

# *Enforcing the Clean Water Act in the Twenty-First Century: Harnessing the Power of the Public Spotlight*

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## *Executive Summary*

The 1972 Clean Water Act (CWA) was intended to protect the nation's waterways from pollution, making lakes, rivers, and streams safe for swimming, fishing, and a host of other activities. In the absence of enforcement, laws alone pack little punch. In the case of the Clean Water Act, the federal government relies on state agencies to enforce many of the key provisions of the law, including the National Pollutant Discharge Elimination System (NPDES), a system by which polluters are issued permits to emit specific quantities of pollution into waterways.

More than three decades after CWA's enactment, it is now clear that state enforcement of the NPDES provisions is woefully inadequate. A new survey of state environmental protection agencies reveals the extent of the failure of state enforcement and documents the barriers to adequate state enforcement. The survey, conducted by CPR Member Scholar Clifford Rechtschaffen, professor of law at Golden Gate University School of Law, gathered data from agencies in 17 states – Alabama, Arizona, California, Delaware, Florida, Georgia, Hawaii, Maryland, Minnesota, Montana, North Carolina, New Jersey, Nevada, Oregon, Washington, West Virginia, and Wyoming. Key findings of the survey:

- Eleven of the 17 states report that their funding for enforcing the NPDES permits is inadequate.
- Seven of the states report that the funding available for enforcement is 60 percent or less of what is needed to do the job, with Wyoming's funding calculated at 29 percent

of what is required, and Georgia's at 20 percent.

- Just five states report funding that they deemed sufficient. These generally were more heavily supported by permit fees. (One state did not report funding.)

Additional research reported in these pages demonstrates that:

- At least in part because of funding shortfalls, state regulators are slow to renew NPDES permits. As a result, many facilities are operating with outdated and inadequate permit limits.
- Once permits are issued, state enforcement is poor. States fail to carry out inspections, fail to take timely and appropriate enforcement actions, and fail to obtain meaningful penalties for noncompliance, including penalties that recover the economic benefit of noncompliance. As a result, many permit-holders are significantly out of compliance with restrictions imposed as a condition of their permits.
- States are failing to monitor the quality of the water in lakes, rivers, and streams within their borders, as required by the Clean Water Act.
- The federal EPA's data-management systems for NPDES permits are out of date and inadequate. Compliance by polluters is largely unmonitored. Data was missing from EPA databases for 96 percent of dischargers. As a result, the federal agency in charge of monitoring state enforcement is unable to do so effectively.

## Fee-Based Permit Programs

To insure adequate funding for water protection efforts, states should shift the costs of implementing their NPDES programs to regulated entities through permit fee programs. Fees should be set at a level necessary to fully fund program costs, and revenue generated by the fees should be dedicated to NPDES programs. The Clean Air Act, for example, requires states to impose permit fees sufficient to fund the costs of administering and enforcing their Title V permit programs.

## A Better Approach to Compliance

In recent years a lively debate has raged about what type of enforcement approach best achieves compliance with environmental laws.<sup>1</sup> The states by and large have preferred a conciliatory, cooperative-based model that relies on incentives to polluters and technical assistance programs to achieve compliance. For its part, the EPA traditionally has favored a deterrence-based approach, one that relies on inspections, formal enforcement responses, and sanctions in the event of violations. The agency's commitment to that approach has wavered under the current Bush Administration, at least among its top-level political appointees,<sup>2</sup> but the record plainly demonstrates that a deterrence-based approach, informed by positive elements of cooperation-based enforcement, is the best way to improve rates of compliance.<sup>3</sup>

There is a third approach, however, that can effectively serve as a supplement or adjunct to any type of primary enforcement mechanism – whether it is a deterrence-based approach, a cooperation-based approach, or something in between. The approach, called “spotlighting,” relies on mandatory disclosure of enforcement- and compliance-related data, and then public accountability for compliance by polluters and enforcement by regulators. This approach has yet to be fully exploited by federal and state agencies, but it has the potential to significantly improve compliance while requiring relatively few resources to implement.<sup>4</sup>

This report calls for federal and state agencies to implement three spotlighting tools:

- EPA should spotlight the enforcement and compliance related records of regulated firms;
- EPA should spotlight the performance of state NPDES programs in achieving compliance among regulated firms within their states;
- The Securities and Exchange Commission should spotlight polluting companies by expanding the mandatory environmental disclosure requirements for publicly-traded corporations.

