at 1572-75, 1585-89, 1615-17; Engel, *supra* note 135, at 351-54 (concluding, based on empirical study, that states engage in a "race to the bottom" in environmental regulation to attract business); U.S. GEN. ACCOUNTING OFFICE, ENVIRONMENTAL ENFORCEMENT: PENALTIES MAY NOT RECOVER ECONOMIC BENEFITS GAINED BY VIOLATORS, GAO/RCED-91-166, 8-9 (1991) (reporting that state and local enforcement offices are susceptible to pressures that make them reluctant to adhere to strong penalty policy); OFFICE OF INSPECTOR GEN., U.S. ENVTL. PROTECTION AGENCY, AUDIT OF REGION 9'S ADMINISTRATION OF THE CALIFORNIA AIR COMPLIANCE AND ENFORCEMENT PROGRAM, E1GAO6-06-0023-7100246, 9 (1997) [hereinafter EPA, AUDIT OF REGION 9] (observing that local air districts reported their boards did not support aggressive enforcement actions in some cases because of potential economic impacts if major industries relocate).

212. Under most citizen enforcement schemes, the government can preclude a private action by filing a suit within 60 days after receiving a notice of intent to sue by the private party. See, e.g., Clean Water Act, 33 U.S.C. § 1365(b) (1994).

213. See, e.g., *id.* § 1319(g)(6)(b); Clean Air Act, 42 U.S.C. § 7604(c)(3) (1994).

214. See Hodas, *supra* note 111, at 1613-14 (arguing that only significant penalties have a meaningful deterrent effect and motivate voluntary compliance). "[B]oth Congress and EPA have long declared civil penalties to be central to the [Clean Water Act's] enforcement scheme because without adequate and consistently imposed civil penalties, particularly in judicial actions, polluters will have little motivation to comply voluntarily with the law." *Id.* at 1644-45. See also *Hearings on the Relationship Between Federal and State Governments*, *supra* note 2 at 219 (prepared statement of Todd E. Robins) ("Without environmental cops aggressively on the beat, without a credible, predictable deterrent to illegal pollution, polluters have little incentive to clean up their acts and plenty of incentive to disregard the law.").

The schism between advocates of cooperative enforcement and citizen enforcers was highlighted at a recent Congressional hearing on the federal-state relationship in environmental enforcement. On the one hand, state government representatives chastised the EPA for stifling state innovative reform efforts to move away from traditional enforcement, and for the EPA's continued emphasis on "enforcement-specific activities, focusing on enforcement for enforcement's sake."²¹⁵ By contrast, environmentalists argued that the new enforcement approach of the states was resulting in "gross and unacceptable levels of non-compliance" with environmental law:

A significant number of States around the country have explicitly reduced, or even dismantled, their already weak, under-funded environmental enforcement programs under the philosophy that voluntary, hand-holding compliance assistance efforts will achieve compliance more efficiently. State and EPA data, as well as anecdotal evidence from around the country indicates that the opposite is true²¹⁶

They called on Congress to beef up traditional enforcement:

[The approach] to Clean Water Act enforcement that we have seen in New Jersey since 1990—characterized by mandatory minimum penalties for serious violations, stronger citizen suit provisions, better monitoring and reporting, and adequate resources—should serve as a national model for enforcement of the Clean Water Act and other Federal environmental statutes.²¹⁷

Even if private enforcers were more philosophically sympathetic to cooperative enforcement, it would be very hard for them to implement. Under the cooperative scheme, inspectors act mainly as consultants and educators, dispensing advice and assistance about how to achieve compliance. The system works best when regulated entities have ongoing, predictable relations with regulators.²¹⁸ Citizen enforcers, however, do not

215. *Hearings on the Relationship Between Federal and State Governments*, *supra* note 2, at 202 (prepared statement of Christopher A.G. Tulou, Secretary, Delaware Department of Natural Resources and Environmental Control). *See also id.* at 198 (prepared statement of Patricia S. Bangert).

216. *Id.* at 220 (prepared statement of Todd E. Robins) (citation omitted). For a similar argument, see Sanford Lewis, *Feel-Good Notions, Corporate Power and the "Reinvention" of Environmental Law* (Good Neighbor Project for Sustainable Industries, Working Paper, March 17, 1997) <<http://www.envirolink.org/orgs/gnp/fgnful.htm>> [hereinafter *Feel-Good Notions*] ("Diminishing the threat of detection and punishment makes it less likely that individuals and corporations will do the right thing. The environmental audit laws are based on a faulty, feel-good assumption about the reach of people's and corporations' good intentions.")

217. *Hearings on the Relationship Between Federal and State Governments*, *supra* note 2, at 218 (prepared statement of Todd E. Robins).

218. *See, e.g.*, BRAITHWAITE, *supra* note 91, at 114-15.

have the resources, expertise, or access to company information to be consultants. Citizen enforcers also do not enjoy continuing relationships with regulated firms in many instances. Additionally, few companies would likely heed the advice of citizen groups even if they attempted to undertake this role.

A radical shift away from deterrence-based enforcement is thus likely to greatly weaken citizen enforcement, which has played an important role in promoting compliance with environmental requirements.

V. HOW TO REFORM ENVIRONMENTAL ENFORCEMENT

As discussed in Part III, the evidence is mixed about the best way to achieve compliance with environmental laws; it does not decidedly show the superiority of either deterrence or cooperative-oriented enforcement. Each approach has its strengths and weaknesses, and elements of both systems are desirable. A system that is purely or primarily deterrence-based can be improved by integrating features of the cooperative model, such as more emphasis on agency advice and consultation, and greater reliance on voluntary self-policing. A system that is purely or primarily cooperative-based, however, will lose some of the expressive character of enforcement, suffer serious risks of substantial noncompliance, agency capture and inconsistent treatment, and negate citizen enforcement. The best approach, therefore, is one that is grounded in deterrence theory but integrates certain constructive features of a cooperative model. This section discusses ways in which current enforcement practice may be improved, and evaluates many of the key enforcement reforms urged by critics.

A. AGENCIES SHOULD PROVIDE MORE CONSULTATION AND COOPERATIVE ASSISTANCE

Enforcement agencies have always considered compliance promotion and education necessary to enforcement programs. Until recently, these efforts have often been overlooked and underfunded.²¹⁹ One positive element in current reforms has been a push to expand cooperative assistance efforts significantly, particularly those directed at small businesses.²²⁰

219. See MINTZ, *supra* note 23, at 106.

220. In other regulatory areas, some Congressional proposals have sought to phase out direct agency enforcement activities and replace them with compliance-assistance programs. For example, one bill introduced in 1995 would have required OSHA to spend at least 50% of its budget on consulting and other employer assistance programs. See H.R. 1834, 104th Cong. § 4(f) (1995). Another measure would have required OSHA to institute a program of cooperative agreements under which

Congress mandated in the 1990 Clean Air Act Amendments that states establish compliance-assistance programs for small businesses.²²¹ Likewise, in the Small Business Regulatory Enforcement Fairness Act (SBREFA), Congress required all agencies to publish easy-to-understand "small entity compliance guides" for all federal rules.²²² On its own, the EPA has made a major effort to elevate the importance of its compliance-assistance efforts, as reflected in the reorganization of its enforcement program into a new Office of Enforcement and Compliance Assurance.²²³ The agency recently developed national Compliance Assistance Centers in several industrial sectors to provide "plain English" guides about compliance requirements, technical assistance, and pollution prevention training to regulated entities.²²⁴ As an incentive for industries to use these centers, the EPA offers businesses with up to six months to correct violations identified through these programs.²²⁵ EPA regional offices have also been experimenting with enhanced assistance programs.²²⁶ The EPA also has in-

regulated employers could consult with agencies about voluntary self-regulatory efforts. See H.R. 1433, 104th Cong. § 2 (1995).

221. See 42 U.S.C. § 7661(f) (1997). Programs must include adequate mechanisms for informing small businesses of their obligations under the act, including providing referrals to qualified auditors or providing state-sponsored audits of sources. See *id.*

222. See Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. No. 104-121, § 212, 110 Stat. 857, 858 (1996). Agencies are also required, whenever appropriate, to answer inquiries by small businesses about how to comply with regulatory requirements. Guidance provided by the agencies may be considered as evidence in assessing the reasonableness of penalties sought against the firms in subsequent enforcement actions. See *id.* § 213.

223. See Stahl, *Enforcement in Transition*, *supra* note 3, at 21.

224. See *id.* at 22. Such centers have been developed for the metal finishing, agricultural, automobile services and repair, and printing industries. The EPA is working on centers to assist municipalities, the transportation industry, small chemical manufacturers, and manufacturers of printed wiring boards. See *Hearings on the Relationship Between Federal and State Governments*, *supra* note 2, at 157-58 (prepared statement of Steven Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency); Steven A. Herman, *New OECA Incentives Policy, Metal Finishing National Assistance Center Will Enhance Compliance by Small Business*, NAT'L ENVTL. ENFORCEMENT J., Aug. 1995, at 9. The EPA has also published 18 "sector notebooks," described as comprehensive environmental and technical profiles of industries designed to help the EPA develop compliance-assistance strategies and to help industries improve their compliance. See Steven Herman, *EPA's FY 1997 Enforcement and Compliance Assurance Priorities* (1997) <<http://es.epa.gov/oeca/naag97.html>>.

225. See Bill Clinton & Al Gore, "Reinventing Environmental Regulation": Clinton Administration Regulatory Reform Initiatives (March 16, 1995) <<http://www.epa.gov/ooaujeag/notebook/clinton.htm>>.

226. For example, in Region 1's CLEAN initiative (Compliance Leadership through Environmental Audits and Negotiation), the EPA, state agencies, universities, and a trade association provide free audits to small and medium-sized firms in exchange for a commitment to achieve compliance and implement at least one pollution prevention project. Violations uncovered during the audit receive penalty reductions or waivers. See Hawkins, *supra* note 5, at 44-45. The EPA's Region 6 has established compliance-assistance programs for chlorofluorocarbons, dry cleaners and foundries. The programs provide training and certification to the small business community to make them aware of

formed front-line inspectors that it is proper for them to provide compliance assistance as part of their traditional enforcement activities.²²⁷ Many states have pursued similar programs that provide businesses with detailed technical assistance and compliance advice, usually in exchange for an agreement not to seek penalties or take enforcement action if detected violations are promptly corrected.²²⁸ Other states have sought to integrate compliance-assistance programs directly into their enforcement activities.²²⁹

regulations. See OFFICE OF INSPECTOR GEN., U.S. ENVTL. PROTECTION AGENCY, REGION 6'S ENFORCEMENT AND COMPLIANCE ASSURANCE PROGRAM, E1GAF5-06-0056-6100309, at 21 (1996) [hereinafter REGION 6 PROGRAM] (reporting findings of an audit of Region 6's (and Texas and Louisiana's) enforcement programs).

227. See *Enforcement: Pollution Prevention Guidance Deemed Appropriate Action for Agency Inspectors*, 28 Env't Rep. (BNA) 726, 726 (Aug. 15, 1997).

228. The Illinois' Clean Break project, geared toward small businesses with an emphasis on firms reluctant to participate, is one such example. Small businesses seeking help with regulatory requirements can contact initially the Illinois Environmental Protection Agency (EPA) directly or can call the State Department of Commerce and Community Affairs, which will provide an anonymous contact with the Illinois EPA. The Illinois Office of Small Business then schedules an in-person meeting or a telephone meeting (with the option for business anonymity) at which regulatory staff will provide the company with preliminary options for compliance and pollution prevention. The firm can then drop out of the program and remain anonymous or schedule a site visit so that agency staff can develop more detailed advice. Participating firms enter a compliance/amnesty agreement under which the business agrees to achieve compliance and the state agrees to forego enforcement action if compliance is accomplished within the agreed-upon timeframe. The program excludes a range of serious and criminal violations. See ILLINOIS ENVTL. PROTECTION AGENCY, DEPARTMENT OF COMMERCE AND COMMUNITY AFFAIRS & ROCKFORD AREA CHAMBER OF COMMERCE, SMALL BUSINESS GUIDE FOR GETTING A CLEAN BREAK (1995) (copy on file with author) [hereinafter SMALL BUSINESS GUIDE]. The California Department of Toxic Substances Control (for all regulated hazardous waste facilities) and the Ohio Environmental Protection Agency (for all dry cleaners) run similar, if somewhat less elaborate, compliance-assistance programs. See CALIFORNIA ENVTL. PROTECTION AGENCY, ON-SITE CONSULTATION AT YOUR BUSINESS (on file with author); Ohio Env'tl. Protection Agency, *Dry Cleaner Initiative*, in ECOS-OLD INNOVATIONS (The Env'tl. Council of the States, June 16, 1997) <<http://www.sso.org/ecos/oldinno.htm>> (describing Ohio's multimedia initiative targeting dry cleaners). Texas has an amnesty program in which the state provides assistance to particular industrial sectors for one-year periods. See REGION 6 PROGRAM, *supra* note 226, at 15. Like many other states, Texas and Louisiana also provide compliance assistance to small businesses through methods such as industry workshops, distribution of literature, special hotlines, aid with permit applications and regulatory questionnaires, and determinations of whether regulations are applicable to a particular firm. See *id.* at 15-16. See generally GAO, EFFORTS TO FOCUS ON RESULTS, *supra* note 8, at 21-24, 66-67 (indicating that most of the 10 states surveyed by GAO had adopted compliance-assistance programs that included seminars, technical assistance visits, and "plain-English" guides explaining regulatory requirements—all generally targeting smaller businesses and specific industries).

229. In Massachusetts, for instance, the Department of Environmental Protection conducts multimedia facility inspections and provides firms with guidance about how to achieve basic compliance and meet the state's toxics use reduction law. See Stahl, *Enforcement in Transition*, *supra* note 3, at 23. Indiana's Department of Environmental Management has recently created a multimedia compliance division that brings together pollution prevention, technical assistance, compliance, and enforcement staff. See Indiana Dep't of Env'tl. Management, *Integrated Compliance Division*, in ECOS-OLD INNOVATIONS (The Env'tl. Council of the States, July 28, 1997) <<http://www.sso.org>

These stepped-up assistance efforts should increase compliance. The programs should be directed first at small businesses, many of which may lack the expertise and resources needed to fully comprehend environmental regulation. Assistance directed at small businesses presents the greatest opportunity for significant improvements in compliance.²³⁰ Agencies should also have separate inspectors carrying out these expanded "advice and consultation" functions, or at least not assign inspectors to carry out these traditional activities at the same facilities where they have provided special technical assistance. This separation will help minimize the risk and appearance of preferential treatment by agency staff who have devoted considerable time and energy consulting with a firm. It also will promote business confidence that the compliance-assistance program will not be used to gather evidence for later enforcement actions, and thus should prompt greater openness by participating firms.²³¹ Agency employment of aggressive outreach efforts in connection with the technical assistance programs also would be desirable. In Illinois, for example, regulators carried out a promotional campaign, organized workshops with trade associations, and contacted facilities several times to enlist their participation.²³² These outreach efforts hopefully will allow agencies to reach

/ecos/oldinno.htm> (describing Indiana's "reengineering effort" to create a new multimedia compliance division).

230. The Illinois Small Business Environmental Task Force noted that there are a substantial number of small businesses that are currently operating in noncompliance with one or more regulatory requirements. Some of the businesses have some knowledge of environmental requirements but are unsure if the requirements are applicable to them and are afraid to find out. Some are unaware of environmental requirements in general. Some know they are operating in violation, but are afraid if they attempt to come into compliance they will subject themselves to large monetary penalties and thereby jeopardize their business. It is believed that the [Illinois EPA] is unaware of the identity of many of these businesses.

GOVERNOR'S SMALL BUSINESS ENVIRONMENTAL TASK FORCE, *supra* note 87, at 12.

231. The compliance-assistance programs in Illinois, Arizona, and Texas, for example, accomplish this separation of function. Under Illinois' Clean Break Program, regular agency inspectors provide technical assistance but do not have the routine inspection responsibility for the facilities which they assist. *See* Welks, *supra* note 9, at 28 n.30. Moreover, there is an express understanding in the agency that the routine inspectors will not try to discover nor make use of the information obtained through the Clean Break Program. *See id.* at 30. In Arizona, state employees who conduct hazardous waste and other types of facility assessments are employed by a special Office of Customer Service that is completely segregated from the traditional enforcement and inspection staff. *See id.* at 36. Arizona's drinking water program employs independent representatives entirely outside the agency to provide technical assistance—an idea dubbed the "circuit rider" program. *See id.* at 39. In Texas, the staff of the Small Business Assistance Program is separate from enforcement personnel. *See* REGION 6 PROGRAM, *supra* note 226, at 15.

232. *See* SMALL BUSINESS GUIDE, *supra* note 228; Welks, *supra* note 9, at 31.

some firms that have the most difficulty keeping abreast of current requirements.²³³

Unfortunately, many states have swung too far in providing assistance and consultation without utilizing traditional enforcement tools. As a result, enforcement is seriously undermined. Indeed, recent experiences in a number of states suggest that, under the guise of working more cooperatively with industry and providing greater compliance assistance, state agencies have simply weakened enforcement. For example, the EPA recently found that while Texas and Louisiana had effective compliance assistance programs, their traditional enforcement efforts had important weaknesses.²³⁴ A report by auditors in Virginia indicated that environmental officials were giving no more than a slap on the wrist to persistent and serious violators, and had cut back substantially on air and water inspections.²³⁵ In Pennsylvania, an audit by the EPA's Inspector General found that the state had seriously underreported the number of significant violators of the Clean Air Act and failed to take appropriate enforcement action to bring violators into compliance, thereby "allowing facilities that were serious contributors of air pollution to continue harming the environment—sometimes for many years."²³⁶ EPA auditors reached similar conclusions about New York's enforcement of environmental laws.²³⁷ The EPA, fearing that these results represent only the tip of the iceberg, has commenced a nationwide examination of the states' performance.²³⁸ Its

233. While it is appropriate for compliance-assistance programs to offer participating firms incentives, such as reduced inspections and reduced penalties, it is unwise to remove *all* agency discretion to impose penalties on such firms when violations are detected and corrected as a result of agency assistance. *See infra* Part V.B.

234. *See* REGION 6 PROGRAM, *supra* note 226. The EPA reported that both states failed to compute economic benefit when assessing fines, that Texas failed to complete enforcement actions in a timely manner, that Louisiana did not adequately publicize its actions, and that both states underreported or inaccurately characterized violations. *See id.* The EPA recently reached comparable conclusions about air quality enforcement in California, which it noted has an excellent compliance-assistance program. *See* EPA, AUDIT OF REGION 9, *supra* note 211.

235. *See* Cushman, *Virginia Seen*, *supra* note 10, at 22; Nakashima, *supra* note 10, at A1.

236. EPA OFFICE OF INSPECTOR GEN., VALIDATION OF AIR ENFORCEMENT DATA REPORTED TO EPA BY PENNSYLVANIA (1997) <<http://www.epa.gov/oigearth/pennchp2.htm>>. The audit also concluded that Pennsylvania's inspections sometimes were not thorough enough to determine whether facilities were in compliance, and that the state did not always ensure that facilities took action to correct detected violations. *See id.* Pennsylvania has vigorously disputed the suggestion that it is undermining enforcement of the Clean Air Act and attributes the Inspector General's conclusions to differing approaches over how to bring violators back into compliance. *See id.*

237. *See* Metzgar, *supra* note 129, at B2 (reporting EPA findings that the New York Department of Environmental Conservation failed to take timely and appropriate enforcement action against significant violators in 12% of cases studied over a two-year period and that an earlier EPA report noted a significant decrease in the number of air inspections by the state agency).

238. *See* Cushman, *States Neglecting*, *supra* note 31, at A1.

findings to date document serious problems in the states enforcing environmental laws.²³⁹

B. POLICIES AUTOMATICALLY PRECLUDING SANCTIONS AND
ELIMINATING ENFORCEMENT DISCRETION
ARE UNDESIRABLE

One very popular strand of current reform efforts seeks to preclude or greatly mitigate penalties for certain classes of violations or against small businesses. While in many circumstances this type of enforcement response is entirely appropriate, it is unwise public policy to negate agency discretion totally and mandate that sanctions are impermissible.

The most notable example of this type of initiative is the SBREFA, enacted by Congress in 1996.²⁴⁰ The statute requires federal agencies to develop policies that provide for the reduction *and waiver* of minor violations by small businesses in certain instances, such as when the violation is corrected within a reasonable period or is discovered in a compliance-assistance program.²⁴¹

239. For example, the EPA Inspector General found that numerous states failed to recover (and some failed to even calculate) economic benefits stemming from noncompliance with the Resource Conservation and Recovery Act (RCRA). This audit also found that penalties imposed for RCRA violations by states were significantly lower than those levied by the local EPA regional offices—in some cases 4% and 6% of those assessed by the regions. See EPA, FURTHER IMPROVEMENTS NEEDED, *supra* note 174, at 21. Another study noted significant weaknesses in enforcement of federal air quality requirements by agencies in California, including failures to timely resolve enforcement actions and to impose adequate penalties, including those that recover economic benefits of noncompliance. See EPA, AUDIT OF REGION 9, *supra* note 211. Another series of reports by EPA's Inspector General found extensive failures by agencies in Idaho, Alaska, Washington, and New Mexico to take enforcement actions against permit violators, conduct inspections, and report violations to the federal government. See John H. Cushman, *EPA and States Found to Be Lax on Pollution Law*, N.Y. TIMES, June 7, 1998, at A1.

240. See Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. No. 104-121, 110 Stat. 857 (1996).

241. See *id.* § 223. As part of the SBREFA, Congress took other steps to modify traditional agency enforcement efforts. For example, it amended the Equal Access to Justice Act to make it easier for small businesses to recover costs of defending government enforcement actions. Specifically, small businesses can recover costs in administrative actions to enforce a party's compliance with a statutory or regulatory requirement if "the demand by the agency is substantially in excess of the decision of the adjudicative officer and is unreasonable when compared with such decision, under the facts and circumstances of the case." 5 U.S.C. § 504(a)(4) (1997). A like provision applies in civil actions. See 28 U.S.C. § 2412(d)(1)(D) (1997). Congress also required the Small Business Administration (SBA) to designate an ombudsman to facilitate small businesses' complaints about agency enforcement activity. Also under the act, Regional Small Business Regulatory Fairness Boards set up by the SBA are required to report instances of excessive agency enforcement actions to the ombudsman. See Small Business Regulatory Enforcement Fairness Act § 222.

Even before the SBREFA was implemented, the EPA announced a very similar policy declaring that it would refrain from seeking civil penalties or would mitigate civil penalties when a small business makes a "good-faith" effort to comply with environmental requirements by either receiving on-site compliance assistance or promptly disclosing the findings of a voluntary environmental audit.²⁴² A related EPA effort is its Policy on Flexible State Enforcement for Small Community Violations, designed to afford states greater enforcement flexibility in responding to environmental violations by small communities.²⁴³ Under the policy, the EPA agrees not to initiate its own enforcement actions against small community violators where a state waives all or partial penalties against any violators that show good faith in correcting identified violations. Good faith is measured by a community's requests for compliance assistance and other steps taken to achieve compliance promptly.

States have adopted similar measures.²⁴⁴ In California, for instance, recent legislation mandates that minor violations of state hazardous waste, air, and water pollution requirements result in "notices to comply," rather than in penalties.²⁴⁵ Notices to comply are informal agency notices that instruct the facility to correct the violations within a given time period. No sanctions attach to the discovery of violations. A 1997 California proposal would extend this principle further, providing immunity for persons who disclose minor violations that are detected as a result of *monitoring already required by existing law*. The bill does not require the entity to take

242. See Interim Policy on Compliance Incentives for Small Businesses, FRL-5512-7, 61 Fed. Reg. 27,984 (June 3, 1996). Small businesses are defined under the policy as companies employing 100 or fewer persons on a company-wide basis. The policy does not apply to criminal violations, repeat violations, violations that cause a significant health, safety, or environmental threat or harm, or violations that are not remedied within the period set forth by the agency. See *id.* at 27,985. The EPA reserves the right to recover any economic benefit associated with a violation (but to waive the gravity component of any penalty) where a business may have obtained an economic advantage over its competitors from a violation under certain conditions. See *id.*

243. See U.S. Env'tl. Protection Agency, *Policy on Flexible State Enforcement Responses to Small Community Violations* (last modified Sept. 16, 1996) <<http://es.epa.gov/oeca/ore/acd/comp/acomp/a24.html>>. Small communities are defined as communities with fewer than 2,500 residents. See *id.*

244. See GAO, EFFORTS TO FOCUS ON RESULTS, *supra* note 8, at 27-28, 68-69 (listing programs adopted by a number of states that grant amnesty from penalties to facilities under certain conditions).

245. See CAL. HEALTH & SAFETY CODE §§ 25187.8, 39152 (West Supp. 1998); CAL. WATER CODE §§ 13399-13399.2 (West 1997). A minor violation is defined by a number of criteria, including its magnitude, scope, and severity; its threat to human health and the environment; and its impact on important regulatory objectives. See, e.g., CAL. HEALTH & SAFETY CODE § 31950(d)-(f).

steps to come into compliance, nor does it require (or provide any incentives for) facilities to engage in any special monitoring activities.²⁴⁶

Likewise, under New Jersey's "grace period" law, when state or local enforcement agencies detect minor violations of environmental laws, they must provide regulated firms with a period of time (from thirty to ninety days based on the nature of the violation) in which to achieve compliance.²⁴⁷ If compliance is achieved within the specified time period, the department is precluded from imposing a penalty for the violation.²⁴⁸ The law also bars regulators from imposing penalties against persons who voluntarily disclose minor violations within thirty days of discovery, immediately remedy them, and achieve compliance.²⁴⁹

On the one hand, the notion of excusing first-time minor violations seems quite reasonable, particularly if limited in scope and tied to proactive measures by regulated facilities, such as requesting agency assistance or making good-faith efforts to comply.²⁵⁰ This allows agencies to devote their resources to serious cases and minimizes resentment by businesses when they are penalized for insignificant violations.

On the other hand, it is poor policy either to *mandate* that all minor violations be forgiven, or that they be forgiven simply because they are

246. See S.B. 647, 1997-1998 Reg. Sess. (Cal. 1997) available in LEXIS, Legis Library, Sttext File.

247. Minor violations are those that are not purposeful, pose minimal risk to the public health and safety, do not substantially undermine the goals of the regulatory program, have existed for less than 12 months prior to discovery, and do not involve repeat offenders (meaning no prior violations by the same person within the previous 12 months). See N.J. STAT. ANN. § 13:1D-129 (West 1995).

248. See *id.* § 13:1D-127.

249. See *id.* § 13:1D-130. Washington also enacted a general regulatory reform statute in 1995 that restricts the ability of the Department of Ecology to issue civil penalties for certain first-time violations, including those that result in only minor environmental harm or are likely to result in property damage of less than \$1,000. See WASH. REV. CODE ANN. § 43.05.070 (West 1997). In late 1997, the department indicated that it would not implement this statutory provision, citing threats from the EPA to withhold approvals of federal hazardous waste and air quality program delegations to the state. At the same time, the agency indicated it would continue to follow its (very similar) administrative enforcement policy of not imposing civil penalties for minor, first-time violations that do not result in environmental harm. See *Washington, Facing USEPA Pressure, Abandons Amnesty Law*, 3 STATE ENVTL. MONITOR 11 (Feb. 2, 1998). Other proposals in this vein would go considerably further than the New Jersey or Washington laws, and would bar penalties except for serious violations. During the 104th Congress, for instance, proposed legislation addressing OSHA enforcement provided that certain violations, including requirements for reporting and notification, would not result in a citation unless a "pattern or practice" was shown and the violator intended to deceive. See H.R. 1834, 104th Cong. (1995). The proposed legislation also provided that penalties could be imposed only when an employer failed to correct a violation previously noted or when there was a death or serious injury. See *id.*

250. But see MINTZ, *supra* note 23, at 104 (noting that there are many practical difficulties in trying to discern the motives of those who violate the law).

corrected. Such a policy is unnecessary since repeated empirical studies show that environmental requirements are enforced in a pragmatic way, with little likelihood of penalties being imposed rigidly or arbitrarily.²⁵¹ More importantly, this approach removes *any* incentive for entities to comply before they are found in violation, since being caught has essentially no consequence other than perhaps a warning. Professor Hodas notes that this approach "often signals to the regulated community that it need not comply until enforcement begins."²⁵² An OSHA administrator in the Reagan Administration, analyzing similar proposals in the occupational safety and health area, noted:

One of the basic premises underlying the present OSHA law is the concept that employers are expected to be in compliance prior to an OSHA inspection. OSHA will never have the resources to inspect every workplace under its jurisdiction. [Congress] did not want to allow employers to wait until after an inspection before taking steps to come into compliance. That essentially is how every law works. You don't get to drive drunk or hold up a store one time for free; a penalty is provided the first time such a "violation" occurs.²⁵³

A better way to deal with relatively minor violations is to expand agency authority to enable regulators to rapidly issue informal administrative orders, such as field citations, or "fix-it" tickets. Field citations are similar to traffic tickets: The citations, issued in the field, address a clear-cut violation, require the violator to correct the violation, carry a small penalty, and provide for some type of appeal.²⁵⁴ Congress expanded the EPA's authority to utilize these tools in the 1990 Clean Air Act Amendments, authorizing a field citation program assessing civil penalties of up to \$5,000 for minor air quality violations.²⁵⁵ Field citations have been used effectively in a range of contexts, both domestically and internationally.²⁵⁶ In New Mexico, for example, when the state relied on traditional methods to enforce its underground storage tank requirements, only fourteen percent of the owners/operators who were found in violation

251. See *supra* notes 25-29 and accompanying text.

252. Hodas, *supra* note 111, at 1616-17. Hodas also argues that as the regulated community perceives that government agencies are unlikely to initiate formal enforcement actions, they are less willing to settle on terms favorable to the government. See *id.*

253. Patrick R. Tyson, *Is This Really OSHA Reform?*, SAFETY + HEALTH, July 1995, at 33, 35-36.

254. See Shelda A. Sutton-Mendoza, *Field Citations: A Tool for Enforcing UST Regulations in New Mexico*, in THIRD INTERNATIONAL CONFERENCE, *supra* note 116, at 409.