By making public and private institutions accountable to the public for their efforts to reduce pollution, we can effectively and inexpensively increase compliance with the Clean Water Act, and reduce pollution in the nation's waterways.

## Introduction

The modern Clean Water Act (CWA) was passed in 1972 with goals both broad and ambitious. Congress called for restoring the “chemical, physical, and biological integrity of the Nation's waters.” The Act sought to achieve by 1983 water quality levels that protect fish and wildlife and recreational use of waters — in short hand, make the waters fishable and swimmable. It was also intended to eliminate the discharge of toxic pollutants in toxic amounts, and eliminate the discharge of any pollutants into navigable waters by 1985.<sup>5</sup>

At the heart of the statute is the requirement that the Environmental Protection Agency (EPA) adopt controls for industrial and municipal polluters that reflect the best pollution control technology, considering cost and other factors, but regardless of location. This requirement is implemented through a permit system known as the National Pollutant Discharge Elimination System (NPDES). EPA estimates that approximately 60,000 facilities nationwide have been issued individual wastewater NPDES permits. Another 400,000 to 500,000

facilities are required to have permits that regulate their discharge of stormwater.

Controlling point source discharges – those from a specific and identifiable source, as opposed to those whose origins are unknown – has led to impressive improvements in water quality over the past 30 years. Nevertheless, considerable challenges remain. Prominent among these is the spotty record of government enforcement of the Act’s permitting requirements. A nationwide EPA survey in early 2003, for example, found that the rate of significant noncompliance with the CWA among 6,600 major facilities – those with the largest discharges – was approximately 25 percent. At the same time, resources for water quality control programs, particularly at the state level, are scarce, creating a daunting gap between needed and available resources.

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

Like most federal environmental statutes, the CWA operates under a “cooperative federalism” framework. Under this model, the federal government sets national standards and is ultimately responsible for ensuring achievement of these requirements, but states can receive authorization from EPA to implement the program, under EPA oversight. To obtain authorization, states must enact standards at least as stringent as federal law, and demonstrate that they have adequate personnel, enforcement authorities, and other capacity to administer the program.<sup>6</sup> Forty-five states have received full or partial authorization from EPA to implement the NPDES program.<sup>7</sup>

But the record of state and EPA performance under this cooperative federalism framework demonstrates that while some important strides have been made, overall enforcement is woefully inadequate and far from achieving the ambitious goals set by Congress. A number of trends emerge from a careful examination of this enforcement record.

## Failure to Renew Permits

Many states and EPA do not promptly renew and update permits once they expire. The Administrative Procedure Act allows a facility to continue operating under the terms of an expired permit if it filed a timely renewal application.<sup>8</sup> Facilities with outdated permits may operate with weak or inadequate controls. As of September, 2003, EPA reported that approximately 15 percent of major facilities and one-third of minor facilities were operating with outdated permits.<sup>9</sup> That is an improvement from prior years; EPA estimated in 2002, for example, that twenty percent of major facility permits had expired.<sup>10</sup> In some states the percentage of outdated permits is much higher, such as Indiana (41 percent); Missouri (34 percent), and Louisiana (30 percent).

## Polluter Noncompliance with Permit Requirements

Failure by polluters to live up to the terms of permits is a longstanding and ongoing problem. A 1982 General Accounting Office (GAO) report examining more than 500 facilities, for example, found that 82 percent of these dischargers had violated their permits at least once during a two-year period, and that 24 percent of these polluters were in significant noncompliance with Clean Water Act requirements.<sup>11</sup> Significant noncompliance is defined for toxic pollutants as exceeding an average monthly limit by 20 percent or more in any two months of a six-month period, and for conventional pollutants as exceeding an average monthly limit by 40 percent in any two months of a six-month period.<sup>12</sup> A 1993 study evaluating the Act’s first 20 years concluded that

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

assessed, are too low to offer [a] meaningful incentive to comply.”<sup>13</sup>

More recent studies reach similar conclusions. For instance, the GAO estimated that in fiscal years 1992-1994, one in six major facilities was in significant noncompliance with its permit limits, and that the actual number could be twice as high.<sup>14</sup> A series of investigations by public interest groups have found similar results. For example, a review by the U.S. Public Interest Research Group (PIRG) found that nearly 30 percent of major facilities examined were in significant noncompliance for at least one quarter during the 15 months from January 1, 2000 to March 31, 2001.<sup>15</sup> A subsequent analysis found that more than 5,000 major facilities, or 81 percent, violated their permits at least once in the years from 1999 to 2001, a total of 88,000 exceedances.<sup>16</sup>