255. See 42 U.S.C. § 7413(d)(3) (1994).

256. See Cheryl E. Wasserman, *Building International Networks, Cooperation, and Capacity for Environmental Compliance: A Progress Report*, in FOURTH INTERNATIONAL CONFERENCE, *supra* note 137, at 97, 110-11.

complied with the agency's orders. By contrast, eighty-two percent of owners/operators cited as part of the field citation program corrected their violations and achieved compliance.²⁵⁷ In California, when the state experimented with "fix-it" tickets in its hazardous waste program, inspectors used these informal citations to resolve the great majority of violations at a fraction of the time and expense required for formal administrative orders.²⁵⁸

C. GREATER SELF-REGULATION SHOULD BE ENCOURAGED TO SUPPLEMENT, NOT REPLACE ENFORCEMENT

The environmental enforcement reforms advanced with the greatest vigor and currently attracting the most intense controversy concern internal environmental audits and environmental management systems. Businesses and other reformers aggressively have pushed to substitute these self-regulatory systems for traditional enforcement activities. Twenty-three states have adopted environmental audit privilege or immunity laws that provide qualified immunity from penalties for violations disclosed and corrected as a result of voluntary internal audits. Reformers propose to afford similar treatment to the self-policing efforts of management systems.²⁵⁹

The expansion of internal regulatory systems is a positive development that should be encouraged. In fact, audits should be made mandatory for publicly traded corporations. Non-publicly traded firms that implement audits or management systems should receive enforcement benefits such as reduced penalties and inspections. But audit privilege and immunity laws, promoted by some businesses as a strategy to curtail government enforcement, should be resisted. These laws undermine incentives for preventative compliance measures and conceal important

257. See Sutton-Mendoza, *supra* note 254, at 410-11, 417-18.

258. See Rechtschaffen, *supra* note 19, at 54-17. In 1992 and 1993, the California Department of Toxic Substances relied on expedited administrative orders, known as "toxic tickets" and "desk orders," to resolve 85% of all enforcement actions for violations of hazardous waste requirements. See *id.*

259. See, e.g., Ira Feldman, *Escape from Command and Control?*, ENVTL. F., Nov.-Dec. 1995, at 39, 39-40 (quoting Pennsylvania Environmental Secretary Jim Seif stating that "the day may soon come when a company certified to ISO 14001 would never again need to see an inspector from his agency," and arguing that "[t]he time has arrived to begin the shift away from prescriptive regulation to a greater reliance on an environmental management systems approach to environmental policy"). Accord Ed Shoener, *No Substitute for Legal Standards*, ENVTL. F., Nov.-Dec. 1997, at 27, 27 (noting that some government officials have asserted "that if [the ISO 14001 management standard] is used by a company . . . there will be no need for the government to inspect its manufacturing facilities").

environmental information. More generally, self-policing systems should supplement, but not replace, traditional enforcement activities.²⁶⁰

1. *Mandatory, Publicly Disclosed Environmental Audits of Publicly Traded Companies*

a. *Existing policies for disclosure of violations detected by environmental audits:* As the term is generally used and defined by the EPA, an environmental audit is a "systematic, documented, periodic and objective review by regulated entities of facility operations and practices related to meeting environmental requirements."²⁶¹ Companies began conducting audits with some frequency in the mid-1980s due to increasingly aggressive activity by government and private citizens, including stepped-up criminal enforcement, as well as the recognition that audits could result in significant economic savings.²⁶²

The EPA, reasoning that auditing would lead to higher levels of compliance, issued a policy statement in 1986 designed to encourage auditing.²⁶³ The EPA indicated it would not *routinely* request environmental audit reports from regulated entities.²⁶⁴ It also stated that facility

260. Professor Douglas Michael has advocated a modified form of self-regulation, which he describes as "cooperative implementation" of regulations. Under this approach, regulatory standards are written to provide entities with considerable discretion in determining how to achieve compliance. Agencies rely to a greater extent than usual on the internal regulatory efforts of firms and conduct fewer routine inspections. In exchange, firms are required to self-monitor and report their own compliance to agencies, which retain traditional enforcement authority. Professor Michael maintains that regulated entities will be attracted to this approach because it will give them greater flexibility in interpreting regulatory standards, and he proposes other incentives for participating firms. See Michael, *supra* note 40, at 543-53. He also argues that this self-regulatory approach will better enable agencies to evaluate the compliance efforts of regulated firms. He notes that, under the current system, inspections provide only a "snapshot" of what is occurring at a facility. Under the cooperative implementation approach by contrast, firms will keep ongoing compliance records that will allow investigators to see how a facility operates over time, to determine whether problems have occurred and how they were addressed, to spot trends that could lead to problems, and to help prevent problems from recurring. See *id.* at 570. He also argues that cooperative implementation will place a greater emphasis on prevention rather than detection and correction of violations. See *id.* at 571.

261. Environmental Auditing Policy Statement, OPPE-FRL-3046-6, 51 Fed. Reg. 25,004, at 25,006 (July 9, 1986) [hereinafter Environmental Auditing Policy Statement]. Beyond verifying compliance, environmental audits can also evaluate the effectiveness of environmental management systems or assess risks from facility activities. A compliance audit is a snapshot of a firm's current compliance with environmental requirements. A comprehensive management audit assesses a firm's adherence to a broader set of firm environmental policies and practices. See *id.* See also Harris, *supra* note 35, at 671-72.

262. See *supra* note 65 and accompanying text, and *infra* note 305.

263. See Environmental Auditing Policy Statement, *supra* note 261.

264. It reserved the right to do so in limited instances, such as where the reports were integral to "accomplish a statutory mission" or material to a criminal investigation. It listed as examples instances where audits are conducted under a settlement agreement, a firm places its management prac-

audits would be taken into consideration in determining inspection priorities and fashioning enforcement responses.²⁶⁵ Subsequent governmental policies created additional incentives to conduct audits. In 1991, the Department of Justice issued guidance indicating that self-auditing would be a mitigating factor in its decisions whether to criminally prosecute environmental violations.²⁶⁶ Likewise, sentencing guidelines proposed by the Federal Sentencing Commission for environmental crimes provided that voluntary compliance programs, including auditing, would be important in evaluating both aggravating and mitigating factors in sentencing.²⁶⁷

Since 1993, the states have moved rapidly to encourage auditing practices. By the end of 1997, twenty-three states had adopted audit privilege or immunity laws,²⁶⁸ and similar bills have been introduced in

tices at issue by raising them as a defense, or a defendant's state of mind is at issue. In these instances, the EPA explained that it would likely limit its request to particular information rather than the entire report, and make the request only where the pertinent information could not be obtained through other sources. *See id.*

265. The agency refused, however, to flatly forego inspections or waive penalties in exchange for implementing audits. *See id.* at 25,007.

266. *See* DEPARTMENT OF JUSTICE, FACTORS IN DECISIONS ON CRIMINAL PROSECUTIONS FOR ENVIRONMENTAL VIOLATIONS IN THE CONTEXT OF SIGNIFICANT VOLUNTARY COMPLIANCE OR DISCLOSURE EFFORTS BY THE VIOLATOR (July 1, 1991). The policy provides that "self-auditing, self-policing, and voluntary disclosure of environmental violations" are mitigating factors in the Department's exercise of its criminal enforcement discretion. *See id.* at 1.

267. *See* Memorandum from Phyllis J. Newton, Staff Director, U.S. Sentencing Commission, on the Report from Advisory Group on Environmental Sanctions (Dec. 6, 1993). The Commission decided in 1994 not to submit its proposal to Congress for consideration, but the guidelines likely will play a significant role in shaping future proposals. *See* Silecchia, *supra* note 65, at 607 n.70. Both the Department of Justice policy on criminal enforcement and the Sentencing Guidelines encourage compliance management systems that are more comprehensive than environmental auditing. *See id.* at 604-12. Other policies that seek to encourage auditing through similar approaches are the EPA's policy on the exercise of its criminal investigative discretion and its policy on debarment from government contracts. *See* Office of Enforcement and Compliance Monitoring, U.S. Env'tl. Protection Agency, *The Exercise of Investigative Discretion* (last modified Apr. 17, 1997) <<http://es.epa.gov/oeca/ore/aed/comp/acomp/a11.html>>; EPA Policies Regarding the Role of Corporate Attitude, Policies, Practices, and Procedures in Determining Whether to Remove a Facility from the EPA List of Violating Facilities Following a Criminal Conviction, FRL-4039-4, 56 Fed. Reg. 64,785 (Dec. 12, 1991). Congress also sought in a limited way to encourage auditing by stating in the Conference Report accompanying the 1990 Clean Air Amendments that available criminal penalties "should not be applied in a situation where a person acting in good faith, promptly reports the results of an audit and promptly acts to correct any deviation." H.R. REP. NO. 101-952 (1990).

268. *See* ALASKA STAT. §§ 09.25.450-09.25.490 (Michie 1997); ARK. CODE ANN. §§ 8-1-301 to 8-1-312 (Michie 1995); COLO. REV. STAT. §§ 13-25-126.5, 25-1-114.5 (1995); IDAHO CODE §§ 9-801 to 9-811 (1997); 415 ILL. COMP. STAT. 5/52.2 (West 1997); IND. CODE ANN. §§ 13-28-4-1 to 13-28-4-10 (Michie 1997); KAN. STAT. ANN. §§ 60-3332 to 60-3339 (1996); KY. REV. STAT. ANN. § 224.01-040 (Banks-Baldwin 1997); MICH. COMP. LAWS ANN. §§ 324.14801-324.14810 (West 1997); MINN. STAT. ANN. §§ 114C.20-114C.31 (West 1997); MISS. CODE ANN. § 49-2-71 (1996); MONT. CODE ANN. § 75-1-1201 to -1206 (1997); NEV. REV. STAT. § 445c.010-.120 (1997); N.H. REV. STAT. ANN. § 147-E:1 to -E:9 (1996); OHIO REV. CODE ANN. §§ 3745.70-3745.73 (Banks-Baldwin 1997); OR.

almost all of the remaining states.²⁶⁹ The measures fall into two general categories, granting either an evidentiary and discovery privilege for the contents of reports based on environmental audits or immunity for violations uncovered by an environmental audit.²⁷⁰ Although the specifics of the state measures vary, they generally require that entities voluntarily report any self-discovered violations within a certain time to regulatory agencies and timely correct the violations to qualify for immunity.²⁷¹

In 1995, the EPA issued its policy on voluntary disclosure of violations in an attempt to forge a middle ground in the audit debate.²⁷² The policy does not accord any privileges or immunities, but rather seeks to promote auditing and other internal review processes by granting a variety of benefits to firms that voluntarily disclose and correct violations they discover in their self-conducted audits.²⁷³ Several states have taken simi-

REV. STAT. § 468.963 (1996); R.I. GEN. LAWS, § 42-17.8-1 to -8 (1997); S.C. CODE ANN. §§ 48-57-10 to 48-57-110 (Law Co-op. 1996); S.D. CODIFIED LAWS §§ 1-40-33 to 1-40-37 (Michie 1996); TEX. NAT. RES. CODE ANN. Art. 4447cc (West 1995); UTAH CODE ANN. §§ 19-7-101 to 19-7-109 (1996); VA. CODE ANN. §§ 10.1-1198 to 10.1-1199 (Michie 1997); WYO. STAT. ANN. §§ 35-11-1105 to 35-11-1106 (Michie 1995).

269. See Lynn Holdsworth, Comment, *Florida's Environmental Self-Audit Legislation: An Incentive for the Environmentally-Conscientious Business or an Opportunity for the Corporate Polluter to Suppress the Truth?*, 27 STETSON L. REV. 211, 217 nn.26, 27 (1997). Federal legislation providing privileges to environmental audits has also been introduced. See S.866, 105th Cong. (1997); S.582, 104th Cong. (1995); H.R. 1047, 104th Cong. (1995).

270. The majority of states have adopted laws that contain both privilege and immunity provisions.

271. The scope of the privilege varies by state. Generally, the privilege does not apply to information required by law to be collected and disclosed to government agencies, where the audit is conducted in bad faith or for fraudulent purposes, where the audit shows evidence of noncompliance and no attempt to correct the noncompliance, or where information in the audit report is necessary to protect the public health or safety and cannot be obtained by other means. A few states extend the privilege to the underlying facts of an audit or require the auditing entity to report the audit to assert the privilege; the majority of states do not. The immunity laws also vary, but they typically do not grant immunity where there are repeated violations, willful violations, knowing criminal violations, serious harm from violations, or where disclosure to the agency occurs after the violations have been discovered or enforcement action commenced by government agencies. Almost all state immunity laws provide immunity in civil court proceedings, but only about one-third also grant immunity in criminal proceedings.

272. See Incentives for Self-Policing, *supra* note 194. For a detailed discussion of the policy, see James T. Banks, *EPA's New Enforcement Policy: At Last, a Reliable Road Map to Civil Penalty Mitigation for Self-Disclosed Violations*, 26 *Env'tl. L. Rep.* (Env'tl. L. Inst.) 10,227 (1996).

273. For an economic analysis of why mitigating penalties are necessary to encourage auditing and other self-monitoring by corporations, see Jennifer Arlen, *The Potentially Perverse Effects of Corporate Criminal Liability*, 23 *J. OF LEGAL STUD.* 833 (1994). Professor Arlen argues that vicarious corporate liability for violations committed by employees will not necessarily lead to greater corporate self-enforcement efforts. This is because increased internal enforcement by firms will not only reduce the number of violations that occur, but also increase the probability that the government will detect these violations—thus enhancing the firm's expected liability. (The analysis assumes that corporations will voluntarily disclose violations uncovered through self-enforcement efforts.) This is true

lar positions.²⁷⁴ Under EPA policy, the strongest incentives are for firms that conduct an environmental audit or that have a systematic compliance management program which “reflects the regulated entity’s due diligence in preventing, detecting, and correcting violations.”²⁷⁵ For these entities, the EPA does not seek gravity-based penalties for violations that are promptly disclosed and corrected. Gravity-based penalties are penalties that seek to punish violators after the economic benefit of noncompliance has been recovered. The agency, however, may seek to recover any economic gain firms have realized from noncompliance. It also does not recommend criminal prosecution against these firms, with some limited exceptions. For other entities, the EPA reduces gravity-based penalties by seventy-five percent for violations promptly disclosed and corrected even if not the result of a formal audit or systematic compliance program. To come within the policy, the violation must have been identified voluntarily and not as a result of legally required monitoring or auditing.²⁷⁶ The policy does not apply to repeat violations or violations which resulted in ac-

regardless of the size of the penalty; in fact, imposing greater sanctions may result in even greater incentive to reduce internal corporate enforcement expenditures. Professor Arlen recommends, among other solutions, that penalties should vary based on the level of corporate self-enforcement expenditures.

274. In California, Pennsylvania, and Florida, state environmental agencies have adopted policies that largely parallel the EPA’s guidance. See Memorandum from Gerald G. Johnston, Assistant Secretary for Law Enforcement and Counsel, California Environmental Protection Agency, to Directors, Executive Officers, Chief Counsel, and Enforcement Chiefs, California Environmental Protection Agency (July 8, 1996) <<http://www.calepa.cahwnet.gov/epadocs/polincni.txt>> (describing the state agency’s policy on incentives for self-evaluation); OFFICE OF POLICY AND COMMUNICATIONS, PENNSYLVANIA DEP’T OF ENVTL. PROTECTION, DOC. NO. 012-0840-001, POLICY TO ENCOURAGE VOLUNTARY COMPLIANCE BY MEANS OF ENVIRONMENTAL COMPLIANCE AUDITS AND IMPLEMENTATION OF COMPLIANCE MANAGEMENT SYSTEMS (last modified on Feb. 5, 1997) <http://www.dep.state.pa.us/dep/subject/final_policies/audit_policy.htm>; OFFICE OF THE GENERAL COUNSEL, FLORIDA DEP’T OF ENVTL. PROTECTION, DEP 922, INCENTIVES FOR SELF-EVALUATION BY THE REGULATED COMMUNITY (1996), reprinted in DEP ENFORCEMENT MANUAL app. MISCELLANEOUS DIRECTIVES (1998) <<http://www.dep.state.fl.us/ogc/documents/enfmanual/appendix/dep922.pdf>>. A number of other states have also enacted self-disclosure policies that do not include audit privilege or immunity provisions. See *The Review of Activities by the Federal Government Concerning Individuals or Organizations Voluntarily Submitting to Environmental Audits: Hearings Before the Senate Comm. on Env’t and Pub. Works*, 105th Cong., 1st Sess. 51 (1997) (prepared statement of Steven A. Hernian, Assistant Administrator, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency) [hereinafter *Hearings on Environmental Audit Privileges*] (listing 11 states with their own self-disclosure policies that do not limit enforcement authority).

275. Incentives for Self-Policing, *supra* note 194, at 66,708.

276. So long as the violations are voluntarily discovered, however, the policy applies even if the violations must otherwise be reported. The violations must be disclosed promptly and prior to the initiation of an enforcement action, investigation or citizen notice, and they must be corrected expeditiously. The regulated entity must also cooperate with enforcement agencies in determining the facts of the violation, and take steps to prevent a recurrence of the violation.

tual harm or presented a substantial threat to public health or the environment. It is also not applicable to criminal violations involving conscious avoidance of, or willful blindness to, the law, or management practices to conceal or condone noncompliance.²⁷⁷

b. *The benefits of mandatory, publicly disclosed audits of publicly traded corporations:* The current debate about auditing focuses on the wisdom of privilege and immunity provisions—in particular, whether they are necessary to promote corporate auditing practices, and whether they undermine enforcement and the public's right to know. This emphasis is too narrow; the discussion instead should be about making audits mandatory for as many regulated entities as possible.

Although not without limitations, environmental auditing is a very effective means for businesses to monitor their compliance with environmental requirements, which is precisely why many responsible corporations voluntarily conduct them. As discussed above, audits may be more extensive than agency inspections or carried out more frequently.²⁷⁸ Such self-policing efforts, especially where results must be reported to governmental agencies, can be a highly effective tool for promoting compliance.²⁷⁹ Ideally, all regulated firms should conduct audits. As a first step in this direction, audits should be required for all publicly traded corporations. Publicly traded corporations can best afford environmental audits, and many already conduct them.²⁸⁰

Environmental audits also should be disclosed to the public. There are strong utilitarian and entitlement rationales justifying public disclosure.²⁸¹ For example, disclosure of environmental audits, like disclosure

277. The EPA also reiterated its preexisting policy not to routinely request audit reports, but reserving its option to seek the reports in limited circumstances.

278. See *supra* Part III.A.3.

279. See Eric Bregman & Arthur Jacobson, *Environmental Performance Review: Self-Regulation in Environmental Law*, 16 CARDOZO L. REV. 465, 484 (1994) (arguing that there is no doubt that routine audits linked to effective internal control systems enhance the effect of regulation); Michael, *supra* note 40, at 575 (suggesting that self-reporting requirements of the Clean Water Act create an incentive for sources to comply rather than to confess noncompliance).

280. Moreover, publicly traded corporations are likely to be most sensitive to market pressure triggered by public disclosure of environmental audits since the audience of parties interested in the audits includes investors, consumers, and employees. Limiting an audit requirement to publicly traded corporations is admittedly an imperfect solution. Smaller, closely held companies clearly commit a substantial number of environmental violations. Moreover, some small public companies may not be in a better position to bear the costs of audits than private companies. Nonetheless, this incremental step is probably all that is politically feasible at this time.

281. Requiring public disclosure is consistent with the broad trend in environmental law toward greater reliance on information disclosure and market-based incentives, and away from direct regulation. This development has been embraced by those on all sides of the political spectrum; conserva-

of financial audits, helps promote the efficient functioning of securities markets. Securities law requires publicly held corporations to disclose independently audited financial statements to the public and potential investors on the theory that disclosure provides investors with the information they need to make intelligent decisions. Information in an environmental audit—which is essentially a snapshot of a firm's environmental health—is at least as relevant to some investors as a picture of a firm's financial well-being.²⁸² Likewise, audit disclosure can help consumers make better-informed decisions about whether to purchase a firm's products, and allows workers to negotiate for less hazardous working conditions or demand wage premiums for risky jobs.²⁸³ Beyond the marketplace, disclosure furthers citizen power and advances democratic decisionmaking. It allows local residents and members of the public to participate more effectively in permit, land use, and other local political decisions involving the company. It enhances the public's ability to bargain with private corporations and exert pressure on companies to change their environmental practices.²⁸⁴ It also enables citizens to enforce environmental laws, since "the public cannot participate in [the enforcement] process without having access to adequate information regarding a facility's compliance with environmental regulations."²⁸⁵ In essence, disclosure has an important deter-

tives favor disclosure because it relies on market forces, while consumer advocates endorse it as a right and tool that enables individuals to protect their interests. See JOHN M. MENDELOFF, *THE DILEMMA OF TOXIC SUBSTANCE REGULATION: HOW OVERREGULATION CURES UNDERREGULATION AT OSHA 209-10* (1988).

282. This is especially true as the socially responsible investment movement expands. See *supra* note 59.

283. As discussed above, however, there are important limitations on the ability of the marketplace to promote compliance with environmental laws. See *supra* notes 56-59 and accompanying text.

284. For these reasons, the EPA has embarked on a program to provide the public with better access to its integrated enforcement data system, including information about the past compliance of companies and facilities. The agency advocates the program as "providing the public with a powerful tool they can use to promote environmental accountability." Stahl, *Enforcement in Transition*, *supra* note 3, at 22.

285. Steven A. Herman, *It Takes a Partnership*, 14 ENVTL. F., May-June 1997, at 26, 30. As a noteworthy example of how audit privilege laws can frustrate citizen enforcement efforts, environmental advocates cite the experience of community groups living adjacent to a landfill owned by Waste Management, Inc. in Cincinnati, Ohio. See *Feel-Good Notions*, *supra* note 216. In 1996, based on Ohio's recently enacted audit privilege law, Waste Management sought to withhold (and actually recapture previously disclosed) audit results and other documents containing air emissions data, compliance reviews, and other information. The company was unsuccessful because the state's audit privilege law had yet to go into effect. Community advocates used the information, which showed a pattern of toxic gas emissions from the landfill and alleged violations of federal environmental laws, to persuade state regulators to issue a corrective order limiting emissions from the landfill. See *id.* Steven Herman, EPA's Assistant Administrator for Enforcement and Compliance, also recently testified before Congress that audit privilege laws jeopardize human health and the environment. See *Hearings on Environmental Audit Privilege*, *supra* note 274, at 49-55 (statement of Steven Herman).

rent function and helps promote compliance by raising the firms' costs of violating environmental requirements.²⁸⁶

In addition to these utilitarian rationales, public disclosure is justified on entitlement grounds—namely, that members of the public have a fundamental right to know what substances and risks they are exposed to by facilities in their community.²⁸⁷ Disclosure furthers individual autonomy by creating awareness of the risks involved in specific choices and allowing individuals to decide whether or not to encounter these risks.

Businesses should be generally supportive of an auditing requirement, since it is a practice that many have voluntarily embraced. Auditing, unlike substantive environmental regulation, does not intrude on management prerogatives or dictate how a firm must satisfy regulatory requirements. It is a process for identifying whether a firm is meeting environmental requirements and can help a company avoid far more intrusive enforcement actions. Still, mandating audits, and in particular the public disclosure of audits, is certain to generate business opposition. One reason for opposition is the costs of audits.²⁸⁸ Publicly traded corporations, however, should be able to absorb this expense without great hardship. Moreover, audits usually save firms money by identifying more efficient production processes and ways to reduce waste generation, as well

Herman referred to two specific instances. In Arkansas, the El Dorado Chemical Company attempted to use the state's audit privilege law to shield environmental impacts information from local citizens who sued the company alleging that they suffered respiratory ailments due to the company's air emissions. *See id.* at 55. In Texas, Browning-Ferris, Inc. successfully used a privilege law to preclude disclosure of two environmental audits that local residents sought to document groundwater contamination from the company's landfill. *See id.*

286. As Malcolm Sparrow argues, the success of the Emergency Planning and Community Right to Know's (EPCRA) disclosure requirements, which mandate industrial facilities to report annually their routine releases of certain toxic chemicals, demonstrates how an informed public can be an ally to the government in achieving compliance. *See SPARROW, supra* note 3, at 96. As a result of EPCRA's requirements, from 1987 to 1993, facilities reported a national drop in toxic releases of 43% from an initial figure of 7 billion pounds. *See John H. Cushman, Jr., Efficient Pollution Rule Under Attack*, N.Y. TIMES, June 28, 1995, at A16. Senator Frank Lautenberg has argued that "the right-to-know [EPCRA] has probably led to more voluntary pollution prevention efforts and more environmental cleanup than any other environmental law." 141 CONG. REC. S9886 (daily ed. July, 13, 1995) (statement of Sen. Lautenberg).

287. Not all environmental audits will necessarily reveal this information, but many likely will.

288. The costs of auditing a facility vary considerably, depending on its size, number of emission points and other factors. The 1995 Price Waterhouse survey of U.S. companies found that the direct cost to audit a single facility ranged from \$200 to \$150,000, with a median cost of \$10,000. *See Voluntary Environmental Audit, supra* note 66, at 6. The median annual cost of an auditing program for companies—many of which audit multiple facilities each year—was \$120,000. *See id.* *See also* DON SAYRE, INSIDE ISO 14001—THE COMPETITIVE ADVANTAGE OF ENVIRONMENTAL MANAGEMENT 140 (1996) (noting that ISO 14000 environmental audits may cost around \$10,000 to \$100,000).

as by reducing their exposure to enforcement actions and liability suits.²⁸⁹ For smaller businesses that cannot afford auditing programs, however, the EPA and states should provide financial assistance for third-party auditors or offer auditing services for free, perhaps creating a cadre of trained governmental auditors. A good model is suggested by EPA's Region I, which recently began providing free compliance and pollution prevention audits to small and medium-sized companies.²⁹⁰

Firms will object strongly to forced public disclosure of audit results, and in particular to the unfairness of the use of audit information as the basis for government enforcement actions or third-party liability suits. However, regulated entities already are required to monitor, record, and in many cases, report extensive aspects of their compliance with environmental laws to government agencies.²⁹¹ Under the Clean Water Act, for example, dischargers must regularly monitor and report their compliance with permit limitations; the reports filed can be the basis of government or citizen enforcement actions.²⁹² Likewise, all sources required to have a permit under the Clean Air Act must submit an annual compliance certification report documenting facility compliance with their permits.²⁹³ Permitted hazardous waste facilities also have extensive monitoring and reporting obligations.²⁹⁴ Thus, a requirement that audit reports be dis-

289. See *supra* note 64, and *infra* notes 301-05 and accompanying text.

290. In exchange, participating companies must achieve compliance and implement at least one pollution prevention project. See Hawkins, *supra* note 5, at 45.

291. See Silecchia, *supra* note 65, at 625-26 & n.134. A variety of nonenvironmental regulatory schemes likewise require firms to self-monitor and report violations, thus making available information that can be used by agencies in enforcement actions. See Michael, *supra* note 40, at 589.