In 2003, EPA conducted a detailed nationwide analysis of compliance by major facilities.<sup>17</sup> The report showed that approximately 25 percent of major facilities were in significant noncompliance with their CWA permits at any given time. It noted that rates of significant noncompliance have effectively remained steady since 1994.<sup>18</sup> The violations, moreover, are of a magnitude with potentially serious environmental effects. Half of the permit exceedances for toxic discharges were more than twice the permitted levels; 13 percent of the exceedances were more than 1,000 percent over permitted levels. For conventional pollutants, the exceedances are also high; a third of the exceedances were double permitted levels.<sup>19</sup>

### Weak State Enforcement

The same EPA study also found that levels of CWA enforcement activity have been declining. From 1999 to 2001, the number of state and EPA inspections decreased by eight percent.<sup>20</sup> The number of EPA and state formal enforcement actions dropped by 11 percent, and the number of informal

actions declined by 50 percent.<sup>21</sup> During this period, only 24 percent of significant violations resulted in a formal enforcement response.<sup>22</sup>

Additionally, a low percentage (9-13 percent) of enforcement actions are carried out in a “timely and appropriate” fashion, only about 40 percent of formal actions result in penalties, and average penalties imposed are low, between \$5,000 and \$6,000 per action.<sup>23</sup> On the other hand, between 1999 and 2001, there was an increase in the percentage of enforcement actions resulting in pollutant reductions.<sup>24</sup> Interestingly, the study found a modest association between levels of enforcement activity and compliance rates, both among EPA regions and states. For example, 14 of 24 states (58 percent) with the worst overall compliance records also had the lowest enforcement activity levels, while 14 out of 23 states (61 percent) with the lowest activity levels also had the worst overall compliance records.<sup>25</sup>

Numerous other studies have pointed out serious weaknesses in many state enforcement programs, including failure to carry out inspections, failure to take timely and appropriate enforcement actions, and failure to obtain meaningful penalties, including penalties that recover the economic benefit of noncompliance.<sup>26</sup> A report by a PIRG research foundation lists some recent examples:

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

Maryland auditors investigated the resolution of 13 consent orders negotiated between state environmental officials and Clean Water Act

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

A 1999 review [by EPA] of New Hampshire's environmental enforcement efforts found that the state relied heavily on informal enforcement practices and that penalties were sought against only a few of the worst violators each year. The review found "an institutional reluctance to pursue formal enforcement" in the state's water pollution control program.<sup>27</sup>

Similarly, the Minnesota Pollution Control Agency reported in 2003 that approximately 18 to 31 percent of Minnesota's major facilities have been in significant noncompliance in recent years, and that 45 percent of major facilities exceeded effluent limits at least once. In addition, six percent of facilities never submitted required discharge monitoring reports (DMRs), and many DMRs submitted were incomplete. The percentage of permitted facilities inspected declined from 32 percent in 1995 to 17 percent in 2000 and 12 percent in 2001.<sup>28</sup>

An evaluation prepared by the University of Maryland Law Clinic in 2002 concluded that the Maryland Department of Environment "does not have anywhere near enough inspectors to track compliance at major sources of air and water pollution. As a result of this shortfall and policy decisions made by the Department's leadership over the last several years, MDE has de-emphasized traditional enforcement, creating a climate that does not effectively deter violations, especially in circumstances where compliance is costly."<sup>29</sup> In Louisiana, a recent report by the Legislative Auditor's Office documented wholesale failures in the state's enforcement program. It found that 69 percent of

major facilities and 49 percent of minor facilities had expired CWA permits; that the state failed to conduct required inspections for 31 percent of minor facilities; and that 26 percent of required self-monitoring reports for water were either not submitted or could not be located. The audit additionally found that 80 percent of water enforcement actions were not filed in a timely fashion and that the department had not collected 58 percent of the monetary penalties assessed for water quality violations in fiscal years 1999 to 2001.<sup>30</sup>