292. See Protection of Environment, 40 C.F.R. § 122.41 (j)(1) (1997).

293. See 42 U.S.C. § 7661c(c) (1994). See also 42 U.S.C. § 7414(a)(3) (requiring enhanced monitoring and submission of compliance certificates by all major stationary sources); 40 C.F.R. § 70.6(a)(3)(iii)(A) (providing that certified reports of required monitoring related to permits must be submitted at least every six months and include "[a]ll instances of deviations from permit requirements"). The Clean Air Act also requires reporting emissions in excess of applicable standards from sources that are subject to new source performance standards. See 40 C.F.R. § 60.7(c), (d). Furthermore, it requires reporting of excess emissions and monitoring results from sources subject to national emission standards for hazardous air pollutants. See *id.* Likewise, utilities subject to the Clean Air Act's acid rain trading provisions are required to install continuous emissions monitoring systems or their equivalent. See 42 U.S.C. § 7651k(a). One commentator notes that "[s]elf-reporting and self-monitoring are 'cornerstones' of the enforcement system" for the Clean Air Act's requirements. ARNOLD REITZE, AIR POLLUTION LAW § 18-1 (1995).

294. For example, they must keep records of their training of personnel, internal facility inspections and repairs of facility equipment, waste analyses, operating logs, and other matters, all of which are available for review by agencies during facility inspections. These entities must also submit to regulators reports regarding releases, fires, and explosions at their facilities, and reports about facility compliance with schedules set forth in the permit; they must conduct extensive on-site environmental monitoring and report the results to regulators. See Rechtschaffen, *supra* note 19, at 54-26 to -27.

closed is in many ways a logical extension of existing law.²⁹⁵ The fear of third-party toxic tort lawsuits is more imagined than real because these cases are enormously difficult to prosecute and win.²⁹⁶ But the more fundamental rejoinder to these arguments is that the information in audits is largely of a public character, reflecting whether a firm is in compliance with publicly enacted requirements designed to protect the public.²⁹⁷ As previously explained, depriving the public of access to this material denies them knowledge fundamental to their ability to make fully-informed and well-considered political and economic decisions—a cost too high to protect firms from the possibility of lawsuits.

c. *The disadvantages of audit privilege and immunity laws to enforcement:* A mandatory audit requirement just for publicly traded companies, notwithstanding its many benefits, is unlikely to be adopted any time soon. In the meantime, a key policy question is the appropriateness of an evidentiary privilege for audits or immunity from prosecution for violations. This issue has sparked an intense debate among the EPA, states, regulated entities, and the environmental community, with one state official accusing the EPA of launching a “holy war” against states with privilege and immunity statutes.²⁹⁸ The Clinton Administration opposed many of the far-reaching state proposals, and warned a number of states that such audit measures may result in the agency withholding or revoking delegation of authority to administer federal environmental programs.²⁹⁹ Citizen groups in five states have requested that the EPA

295. Moreover, government agencies report that they have rarely, if ever, used audit data as the basis for enforcement actions. *See infra* note 304.

296. *See supra* notes 60-62 and accompanying text.

297. To the extent that audits discuss trade secrets or confidential business information, this information should be withheld.

298. *See Hearings on the Relationship Between Federal and State Governments, supra* note 2, at 199 (prepared statement of Patricia S. Bangert).

299. The EPA has articulated the types of enforcement authority states with privilege and immunity laws must retain to receive approval to enforce federally-delegated programs. States must have the authority to (1) obtain immediate and complete injunctive relief for any violation of program requirements; (2) recover civil penalties for significant economic benefit, repeat violations and violations of judicial or administrative orders, serious harm, and activities that may present an imminent and substantial danger; and (3) obtain criminal penalties for willful and knowing violations. The state laws must also not interfere with the public's right to obtain information about a facility's compliance with environmental requirements, and not restrict the state's ability to obtain information needed to identify noncompliance or criminal conduct. *See Memorandum from Steven A. Herman, Robert Perciasepe, Mary Nichols and Timothy Fields to U.S. Environmental Protection Agency Regional Administrators* (Feb. 14, 1997), *reprinted in* Daily Envtl. Rep. (BNA) No. 36, at E-16 (Feb. 24, 1997).

withdraw parts of its delegated programs in their states because of the passage of audit/immunity laws.³⁰⁰

Without repeating the issues explored at length elsewhere,³⁰¹ the arguments below form the basic contours of this debate. Advocates of privilege and immunity provisions argue that these laws create a critically important incentive for firms to conduct audits. Without these legal protections, many firms would forego audits because of fear that the information discovered will be used against them in enforcement actions or third-party lawsuits. In fact, the audit reports would provide a road map of violations for enforcement agencies. Moreover, the argument goes, self-audits uncover and correct many violations that the government would never discover on its own.³⁰² Thus, absent protection from future enforcement, firms would expose themselves to greater risk by conducting audits.³⁰³ A 1995 Price Waterhouse survey found that two-thirds of the firms with auditing programs in place would conduct more audits if penalties were waived for violations voluntarily discovered and disclosed.³⁰⁴

300. Petitions have been filed in Colorado, Idaho, Michigan, Ohio, and Texas. *See id.* Some have taken the position that the push for audit/immunity laws has been driven by corporations with poor environmental records. *See Engel, supra* note 135, at 349 & n.228 (quoting BEDFORD, *supra* note 72).

301. The literature discussing the debate over audit immunity and privilege provisions is extensive. For some recent examples, see Heather L. Cook & Robert R. Hearn, *Putting Together the Pieces: A Comprehensive Examination of the Legal and Policy Issues of Environmental Auditing*, 7 TUL. ENVTL. L.J. 545 (1994); Peter A. Gish, *The Self-Critical Analysis Privilege and Environmental Audit Reports*, 25 ENVTL. L. 73 (1995); Michael Goldsmith & Chad W. King, *Policing Corporate Crime: The Dilemma of Internal Compliance Programs*, 50 VAND. L. REV. 1 (1997); E. Lynn Grayson & Christina Riewer, *EPA's Audit Policy and State Audit-Privilege Laws: Moving Beyond Command and Control?*, 27 *Envtl. Law Rep. (Envtl. L. Inst.)* 10,243 (1997); Harris, *supra* note 35; Holdsworth, *supra* note 269; Terrel E. Hunt & Timothy A. Wilkins, *Environmental Audits and Enforcement Policy*, 16 HARV. ENVTL. L. REV. 365 (1992); Johnston, *supra* note 66; Edwin F. Lowry, *Environmental Audit Privilege Legislation: Necessary for Business or a Nightmare for Prosecutors?*, 17 PROSECUTOR'S BRIEF 5 (1995); Van Cleve & Holman, *supra* note 13; Weaver et al., *supra* note 63; Marty, *supra* note 14. *See also* Silecchia, *supra* note 65, at 603 n.58 (citing articles); Carr & Thomas, *supra* note 71, at 115 & n.79, 117 & n.81 (citing articles).

302. *See, e.g.,* Weaver et al., *supra* note 64, at 7 ("[B]ecause the resources of EPA and most state regulatory agencies are spread so thin, most violations discovered and reported by businesses as a result of voluntary environmental audits probably would not otherwise have been found, much less reported and corrected.").

303. *See* Marty, *supra* note 14, at 544-45 (arguing that audit privilege laws will reduce costs of audits since attorneys will no longer be strategically employed to bring audits within attorney-client or work-product privileges, and will lead to more effective auditing practices since the lack of privilege protections encourages the production of vaguely worded and difficult-to-implement audit reports).

304. *See Voluntary Environmental Audit, supra* note 66, at 6. On the other hand, the survey found that 75% of responding firms were already conducting audits, and that among companies that did not audit, the primary reason most often cited was not fear of disclosure but a perception that the firm's processes and products had an insignificant environmental impact. *See id.* at 5-6. Enforcement agencies contend that privilege/immunity legislation is unnecessary because information in an envi-

The opposing camp contends that audit privileges or immunities are not necessary to stimulate auditing for a number of reasons. First, many businesses will voluntarily conduct audits to reduce their liability and for other sound business reasons.³⁰⁵ Many will audit to comply with voluntary environmental management codes.³⁰⁶ Additionally, firms already realize important enforcement benefits from conducting audits, under the EPA's voluntary disclosure policy, the Department of Justice's guidelines for criminal prosecution of environmental violations, and the EPA's policy on criminal environmental investigations.³⁰⁷ Even in the absence of such formal policies, state and local agencies inevitably consider a firm's auditing practices when calculating penalties or making other enforcement decisions.³⁰⁸

The EPA contends its policy is effective by pointing to the more than 225 companies that had disclosed and corrected violations at more than 700 facilities as of October 1997.³⁰⁹ Privilege proponents reply that privilege laws have resulted in a greater number of regulated entities reporting and correcting violations than under the EPA's policy.³¹⁰ In fact, the ini-

ronmental audit is virtually never used to prosecute a company; the most frequently cited statistic is that it has been used in three cases. See Lowry, *supra* note 301, at 6. But as supporters of privilege legislation note, the prospect that the information might be used still influences corporate willingness to conduct audits. They also rejoin that if the information is used so rarely, enforcers should not object to cloaking it with a privilege.

305. See Harris, *supra* note 35, at 679-83 (arguing that the benefits to auditing include: avoiding and reducing liability, reducing costs and increasing profits by gathering information about a company's expenditures for production and pollution prevention, attracting and maintaining corporate investors, and generating favorable publicity).

306. See *supra* note 68 and accompanying text.

307. See *supra* Part V.C.1.a. Businesses counter that penalty mitigation is not easy to obtain under the EPA's policy; the policy itself is vague in certain key areas; and the policy excludes serious violations. See Weaver et al., *supra* note 64, at 7. See also Jim Moore & Nancy Newkirk, *Not Quite a Giant Step*, ENVTL. F., May-June 1995, at 16, 19.

308. See, e.g., Krista McIntyre, *Voluntary Disclosure—Gotcha!*, NAT. RESOURCES & ENV'T 52, 53 (Spring 1997) ("No member of the regulated community can dispute that in any environmental enforcement action (state or federal agency initiated) it is easier to negotiate resolution of violations that are voluntarily disclosed and corrected, than to negotiate resolution of violations that were discovered independently by the government and are ongoing.").

309. See *Environmental Audit Privileges*, *supra* note 274, at 51 (statement of Steven Herman).

310. See Weaver et al., *supra* note 64, at 12-13 (citing a 1996 report from the Texas Senate Natural Resources Committee indicating that the state environmental agency received 256 notifications of intent to audit and 42 voluntary disclosures of violations from facilities during the first year the audit privilege bill was in effect, and arguing that these figures compare very favorably to the 105 disclosures the EPA received from regulated entities during 1996). See also *Environmental Audit Privileges*, *supra* note 274, at 85-86 (prepared statement of Barry McBee, Chairman, Texas Natural Resource Conservation Commission) (noting that during the first two and a half years the Texas audit privilege bill was in effect, the state environmental agency received 650 notifications of intent to audit and 100 voluntary disclosures of violations).

tial evidence does not support these latter claims; there apparently has been relatively little additional auditing and disclosure stimulated by the state statutes.³¹¹ But this lack of activity may not be determinative either, since, as audit advocates are quick to point out, companies may be chilled from taking advantage of state laws by the prospect of direct federal actions or federal overfiling against them.³¹² At the very least, while the evidence is not conclusive, it suggests that most businesses (especially larger firms) will likely audit for business reasons even in the absence of privilege/immunity protections.³¹³

Opponents of audit privilege and immunity measures also contend, with considerable justification, that privilege laws would complicate and increase the costs of enforcement. These provisions would invite litigation over what material is or is not privileged, a problem compounded by the lack of clear guidelines in many state statutes over the scope of the privilege.³¹⁴

Beyond these concerns, there are two overriding flaws of privilege/immunity measures. First, they seriously undermine the incentives for facilities to take preventative steps to achieve compliance. To varying degrees, they permit firms to sit back and wait until an audit is conducted

311. See *Environmental Audits: State Immunity, Privilege Laws Examined for Conflicts Affecting Delegated Programs*, Daily Env't Rep. (BNA) No. 181, at AA-1, 1 (Sept. 18, 1996) (observing that some states report no instances of regulated entities seeking the protection of audit laws); Arrandale, *supra* note 71, at 36 (noting that Colorado's audit/privilege statute has resulted in just 23 violation disclosures in three years).

312. The Colorado Attorney General Office has complained that "it is impossible to measure the success of audit programs if companies are discouraged from participating in them by EPA's threats of overfiling. EPA's response [to State privilege and immunity laws], in practice, nullifies State laws." *Hearings on the Relationship Between Federal and State Governments*, *supra* note 2, at 200 (prepared statement of Patricia S. Bangert). On the other hand, federal overfiling—the initiation of a federal enforcement action following a state action for the same violation against the same facility—occurs very rarely, and because of the politically sensitive nature of such actions, is unlikely to increase in the future. See *id.* at 161-62 (statement of Steven A. Herman). During fiscal years 1994 and 1995, the EPA overfiled on 18 cases or about 0.1% of state enforcement actions; during the next fiscal year, the EPA overfiled in four cases. Moreover, the EPA has disclaimed any intention to target companies in states with audit privilege and immunity laws. See *id.* at 162.

313. See Silecchia, *supra* note 65, at 628 (arguing that firms will continue to create environmental compliance plans because of substantial legal benefits for doing so). See also Breger, *supra* note 3, at 327 (noting that the argument that companies will cut back their voluntary self-policing efforts in the absence of privilege laws, "[f]or large corporations, at least, is little more than an advocate's assertion and should be taken as such").

314. See Incentives for Self-Policing, *supra* note 194, at 66,710; Lowry, *supra* note 301, at 19 ("[Prosecutors] fear that in virtually every case where a company document is involved, the defense will request a hearing about its admissibility."). A number of state laws require privilege questions to be resolved by *in camera* proceedings, further adding to the expense of enforcement actions. See Incentives for Self-Policing, *supra* note 194, at 66,710.

before coming into compliance. Then, so long as a firm corrects and discloses the violations, its sanctionable behavior will be excused. Privilege laws achieve this effect *indirectly* by making it more difficult and in some cases impossible for enforcement agencies to obtain evidence about violations contained in an audit report. Immunity statutes achieve this effect *directly*. The broader versions of these latter measures immunize intentional criminal conduct and serious violations that pose significant threats to the environment. This runs counter to the assumptions of most enforcement activity; as one prosecutor succinctly puts it, “[y]ou wouldn’t expect that the act of confessing to a crime should bring with it an entitlement of immunity.”³¹⁵

Privilege/immunity laws also allow firms to retain the economic benefit they obtain from noncompliance, removing an important incentive for timely compliance. As the EPA argues in opposition to state measures that do not recoup economic benefit if violations are disclosed and corrected, “[t]axpayers expect to pay interest or a penalty fee if their tax payments are late; the same principle should apply to corporations that have delayed their investment in compliance.”³¹⁶

Second, privilege laws are highly objectionable because, as described above, they keep a category of public environmental information pertaining to the facility’s compliance with environmental requirements secret and out of the public’s reach.³¹⁷ As one commentator summarizes, these measures “[regard] third parties as almost unnecessary to administration of the regulatory system.”³¹⁸

The EPA’s voluntary disclosure policy and similar state initiatives strike a better, albeit not perfect, balance between promoting self-policing and retaining a meaningful deterrent component of enforcement. The policies provide strong encouragement to audit by waiving all gravity-based penalties and generally not recommending criminal enforcement when violations are voluntarily disclosed and corrected, but they do not

315. Lowry, *supra* note 301, at 5. Another commentator echoes these concerns: [Audit amnesty programs] emphasize, virtually to the exclusion of other considerations, the need to correct the present violation. . . . [H]ow does an audit amnesty program affirmatively discourage employees from allowing, through inattention or negligence, non-complying conditions to come into existence? If employees can be presumed to be knowledgeable both about their firm’s audit procedures and the government’s amnesty response, then it can be speculated that their vigilance may in fact be reduced.

Welks, *supra* note 9, at 16 (citations omitted).

316. Incentives for Self-Policing, *supra* note 194, at 66,707.

317. The EPA’s position is that “[i]n the final analysis, an audit privilege invites secrecy and breeds distrust.” Herman, *supra* note 285, at 30.

318. Welks, *supra* note 9, at 46.

grant any privileges to audit documents. The policies contain insufficient incentive, however, for firms to take steps to prevent violations before the audits are conducted.³¹⁹ The only sanction facing a firm that does not act proactively to achieve compliance is potential action by the EPA or states to recover the economic benefit gained from noncompliance. However, this merely puts a firm back in the position it would have been had it originally complied; it does not alter the firm's basic cost-benefit calculation as a way to deter violations in the first place. A better approach would be not to waive all penalties, but to allow enforcement agencies to consider the voluntary disclosure and correction of the violations when determining enforcement responses and the size of penalties to impose.³²⁰ Audits should also be the basis for agencies to provide firms with other enforcement and permit benefits, such as less frequent inspections or inspections reduced in scope, accelerated permit reviews, and eligibility to participate in other flexible regulatory initiatives.³²¹

2. *Environmental Management Systems*

Environmental management systems are more comprehensive than environmental audits. Audits are intended to measure, at a fixed point in time, a facility's compliance with a specific set of regulatory requirements or other criteria. Management systems, by contrast, seek to evaluate and

319. There is an important qualification to this point, however. The EPA policy also provides enforcement benefits to firms that voluntarily disclose and correct violations detected through "a documented, systematic procedure or practice which reflects the regulated entity's due diligence in preventing, detecting, and correcting violations." Incentives for Self-Policing, *supra* note 194, at 66,708. Due diligence is defined by the EPA to include efforts to *prevent*, detect, and correct violations, including mechanisms for systematically assuring that compliance policies are being carried out. *See id.* at 66,708, 66,710 to 66,711 (emphasis added). Thus, arguably, some firms that satisfy the EPA's due diligence standard may have management systems that include preventative measures to avert violations—systems comparable to the environmental management systems discussed below. For these firms, it may be appropriate to waive gravity-based penalties for certain types of violations when they are voluntarily detected and corrected. *See infra* notes 358-59 and accompanying text.

320. It also is desirable for enforcement officials to retain some discretion in choosing enforcement responses rather than being bound by fixed policies. There is extensive evidence demonstrating that, contrary to popular misconception, agency officials act flexibly and pragmatically in meting out penalties. There may be some instances where, despite the voluntary disclosure and correction of a violation, a small penalty would be appropriate; the EPA approach would preclude this.

321. For a critique of the EPA's auditing policy as insufficiently ambitious, see Silecchia, *supra* note 65, at 615-24. Professor Silecchia criticizes the auditing policy, as well as the Department of Justice's policy on criminal enforcement of environmental violations and the Sentencing Commission's proposed guidelines for organizational environmental crimes, because it places too much emphasis on attaining legal compliance (and on certain means of realizing compliance), and gives insufficient attention to avoiding environmental harm and improving environmental performance beyond what is required by law. *See id.* at 616-33.

typically improve the environmental impacts of all activities of a firm.³²² Moreover, the systems are process-oriented; the underlying notion is that having better systems in place will lead to better environmental performance and less pollution. Many environmental management systems, therefore, do not focus on a facility's actual performance in complying with regulatory standards.³²³ Like environmental audits, management systems have grown over the past decade in response to growing liability concerns and enforcement actions.³²⁴

a. *The key environmental management systems:* The three most important environmental management systems for U.S. companies are the standard contained in the ISO 14000 series, a recently published set of environmental standards issued by the International Organization for Standardization (ISO);³²⁵ the Eco-Management and Audit Scheme (EMAS), a voluntary management system adopted by the European Union;³²⁶ and the EPA's Environmental Leadership Project (ELP).

ISO's standards have been highly influential in the past,³²⁷ and the ISO 14000 environmental standards are likewise predicted to become the most widely accepted global environmental standards and a condition of doing business with a number of countries and corporations.³²⁸ The management standard of the ISO 14000³²⁹ consists of several key components.

322. See Kerry E. Rodgers, *The ISO Environmental Standards Initiative*, 5 N.Y.U. ENVTL. L.J. 181, 184 (1996).

323. See WELFORD, *supra* note 72, at 75.

324. Their growth has also been fueled by the desire of some corporations to import total quality management principles into the environmental area, and the desire of some firms to adopt sustainable environmental practices.

325. ISO is an international standards-setting organization whose purpose is to promote international standards to facilitate international trade. It consists of the standards-setting organizations of 100 member nations. ISO standards are documented agreements of technical specifications that companies use as guidelines to ensure that materials and products fit their purpose. For example, the format of automatic teller machine cards is based on an ISO standard.

326. The EMAS standard is contained in Council Regulation 1836/93, art. 1(1), 1993 O.J. (L 168). It was initially proposed as a mandatory scheme for about 50 industrial sectors, but was changed to a voluntary program under pressure from industry and concerns about implementation costs. See WELFORD, *supra* note 72, at 72.

327. The 1987 ISO 9000 quality control standards have become a *de facto* requirement for doing business in Europe and other parts of the world, and have been adopted by about 8,500 companies in the United States. See Roht-Arriaza, *supra* note 58, at 500-01; Michael Prince, *ISO Now Offering Voluntary Standards*, BUS. INS., Nov. 11, 1996, at 21.

328. See Marc E. Gold, *ISO 14000: A New Global Business Benchmark*, 12 ENVTL. COMPLIANCE & LITIG. STRATEGY 1 (May 1995).

329. The ISO 14000 series will establish environmental management systems in six areas: management systems, auditing, labeling, performance evaluation, life-cycle assessment, and terms and definitions. The management systems standard, ISO 14001, will form the overarching framework for

The first element is planning: Top management must establish an environmental policy for their organizations;³³⁰ firms must identify the "environmental aspects" of their activities, products and services, and applicable legal requirements;³³¹ and they must establish environmental objectives and targets, and a program documenting how and when these will be achieved.³³² The second element is implementation: Firms must put in place a number of internal processes to carry out their policies and objectives, including designation of responsible managers, training programs, communication systems and documented operating procedures.³³³ The final element is monitoring and review: Firms must regularly measure the key characteristics of their activities that have a significant environmental impact, and must periodically conduct management system audits to verify compliance with the ISO standard.³³⁴

Under the EMAS, companies are required to establish an environmental policy based on eleven basic principles of good management practice. For each participating site, companies must develop an environmental program that describes the company's environmental protection objectives and an environmental management system.³³⁵ As with the ISO 14001 standard, companies must implement their policies and programs through a variety of internal systems, including maintaining a registry of "significant" environmental effects at each site.³³⁶ Each facility must also engage in periodic environmental auditing at least once every three years

the other standards. For a comprehensive list of sources discussing the ISO 14001 management system, see Carr & Thomas, *supra* note 71, at 152 & n.160.

330. See International Standards Organization 14001, Environmental Management Systems—General Guidelines on Principles, Systems and Supporting Techniques, §§ 4.0-4.1 (1996) [hereinafter ISO 14001].

331. See *id.* §§ 4.2.1-4.2.2.

332. See *id.* §§ 4.2.3-4.2.4.

333. See *id.* §§ 4.3.1-4.3.7.

334. See *id.* §§ 4.4.1-4.4.4.

335. See Allowing Voluntary Participation by Companies in the Industrial Sector in a Community Eco-Management and Audit Scheme, Council Regulation 1836/93, Annex I, § C (1993), available in WESTLAW, ENFLEX-EU database [hereinafter Council Regulation]. The principles of good management practice go well beyond simply achieving compliance, and include: assessing in advance the environmental impact of all new activities and products; monitoring the impact of current activities on the local environment; preventing pollution and reducing pollutant emissions; and providing information to the public necessary to understand the environmental impact of the company's activities. For a detailed list of citations discussing EMAS, see Carr & Thomas, *supra* note 71, at 167-68 & nn.208-10.

336. See Council Regulation, *supra* note 335, Annex I, §§ A-C. Among other things, the management systems must include: periodic review at the highest appropriate management level; designation of key personnel responsible for environmental performance, education and training of personnel at all levels; establishing procedures for investigation and remediation of noncompliance; and establishing communication procedures concerning environmental practices.

that reviews both compliance issues and the facility's management system.³³⁷ Unlike the ISO standard, facilities also must prepare and publicly disseminate statements that summarize in nontechnical form the findings of internal audits. The statements must include an assessment of "all the significant environmental issues of relevance," and a summary of information about emissions, waste generation, consumption of resources, and other factors regarding environmental performance. These public statements are verified by "accredited environmental verifiers" who check to ensure that the company is in compliance with all aspects of the EMAS regulation.³³⁸ Once the statements are verified, they are disclosed to the public.³³⁹

The EPA's vehicle for encouraging environmental management systems, ELP, began as a pilot project in 1995 with ten private and two governmental facilities, and has expanded to include any eligible facility.³⁴⁰ To participate, firms must have a "mature" environmental management system that expands on the ISO 14001 management requirements.³⁴¹ The environmental management system must specifically include systems for achieving continual compliance with all legal requirements, continually improving the organization's environmental performance, implementing pollution prevention practices to stop the generation of pollution at its source, and communicating with community stakeholders about the or-

337. *See id.* Annex II, § C. The auditing may be done by company staff or external auditors, but the auditors must be technically qualified, and in the case of internal auditors, independent of the activities they are auditing.

338. *See id.* art. 6.1-7. The verifiers, described as a new professional occupation that is "part accountant, part environmental scientist, and part lawyer/regulator," are accredited by each European Union member state, and must be independent. Orts, *supra* note 3, at 1306.

339. *See* Council Regulation, *supra* note 335, art. 4.7. The data underlying the environmental statement remain confidential, however. *See id.* art. 10.3. Facilities that successfully comply with EMAS requirements are officially registered and listed, and also can use a graphic to announce their compliance, but the graphic cannot be used for advertising products or on packaging.

340. The EPA also seeks to encourage states to work with regulated entities to develop environmental management systems through a grant program administered by its Office of Water. *See* Proposal for Using Voluntary Environmental Management Systems in State Water Programs, FRL-5678-7, 62 Fed. Reg. 3036 (Jan. 21, 1997). Regional EPA offices are also experimenting with their own initiatives to promote the development of environmental management systems, such as the "Merit" program in EPA's Region 9 office.

341. *See* U.S. ENVTL. PROTECTION AGENCY, DRAFT—ELP PROPOSED FRAMEWORK (visited Feb. 1997) <<http://www.envirosense.com/elp/om5frm.html>> [hereinafter ELP PROPOSED FRAMEWORK]. A "mature" management system is one that has been in place for at least two years and has gone through an initial "shake-down" period in which the system's weaknesses were identified and corrected. Facilities are precluded from participating if they have been the subject of recent enforcement actions, and they may be disqualified for recent instances of noncompliance.

ganization's environmental management system.³⁴² The facility also must have an auditing program that periodically evaluates compliance with regulatory standards and with EMS requirements.³⁴³ Finally, the firm must prepare an annual report, available to the public, that discusses the facility's environmental performance and success in meeting its management objectives, and the results of environmental audits and any agency inspections conducted during the year.³⁴⁴ Firms that participate in ELP will receive a number of enforcement benefits.

b. *Environmental management systems as the basis for enforcement benefits:* Environmental management systems are likely to improve compliance and better the environmental performance of regulated entities.³⁴⁵ Therefore, firms with environmental management systems in place should be granted enforcement benefits, provided that several conditions are met. First, the system should require compliance with environmental requirements and prophylactic measures to prevent violations in advance of any self-audits. Second, adherence to the system should be verified by outside parties to ensure the system's integrity to agencies, the public, and other private parties, including companies and consumers doing business with the firm. Third, the environmental management system should provide the public with access to environmental information. The EPA's ELP and the EMAS standard meet all of the above criteria; the ISO 14001 standard does not.

The orientation of the ISO 14001 standard, for example, fails to assure that a firm will realize any specific compliance benefits. ISO 14001 does not prescribe specific operational practices or set numeric or other

342. *See id.* The definition of pollution prevention is broader than that used in the ISO 14001 standard.

343. *See id.* Audits must be conducted, at a minimum, in the second and fifth years of a six-year cycle.