While the above illustrations provide an overall picture, it is worth emphasizing that state CWA programs are far from monolithic, and that some states have strengthened their enforcement and compliance laws in recent years. New Jersey and California, for example, have both enacted laws requiring that agencies impose penalties for repeat, serious violations of water pollution requirements.<sup>31</sup> At least some anecdotal evidence suggests that these laws have improved compliance. According to the New Jersey Department of Environmental Protection, since the early 1990s, the number of total violations, serious violations, and instances of significant noncompliance have dropped by amounts ranging from 80 to 90 percent.<sup>32</sup> Likewise, according to an analysis by Environment California, between 2000 and 2002 (following enactment of the state's mandatory penalty law), there was a 41 percent reduction in the number of clean water permit violations in California.<sup>33</sup>

Besides weak enforcement by states, compliance efforts also are impeded by limitations in EPA's data management systems. For instance, a 2002 audit by EPA's Inspector General found that "EPA's Permit Compliance System – its national permitting and enforcement system – was incomplete, inaccurate and obsolete. . . . Hundreds of thousands of dischargers were not monitored by the system."<sup>34</sup> The report estimated that EPA lacks data on an estimated 96 percent of stormwater discharges, 65 percent of discharges from concentrated animal feeding operations, and thousands of minor dischargers.<sup>35</sup> It also noted the failure of officials in the states examined to identify significant violators by major

sources. These findings were confirmed in another Inspector General report a year later, which found that EPA had made slow progress in fixing the flaws in the system.<sup>36</sup> (Eighteen states use EPA's computer system as their primary tool for enforcing the CWA.)

Moreover, many states fail to fully monitor the condition of their water bodies, as required by the CWA. For instance, according to EPA, as of 1998, states have assessed water quality for only 23 percent of the nation's rivers and streams, 42 percent of its lakes, ponds, and reservoirs, and 32 percent of its estuaries.<sup>37</sup> Even for those water bodies that have been assessed, the data are often unreliable and inconsistent across states (or even over time within the same state). The GAO found in 2000 that only six states reported that they had a majority of the data needed to assess whether their waters meet water quality standards.<sup>38</sup>

In theory, flaws in state implementation of the CWA should be remedied by EPA in its role of overseeing state programs. In practice, however, EPA has had only limited success in promoting better state performance. Numerous studies show that EPA oversight of state programs has been inconsistent and not particularly effective, for a variety of reasons.<sup>39</sup> In some cases, regional EPA administrators and regional EPA offices (the primary interlocutors with the states) feel loyalties to and develop close relationships with the states they oversee;<sup>40</sup> in other cases, they may feel intimidated by the prospect of tangling with governors or state congressional delegations.

Some oversight tools, such as "overfiling" and withdrawing authority for poorly performing states, are so politically charged and resource-intensive that they are scarcely ever used by EPA. Overfiling refers to the filing of a suit by EPA against an alleged violator even though the state already has initiated its own enforcement action against the party alleging the same violation(s). EPA appears to overfile in approximately 0.1 to 0.3 percent of federal enforcement actions.<sup>41</sup> In approximately the first three years of the Bush Administration, EPA overfiled in six cases (none of them under the CWA).<sup>42</sup> Moreover, EPA has rarely if ever actually withdrawn

a state's authorization.<sup>43</sup> Other traditional oversight techniques also have not been especially effective.<sup>44</sup> To cite one among many recent examples, in 2003, EPA's Inspector General found that despite well documented problems with Louisiana's water (and air and hazardous waste) programs, noted above, EPA's regional office lacked a plan for conducting oversight of the state's programs, did not hold the state accountable for meeting its commitments or escalate oversight in response to poor performance, and did not ensure that data submitted by the state were accurate.<sup>45</sup>

### *The Resource Gap in NPDES Programs*

At the same time that state NPDES programs are falling short in their performance, resources available to them are growing scarcer. While state environmental spending grew rapidly during the late 1980s and mid 1990s,<sup>46</sup> the rate of spending increases slowed in the late 1990s.<sup>47</sup> In 2001, the impact of the recession hit the states, leading to major budget shortfalls and cutbacks in spending on environmental protection. The Environmental Council of States (ECOS), an organization of state and territorial environmental commissioners, found that in Fiscal Year 2002, 30 of 42 states responding to its survey were forced to cut their environmental budgets, by an average of 6 percent.<sup>48</sup> Operating budgets absorbed about three-quarters of the cuts. Staff actions – leaving a position vacant or instituting a hiring freeze – were the most commonly mentioned ways for meeting the budget reductions. More cuts were made in Fiscal Year 2003, as overall state spending on environmental protection and natural resources programs dropped by another 1.6 percent.<sup>49</sup> ECOS reports that states spent 1.4 percent of their total state budgets on environmental protection and natural resources in 2003; this is the lowest percentage in the seventeen years that ECOS (or similar groups) have been calculating these numbers.<sup>50</sup> Notably, federal contributions to state programs have increased significantly in the past few years, from \$3.75 billion in 1999 to \$5 billion in 2003.<sup>51</sup> Absent these additional contributions, state program cuts would have been far more precipitous.

These cuts are unwelcome at any time and for any program, but the effects are particularly acute given the glaring resource needs of state water programs, including NPDES programs. In the late 1990s, a state/EPA task force undertook a major project to measure states' spending on water quality programs and forecast their resource needs for fully implementing the Clean Water Act's requirements.<sup>52</sup> The study (known as the "State Water Quality Management Resource Analysis" or the "Gap Analysis" for short) estimated that state resource needs were in the range of \$1.54 to \$1.68 billion; that state expenditures were in the range of \$722 to \$805 million; and that the resulting gap between needs and expenditures is between \$735 million and \$960 million. Overall, state agencies are receiving less than ½ the resources they need to fully implement the statute's requirements.<sup>53</sup> ECOS reported similar results last summer, estimating that in Fiscal Year 2002, the gap between funding and state resource needs for water quality programs was \$800 million.<sup>54</sup> The Gap Analysis and a very similar but slightly updated survey by the National Academy of Public Administration (NAPA) reported that funding for state programs comes from a variety of sources. According to the NAPA survey, 37 percent came from state revenues; 37 percent from federal contributions; 19 percent from fee revenues, and 6 percent from other sources (special funds, special taxes, bond funds, etc).<sup>55</sup>

The budget woes of the states have prompted some to consider returning authorization of their programs to EPA. For example, according to a news report in August, 2003, officials at a meeting of EPA's Environmental Financial Advisory Board reported that Missouri, Kansas and Iowa officials were considering returning their NPDES programs back to EPA.<sup>56</sup> (Also in Missouri, during the summer of 2003, the federal Office of Surface Mining assumed control of most of the federal surface mining program that had been delegated to the state after the state legislature forced its hand by eliminating funding for most of the state's program.<sup>57</sup>)

The federal government, facing its own mounting deficits, is unlikely to significantly increase its

contributions to state programs. Indeed, states have complained for a number of years that federal grants have failed to include adjustments for inflation.<sup>58</sup> In the area of enforcement, EPA has seen its own resources stretched thinner, and for each of the past three years, the Bush Administration has cutback EPA's proposed budget before submitting it to Congress.<sup>59</sup> From 2001 to 2003, EPA's enforcement and inspection staff has decreased by over 12 percent.<sup>60</sup> Since September 11, numerous criminal investigators from EPA have been assigned to help work on homeland security investigations and also to provide protective services when the EPA Administrator travels.<sup>61</sup> Resource shortfalls at the Department of Justice have resulted in civil enforcement cases referred by EPA (regarding water pollution, drinking water, and other important problems) being ignored or delayed for months.<sup>62</sup>

The Gap Analysis focused on gaps in overall state water programs.<sup>63</sup> To supplement these findings with specific data about NPDES programs, and also to gauge the effects of recent budget cuts on these programs, CPR's Clifford Rechtschaffen conducted a short survey of states currently authorized to fully implement the NPDES program. The survey, reprinted in full in the Appendix, asked about several aspects of states' NPDES programs for the period 2000 to 2002, including personnel and resources devoted to permitting, monitoring, enforcement and compliance assistance programs; examples of how budget shortfalls had affected their program; and what level of funding they believed was necessary to meet all their mandates. Of the 45 states to which surveys were sent, 17 replied. The survey was sent to each state's director of water quality programs.

While the survey is not intended to be comprehensive, the results illustrate some important trends. Overall, the responses confirm that the state-authorized NPDES programs have been significantly affected by shrinking funding and face major gaps between program needs and available resources. Of the responding states, 12 said they had been forced to make budget cuts; five said they had not.

- Maryland, for example, from 2002 to 2004, cut back 7 percent of its compliance staff (and anticipates additional cuts in the upcoming year), leading it to conclude in internal budget analyses that the impacts would be poorer water quality and a high risk of public health effects.<sup>64</sup>

- Wyoming reported that inspections had been cut and monitoring had been limited.

- Washington officials cited a backlog in permits, fewer inspections, and less technical assistance provided

- Arizona responded that during fiscal years 2003 and 2004, “our water programs have received budget and personnel cuts due to state budget constraints. This has impacted compliance/enforcement programs and all water programs.”