344. *See id.*

345. As Richard Welford notes, "a systems approach to attaining the goals of an enterprise is most likely to be successful No matter what the structure of the firm . . . it is the lack of a comprehensive and effective management system which can often lead to failure." WELFORD, *supra* note 72, at 51. One writer describes the premise of ISO 14001 as an assumption that "organizations that systematically manage their environmental obligations will improve their environmental performance, broadly measured." Christopher L. Bell, *Bench Test*, 14 ENVTL. F., Nov.-Dec. 1997, at 24, 25 ("This assumption is based on the history that managing other organizational functions—inventory, finance, production, quality—has typically improved their performance, and the common sense concept that it is better to manage something than it is not to manage it."). Even skeptics concede that "[t]here is little question that some environmental problems can be better addressed by shoring up a firm's management systems. A management system allows a firm to learn from its past mistakes, and to delineate clear pathways, systems and incentive systems for achieving specified goals." Lewis, *Analysis of ISO 14000*, *supra* note 72.

kinds of performance standards. It also does not require emissions and discharge reductions. By its own terms, ISO 14001 does not necessarily expect immediate, tangible environmental improvements from the management systems.³⁴⁶ Moreover, the standard cannot be counted on to ensure compliance with environmental regulations. While firms must include in their environmental policies a commitment to comply with relevant environmental legislation and regulation, outside auditors certifying a firm's conformance to ISO 14001 are not expected to audit the company's actual compliance.³⁴⁷ By contrast, both the EMAS standard and ELP require participating firms to assure compliance with all environmental requirements.

Likewise, the ISO 14001 standard does not mandate that independent, third parties verify adherence to the ISO requirements.³⁴⁸ Under EMAS, a company's environmental policy, program, management system and audit

346. As described in the standard's guidance:

Although some improvement in environmental performance can be expected due to the adoption of a systematic approach, it should be understood that the environmental management system is a tool which enables the organization to achieve and systematically control the level of environmental performance that it sets itself. The establishment and operation of an environmental management system will not, in itself, necessarily result in an immediate reduction of adverse environmental impact.

Council Regulation, *supra* note 335, Annex A, § A.4. As Professor Roht-Arriaza explains, the United States (and some other participants in the ISO drafting process) objected to any fixed set of mandatory improvements, preferring a less substantive, more flexible approach that preserved management prerogatives. See Roht-Arriaza, *supra* note 58, at 504-05. Thus, ISO 14000's substantive requirements were considerably weakened from the original British template on which the standard was based in order to achieve consensus among all the participants. See *id.* at 534-36. See also BENCHMARK ENVIRONMENTAL CONSULTING, ISO 14001: AN UNCOMMON PERSPECTIVE 6-10, 15-17 (rev. 1996) [hereinafter BENCHMARK CONSULTING] (criticizing ISO 14001 because it does not require improved environmental performance, does not address health and safety requirements, and is far more limited in scope and commitment than international environmental agreements, such as Agenda 21, and voluntary industry codes, such as the ICC Business Charter and the Responsible Care program). But see Joseph Cascio, *They Will Be Used—For Good Reason*, ENVTL. F., Nov.-Dec. 1995, at 38, 39 (maintaining that focused management of the environmental aspects of a firm's activities required by ISO 14001 will result in better environmental performance, as evidenced by the ISO 9000 product quality standards).

347. See ISO 14001, *supra* note 330, §§ 4.1, 4.4.1. See Joseph Cascio, *Implications of ISO 14001 for Regulatory Compliance*, in FOURTH INTERNATIONAL CONFERENCE, *supra* note 137, at 45 ("It must be remembered that under ISO 14001, no proof of actual compliance is actually required for an organization to obtain registration. ISO 14001 requires only evidence of working processes that are designed to maintain compliance."); Gareth Porter, *Little Effect on Environmental Performance*, 12 ENVTL. F., Nov.-Dec. 1995, at 43, 44. As Porter notes, it is unrealistic to expect firms to spend resources on ensuring actual compliance if they know they can achieve ISO 14001 certification simply by adopting appropriate procedures. As Porter further explains, "[h]aving a 'system in place for compliance' does not necessarily lead to complying with environmental regulations." *Id.*

348. Some firms may nonetheless hire external auditors to certify that their management systems follow the ISO 14001 standard in order to become ISO "registered," a certification that confers a certain legitimacy upon firms. See Nash & Ehrenfeld, *supra* note 58.

findings must be validated by independent, accredited environmental verifiers. ELP also requires outside verification; facilities may use internal auditors to check compliance with a firm's management system, but their work must be monitored by third-party observers.³⁴⁹

The ISO 14001 standard also fails to provide for meaningful public disclosure of a facility's environmental performance.³⁵⁰ It does not require disclosure of a facility's environmental audits, releases, or other pertinent information about the environmental impacts of its activities and products. The only information that must be disclosed is a company's environmental policy.³⁵¹ Both EMAS and ELP have much stronger disclosure elements requiring release of annual environmental reports. As Eric Orts argues, disclosure of these reports will increase public trust that environmental business practices are sincere, as well as increase the general level of information available concerning important environmental issues.³⁵² EMAS' required public statements are broader than those required by ELP; they must include information about emissions, waste generation, consumption of resources, and the like, although firms may keep the data underlying the statements confidential. ELP's public outreach component—the Community Outreach/Employee Involvement Program that every firm is required to have—is also disappointingly vague. It requires facilities to “have a written policy to demonstrate its commitment to open communication with its employees and with the community for the purpose of understanding and responding to environmental issues,” as well as a “strategy for identifying and interacting with affected communities, identifying community needs and a plan of action for addressing those community needs.”³⁵³ The most concrete specification is that the facility

349. See ELP PROPOSED FRAMEWORK, *supra* note 341.

350. See BENCHMARK CONSULTING, *supra* note 346, at 19-21.

351. These very limited disclosure requirements resulted from pressure by the United States during drafting of the ISO standard. See Roht-Arriaza, *supra* note 58, at 504. They run counter to the trend toward greater disclosure of environmental information in international environmental agreements and voluntary industry codes. See BENCHMARK CONSULTING, *supra* note 346, at 19.

352. See Orts, *supra* note 3, at 1323. See also BENCHMARK CONSULTING, *supra* note 346, at 20 (“A core idea of the [European Union's] EMAS . . . is that public pressure will motivate companies to improve environmental performance. However, in order for this to work, there needs to be disclosure of corporate environmental performance. Without external audit and public disclosure, self-monitoring is an oxymoron.”) (citations omitted).

353. The substantive requirements of the Community Outreach/Employee Involvement Program are that it (1) “should be designed to impart an environmental message or contribution;” (2) “should respond to a community need or desire [and] provide . . . a means of obtaining feedback from the community regarding facility environmental issues;” and (3) “should involve employees and recognize that employees are one of the best resources of the facility [and] provide training or information for employees to ensure that the employees know about the facility's position on environmental and health issues, and environmental policies and plans.” U.S. ENVTL. PROTECTION AGENCY, DRAFT—

must educate the community on any environmental impact the facility may have. These hortatory guidelines do relatively little to ensure that affected communities will become meaningful partners in corporate environmental decisions or have any greater access to environmental information than they enjoy under existing laws. If, as the EPA envisions, the ELP program is designed to publicly recognize facilities that "demonstrate outstanding environmental management practices,"³⁵⁴ firms should be required to do considerably more, such as committing to allow citizen auditors direct access to the facility to monitor compliance with a firm's environmental management objectives.³⁵⁵

Despite these limitations, the EPA's ELP contains sufficient safeguards to ensure improvements in compliance, and the EPA has appropriately proposed to provide firms participating in ELP with enforcement benefits.³⁵⁶ Specifically, the EPA will reduce facility inspections for participating firms and also waive gravity-based civil penalties for the violations, provided that the firms promptly correct any detected instances of noncompliance with essentially the same exceptions that apply to disclosures by firms that voluntarily conduct audits.³⁵⁷ Unlike the case with audits, the ELP prompts far less concern that waiving gravity-based penalties will undermine an important element needed to deter violations in the first place.³⁵⁸ This is because the ELP includes systems designed to achieve ongoing compliance, effectively requiring firms to take preventive measures before violations are detected. This more confident view is particularly true if independent parties certify the integrity of the environ-

COMMUNITY OUTREACH/EMPLOYEE INVOLVEMENT (visited Mar. 5, 1998) <<http://es.epa.gov/elp/pf4.html>> (emphasis added).

354. Environmental Leadership Program: Request for Pilot Project Proposals, FRL-5001-5, 59 Fed. Reg. 32,062, 32,062 (June 21, 1994) [hereinafter Pilot Project Proposals].

355. Such a system would probably need to incorporate some mechanism for protecting the (nonenvironmental) trade secrets of the firms. See generally *Feel-Good Notions*, *supra* note 219 (describing Good Neighbor Agreements that provide community members with the right to obtain any company documentation or studies relevant to safety or environmental matters of concern and that provide rights of access to company facilities for direct visual inspection and confidential discussions with employees). See also Susan Casey-Lefkowitz, *The Evolving Role of Citizens in Environmental Enforcement*, in FOURTH INTERNATIONAL CONFERENCE, *supra* note 137, at 221, 227-28. In some countries, citizens are deputized as public inspectors and carry out government inspection responsibilities. In other countries, citizens can demand inspections under certain circumstances. See *id.*

356. Firms that implement the EMAS should also be entitled to similar benefits from enforcement agencies.

357. See discussion *infra* notes 274-77 and accompanying text.

358. This is not to say that some deterrence value is not lost by waiving penalties. One could certainly argue that firms will carry out preventative measures less diligently knowing that they will not be sanctioned for any violations that nonetheless occur if the violations are voluntarily discovered and remedied.

mental management system program. The EPA should follow through on other benefits it has suggested for participating firms, including expedited permit approval and a streamlined process for modifying permits.³⁵⁹

3. Summary

Environmental auditing practices and management systems have great potential to improve compliance with environmental laws. They should be encouraged with carefully designed incentives and in some instances made mandatory. They are not, however, a reason to dismantle traditional enforcement activities.

D. CITIZEN ENFORCEMENT SHOULD REMAIN AN INTEGRAL FEATURE OF THE ENFORCEMENT SYSTEM

Citizen enforcement has played a significant role in fostering compliance with environmental law.³⁶⁰ Thus, a largely cooperative-oriented enforcement system is likely to be incompatible with vigorous citizen enforcement.³⁶¹ Indeed, some scholars who support cooperative approaches expressly favor limiting the role of private enforcers or the ability of third parties to affect agency enforcement priorities.³⁶² The regulated community is beginning to focus on the inherent tensions between the different modes of enforcement and to suggest devices to curtail citizen actions.³⁶³

While citizen enforcement may not be compatible with a purely or primarily cooperative-oriented system, it can and should be integrated into

359. See *Enforcement: EPA Preparing for 1997 Launch of Environmental Leadership Program*, Daily Env't Rep (BNA) No. 200, at AA-1 (Oct. 16, 1996). Participating firms also receive public recognition and a logo that can be used for limited advertising purposes (in facility advertisements but not on product advertising). Although the EPA should be commended for insisting that the ELP surpass the ISO 14001 standard in several key areas, the ELP is nonetheless insufficiently ambitious. Most notably, the ELP does not require a substantive commitment to any specific set of environmental goals, such as requiring all facilities to endorse a Code of Environmental Management Principles (as the EPA initially considered). See *Environmental Leadership Program*, FRL-4552-6, 58 Fed. Reg. 4,802 (Jan. 15, 1993) (outlining possible elements of Corporate Statement of Environmental Principles); Pilot Project Proposals, *supra* note 354 (announcing that the EPA would not develop its own principles but would work with organizations that have developed their own corporate or industry codes). But see Silecchia, *supra* note 65, at 629-31 (praising the ELP because of its requirement that firms engage in pollution prevention activities).

360. See *supra* notes 208-11 and accompanying text.

361. See *supra* notes 212-18 and accompanying text.

362. See Scholz, *Cooperative Regulatory Enforcement*, *supra* note 117, at 124, 129-30.

363. Thus, some propose permit conditions that explicitly provide for a certain number of instances of noncompliance, or that liberalize the underlying standards to provide for accidents or normal variations in operating conditions. See Ross Macfarlane & Lori Terry, *Citizen Suits: Impacts on Permitting and Agency Enforcement*, 11 NAT. RESOURCES & ENV'T 20, 24-25 (1997).

a system that is deterrence-based but includes significant cooperative-based features. Under the reforms proposed here, citizen enforcement would remain a backdrop to traditional government enforcement. Citizen enforcers could continue to bring actions to remedy violations where the government has failed to act because of lack of resources, political pressures, capture of regulatory staff, or other factors. Moreover, citizens could continue to file enforcement actions largely unsupervised by the government, as they do under the current system.³⁶⁴

Some companies claim that the prospect of citizen enforcement is likely to discourage businesses from implementing some of the reforms suggested here, such as audits and other management systems.³⁶⁵ However, firms that self-police and correct discovered violations are likely to face very little citizen enforcement. Under most federal statutes, coming into compliance defeats a jurisdictional prerequisite for citizens to file suit—namely that there is an ongoing violation alleged at the time a complaint is filed.³⁶⁶ Even if citizens are not barred from suing, voluntary compliance will greatly mitigate any penalties awarded and obviate the need for injunctive relief. Finally, there is little evidence to support the charge levied by some critics that citizen enforcement needs to be curtailed because it is focused on trivial violations.³⁶⁷

E. REFORMS TO COMMAND AND CONTROL REGULATION SHOULD INCLUDE STRICT ENFORCEMENT

Any discussion of enforcement would not be complete without briefly touching on the separate but related issue of reforms in the underlying substance of environmental regulation. As previously discussed, the substance of environmental regulation is also in a state of flux and is moving

364. See *supra* notes 212-13 and accompanying text.

365. See *supra* Part V.C.

366. In *Gwaltney of Smithfield Ltd. v. Chesapeake Bay Foundation*, 484 U.S. 49 (1987), the Supreme Court ruled that the present tense language of the Clean Water Act's citizen suit provision, 33 U.S.C. § 505(a)(1) (1994), authorizing citizen suits against any person "who is alleged to be in violation" of the Act, only permits actions for ongoing violations. Several other federal statutes have similarly worded citizen suit provisions. See Resource Conservation and Recovery Act, 42 U.S.C. § 6972(a)(1) (1994); Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9659(a)(1) (1994); Toxic Substances Control Act, 15 U.S.C. § 2619(a)(1) (1994). Moreover, in *Steel Company v. Citizens for a Better Environment*, 118 S.Ct. 1003 (1998), the Supreme Court held that as a matter of constitutional standing, citizens could not bring suits for wholly past violations of a statute, at least where penalties authorized by the statute are payable to the federal government.

367. See Macfarlane & Terry, *supra* note 363, at 20, 23 (arguing that citizen suits "are being prosecuted whenever there is evidence of a violation," and that "[t]he sole measure of [corporate] performance is strict compliance with all permit and regulatory requirements, [which business] must achieve . . . 100 percent of the time").

toward providing greater flexibility to regulated entities. This is a hallmark of the Clinton Administration's "reinvention of environmental regulation,"³⁶⁸ as well as a major theme of state regulatory reform efforts. For example, the EPA's Environmental Excellence (XL) initiative frees regulated entities from command and control requirements in exchange for a commitment to accomplish environmental performance superior to what would be achieved through compliance with existing regulation.³⁶⁹

The relaxation of underlying substantive standards further strengthens the need to maintain strong deterrence-based enforcement provisions, including those that assure citizen groups a meaningful role in policing compliance. Given that many of these reforms grant facilities great leeway in meeting regulatory limits, government regulators and the public are no longer assured that an effective control strategy is being implemented. In return for this freedom, regulated entities should be held closely accountable for their promises.³⁷⁰

This point of view is reflected in the Clean Air Act's Acid Rain Program, which provides marketable allowances for sulfur dioxide emissions³⁷¹ but with stringent enforcement provisions. Utilities subject to the program are required to install continuous emission monitors (or their equivalent), and if the monitors do not work, the EPA is required to assume that the source is operating in an uncontrolled manner.³⁷² In addition to the possible imposition of standard criminal and civil penalties for violations of the Clean Air Act,³⁷³ firms that fail to meet emission limits must pay a penalty of \$2,000 per excess ton emitted and must offset the excess

368. This reinvention encompasses a variety of initiatives, including greater reliance on market-based incentives and performance-based standards rather than on command and control regulation, more flexibility through development of industry-wide standards as opposed to individual pollutant approaches, and increased use of collaborative partnerships (between the public and private sectors and between different levels of government). See Clinton & Gore, *supra* note 225.

369. See Rena I. Steinzor, *Regulatory Reinvention and Project XL: Does the Emperor Have Any Clothes?*, 26 *Envtl. L. Rep. (Envtl. L. Inst.)* 10,527 (Oct. 1996).

370. Professor Michael has identified a number of reasons why a backdrop of traditional enforcement practices is necessary in a system that grants flexibility to regulated entities: to verify compliance by entities, to maintain the perception that noncompliance will be detected and sanctioned, to account for the diversity of regulated sources with some less skillful in achieving compliance, to ensure compliance where the costs of necessary preventative measures exceed the likely costs of a system of self-regulation, and to maintain compliance if the failure of self-regulation programs makes compliance unduly expensive. See Michael, *supra* note 40, at 544, 547.

371. Under the program, utilities are provided with allowances based on historic fuel consumption and operating factors, and provided with complete flexibility in determining how to meet these limitations.

372. See 42 U.S.C. § 7651k(a), (d) (1994).

373. See *id.* § 7651j(e).

emissions by an equal tonnage amount in the next year.³⁷⁴ Moreover, the EPA is required to deduct allowances equivalent to the excess emissions from those allocated to the source for the next year.³⁷⁵ Notably, recent analyses indicate that the rate of noncompliance with the program has been extremely low and may be zero.³⁷⁶

This type of strict enforcement approach, accompanied by citizen suit provisions, should be the template for other regulatory flexibility efforts.

F. BETTER WAYS TO MEASURE THE EFFECTIVENESS OF ENFORCEMENT SHOULD BE DEVELOPED

Many observers agree that regulatory agencies should improve the way they evaluate the effectiveness of their enforcement programs. The EPA has recognized that its traditional approach of using numerical indicators is of "limited value for determining the state of compliance and identifying [the] environmental results and benefits of [enforcement] actions."³⁷⁷ The agency is currently engaged in an ambitious effort to develop additional performance measures for its enforcement program.³⁷⁸ State enforcement agencies have likewise begun exploring new evaluation measures.³⁷⁹ While these are worthwhile undertakings, it is important to realize the inherent difficulties in developing precise, objective measurements of success for an enforcement program.

One obvious starting point for improvement is to better evaluate the extent of compliance by regulated facilities and the extent to which enforcement actions promote compliance. For example, Professor Joel Mintz suggests that agencies should evaluate the percentages of regulated sources inspected, their overall rates of compliance, and the rates of recidivism among violating sources.³⁸⁰ Another useful measure would be to

374. See *id.* § 7651j(a), (b). The sources must submit a compliance plan for achieving the required offsets within 60 days, which becomes a condition of the source's operating permit. See *id.* § 7652j(b).

375. See *id.*

376. See Byron Swift, *The Acid Rain Test*, ENVTL. F., May-June 1995, at 17, 17 (noting there has been virtually 100% compliance with the acid rain trading provisions in the first two years of the program's operations).

377. Workshop on National Performance Measures Strategy, *supra* note 197.

378. See *supra* note 157 and accompanying text.

379. See GAO, EFFORTS TO FOCUS ON RESULTS, *supra* note 8, at 29-32.

380. See MINTZ, *supra* note 23, at 102-03. EPA's Performance Measures Strategy has proposed measuring the percentage of significant violators with new or recurrent significant violations within two years of any prior enforcement action. See DRAFT REPORT OF THE NATIONAL PERFORMANCE MEASURES STRATEGY, *supra* note 97, at 20.

determine multimedia compliance rates for entire facilities or industry sectors.³⁸¹

However, determining the rate of compliance is easier said than done. Indeed, the definition of "compliance" is not a fixed or purely objective one. Because measurement techniques are never perfect, for example, there is always some ambiguity in what constitutes a "violation."³⁸² Other subjective factors help determine what constitutes "compliance," such as the time period an industry is given to reach compliance, or how strictly businesses must adhere to a standard.³⁸³ Indeed, differing interpretations of compliance partially underlie current disputes between the EPA and a number of states about the effectiveness of the states' enforcement programs.³⁸⁴

Beyond ascertaining rates of compliance, agencies should measure the environmental benefits of enforcement actions. This includes steps taken by facilities in response to enforcement actions and reductions in pollutants discharged by regulated entities. Most ambitiously, it would also embrace improvements in the ambient environment resulting from enforcement actions.³⁸⁵ The EPA, as well as some states, has started calculating these measurements³⁸⁶ to varying degrees.³⁸⁷ Other federal envi-

381. The EPA has begun to develop such measures. See Stahl, *Enforcement in Transition*, *supra* note 3, at 22. The EPA has also proposed to measure how quickly significant violators return to compliance or enter compliance agreements. See DRAFT REPORT OF THE NATIONAL PERFORMANCE MEASURES STRATEGY, *supra* note 97, at 20.

382. See Clifford Russell, *Environmental Enforcement*, in INNOVATION IN ENVIRONMENTAL POLICY, *supra* note 32, at 215, 216 (arguing that the notion of a "violation" is always treated in literature as better defined than it possibly can be in practice). See also RUSSELL, ET AL., *supra* note 25, at 178 (noting that the unavoidable variation in discharge levels and imperfections in measurement equipment introduces ambiguity into the notion of compliance and noncompliance).

383. See DIMENTO, *supra* note 101, at 26-27. For example, does compliance mean good-faith efforts, substantial compliance, reasonable probability of compliance, or total compliance?

384. See, e.g., EPA, AUDIT OF REGION 9, *supra* note 211, at 7. A local air board in California considered a facility in compliance if it immediately repaired a piece of equipment or submitted a permit application even where the facility had previously violated same requirements. The EPA's Inspector General, however, was concerned that repeat violations indicated the facility was not achieving continuous compliance.

385. See NATIONAL ACADEMY, *supra* note 49, at 81 (suggesting that the EPA develop environmental performance indicators to measure changes in air and water quality, ecosystem health, and environmental threats to human health and welfare).

386. In 1994, the EPA began supplementing its measures of enforcement effectiveness with a "case conclusion" sheet for enforcement actions. The case conclusion sheet lists steps taken by the regulated entities, the environmental impact of such actions, quantitative reductions in pollutants, information about the types and impacts of compliance-assistance activities, and industry-specific compliance rates. See DRAFT REPORT OF THE NATIONAL PERFORMANCE MEASURES STRATEGY, *supra* note 97.

ronmental agencies are also moving in this direction.³⁸⁸ But attempting to judge the effectiveness of an enforcement program by looking at these measures is also problematic. In many cases, calculating steps taken by regulated entities will likely show important environmental benefits from enforcement actions. The EPA's 1996 enforcement report, for example, estimated that its actions would reduce pollutant discharges by 260 million pounds.³⁸⁹ On the other hand, a facility's compliance with certain regulatory requirements, such as the many standards that are preventative, may greatly reduce the risk of serious environmental harm but will not necessarily lead to a quantifiable emissions reduction or environmental benefit.³⁹⁰

It is especially difficult to link compliance with actual improvements in the ambient environment for a variety of reasons. Environmental changes may not manifest themselves for years; other confounding factors may be at work that block or delay any changes resulting from specific actions. Alternatively, the underlying regulation may be inadequate to prompt changes, or ongoing pollution may result from a few major discharges.³⁹¹

387. See Wetherell, *supra* note 154, at 22-23 (describing new programs in Illinois, Indiana, and Florida that place more emphasis on measuring environmental indicators and actions taken by regulated entities, and noting that "[n]o longer can [states] only count the number of inspections, enforcement orders entered, and fines collected. Instead, we must ask, Is the air and water getting cleaner? If not, why not? Are companies complying with the law? . . . Is the environment healthier for children?"). See also GAO, EFFORTS TO FOCUS ON RESULTS, *supra* note 8, at 33-34, 36-38 (describing state programs and discussing the difficulties for states to quantify and measure environmental indicators as a means of evaluating compliance strategies).

388. For example, the Office of Surface Mining Reclamation and Enforcement recently announced that it will no longer collect data on the number of inspections conducted or violations cited by state regulators. Instead, it will measure the effectiveness of state programs by analyzing the number and extent of off-site pollution impacts from mining activities, and the number of mined acres that meet various reclamation standards. See U.S. Dep't of Interior, Office Surface Mining, Reclamation and Enforcement, "Reg-8", Appendix II-3-8 (June 20, 1996). These reclamation standards include restoration of land form and land capability, hydrologic reclamation, and contemporaneous reclamation.

389. See News Release from the U.S. Env'tl. Protection Agency, Environmental Enforcement Records Set for 1996 (Feb. 25, 1997) (on file with author).

390. The EPA has noted that "[c]ausality between program activities and outcomes is usually impossible to prove. Outcomes cannot generally be attributed to individual functions of an agency or program. 'Prevention' or deterrence of undesired outcomes is difficult to measure." DRAFT REPORT OF THE NATIONAL PERFORMANCE MEASURES STRATEGY, *supra* note 97, at 8.

391. See HUNTER & WATERMAN, *supra* note 26, at 209.

An even more fundamental problem is the difficulty of measuring what constitutes "better environmental quality."³⁹² Professors Hunter and Waterman have highlighted this problem with the Clean Water Act, concluding that

there is no uniform method of measuring water-quality across the fifty states, and although some quantifiable measures do exist . . . a major problem with surface-water regulation in the United States is that nearly twenty-five years after the enactment of the Clean Water Act of 1972, we still do not have a reliable means of measuring the legislation's relative success or failure.³⁹³

Similar problems exist, perhaps to a lesser degree, with other environmental media.

Finally, it is important that the search for improved performance measures not override the essential purposes of environmental regulation. One impetus behind the quest for improved performance measures is a desire to import into government the principles of private sector management theory.³⁹⁴ Yet "there are such fundamental differences between the public sector and the private sector that management theory from one will never be applicable to the other."³⁹⁵ Thus, while in the private sector the search for bottom-line measures of performance may be necessary and understandable, there are conflicting pressures in government that may frustrate the ability to assess objectively the impacts of regulation, or in some cases trying to do so may be inappropriate.

In summary, developing better ways to evaluate the efficacy of environmental enforcement and de-emphasizing bean counting is important, and should lead to smarter, more targeted enforcement activities. But determining precisely how enforcement efforts translate into actual improvements in the environment is likely to prove an elusive goal.

392. See SPARROW, *supra* note 3, at 145 (explaining it is enormously difficult to generate any consensus, even scientific consensus, as to which measures of environmental quality have broad validity).

393. HUNTER & WATERMAN, *supra* note 26, at 210. They note that state agencies use very diverse and often dubious methods to measure water quality. One state relies on "reports of bad news from citizens and other sources. If there are no reports of fish kills or complaints from recreational areas, [state] officials interpret this as evidence that water quality in their state is sound." *Id.* at 207.

394. See JOHN MICKLETHWAIT & ADRIAN WOOLDRIDGE, *THE WITCH DOCTORS* 282-84 (1996). In recent years, observers note, the public sector "has shown a blind affection for management theory that is rarely seen in the private sector." *Id.* See also Ronald, *The Role of the CEC*, *supra* note 159, at 6-7 ("One of the mantras of total quality management is that, in order to control, you must manage and, in order to manage, you must measure.").

395. MICKLETHWAIT & WOOLDRIDGE, *supra* note 394, at 6.

VI. CONCLUSION

The movement to transform environmental enforcement is being advanced with exceptional ardor. Before the old system is discarded however, it is critical for policymakers to engage in a careful and sober assessment of the calls for reform. If the system is flawed, will the proposed changes improve it? In particular, is there a sufficient basis on which to conclude that the new approaches will be superior to the ones being reformed?

As this Article demonstrates, the record does not support a wholesale transformation of enforcement practices as has been proposed. Deterrence-based enforcement has many attributes essential to effective enforcement, the most notable one being its strong, credible threat of meaningful enforcement necessary to promote widespread voluntary compliance. Strong enforcement also serves important expressive functions, better guards against agency "capture" by regulated entities, and ensures more consistent treatment of regulated facilities. Rather, the best way to promote effective environmental enforcement is to integrate some of the most constructive features of a cooperative model within a deterrence-based system. Agencies should provide more consultation and cooperative assistance to regulated entities, reward well-conceived self-policing efforts with reduced enforcement attention and lower penalties, and expand the traditional indicia for measuring enforcement success. Publicly traded corporations should be required to conduct environmental audits. At the same time, government regulators should retain the ability to respond to violations with strong and meaningful enforcement measures; measures that strip agencies of discretion in responding to certain classes of violations undermine enforcement and should be avoided. Citizen enforcement should remain an important supplement to agency enforcement, and corporations should not be allowed to withhold from the public information in environmental audits and other internal environmental reviews. In short, it is a thoughtfully and carefully considered evolution in environmental enforcement that is called for, not a reckless revolution.