- Several states, including Georgia, North Carolina, and Hawaii, reported freezing program positions (and in some cases freezing salaries).

- Oregon noted that a permanent cut of two positions from its permitting staff would cause delays in issuing permits for at least 25 smaller communities and 400 construction sites.

- California reported that its regional boards had “reduced their commitments” to perform virtually all aspects of the regulatory program, including reissuing expired or expiring permits, conducting inspections, issuing enforcement orders, responding to public complaints, and handling cases.

- Minnesota’s comments reflect the predicament facing many states:

As with most, if not all states, Minnesota’s NPDES program has been and continues to be squeezed between rising program demands and expectations and stagnant or declining revenues. On the revenue side, a major problem continues to be the lack of inflationary adjustments at both the federal and state levels. With each passing year, the federal grants and state appropriations simply buy less program delivery so expectations and deliverables will have to be adjusted accordingly,....Minnesota has

taken some steps to address these problems, but taken individually or even as a group, they do not address the long term problem of fund shortages. Annual water quality permit fees and application fees have been increased but still fund less than a third of the program. ... In the past, the legislature has provided stop gap funding to the program on a one time basis, but that is not to be considered a reliable long term funding solution.

Table One summarizes the survey responses in terms of the states’

individual estimates of how much funding they require to meet current statutory requirements, what percentage of that funding they actually have available for meeting those requirements, and

what impact recent budget cuts have had on their programs.

Thirteen of the responding states indicated they had too little money to adequately meet all federal and state statutory mandates. As indicated in Table 1, the shortfalls identified were often significant, such as in Georgia (5 times current level), California (more than 4 times current level), Arizona and Wyoming (3 times current level) and Maryland and Minnesota (2 times current level).<sup>65</sup> Montana’s response was that “to better meet our mandates *in a timely manner* we might need twice our resources (emphasis in original).” Other data prepared by Wisconsin in 2001 (not in connection with this survey) estimated that its resource gap for water quality compliance programs was \$5.3 million and for enforcement programs, \$1.2 million.<sup>66</sup>

The states that reported fewer cuts generally were those more heavily supported by permit fees. (Not all states authorize fees at levels that fully fund their programs, and as noted below, in some states fees can be used for other purposes.)

- Florida, which is required to have a program fully supported by fees, indicated that it experienced no budget cuts or layoffs.

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*Thirteen of the responding states indicated they had too little money to adequately meet all federal and statutory mandates. The shortfalls identified were often significant, such as in Georgia, California, Arizona, Wyoming, Maryland and Minnesota.*

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**Table One: State Resource Needs and Impact of Budget Cuts (2002)\***

<i>State</i>	<i>Total Resources Needed</i>	<i>% of Program Needs Currently Being Met</i>	<i>Impacts of Recent Budget Cuts</i>
<b>Alabama</b>	<b>adequate</b>	<b>100 percent</b>	none
<b>Arizona</b>	<b>2.9 million</b>	<b>30 percent</b>	Budget & Personnel cuts; Compliance, Enforcement, & All Water Programs Impacted
<b>California wastewater</b>	<b>215 positions vs. 49.3 currently funded</b>	<b>23 percent (est)</b>	'Reduced commitments' to virtually all aspects of program
<b>California stormwater</b>	<b>200 positions vs. 119 currently funded</b>	<b>60 percent (est)</b>	Staff Departures, Shift in Personnel, Loss of Interns
<b>Delaware</b>	<b>Adequate</b>	<b>100 percent</b>	none
<b>Florida</b>	<b>\$5 million</b>	<b>90 percent</b>	none
<b>Georgia</b>	<b>\$21.5 million</b>	<b>20 percent</b>	positions frozen
<b>Hawaii</b>	<b>\$3.6 million (w/TMDL)**</b>	<b>58 percent</b>	positions frozen
<b>Maryland</b>	<b>\$17.6 million</b>	<b>50 percent</b>	6 percent cut in positions
<b>Minnesota</b>	<b>\$8.16 million</b>	<b>90 percent</b>	Staff Transferred, Lower Priority Positions Reduced, Greater Efficiencies
<b>Montana</b>	<b>'Two times current level to meet mandates in a timely manner'</b>	<b>50 percent (est)</b>	1 staff position cut
<b>North Carolina</b>			positions frozen
<b>New Jersey</b>	<b>\$15.76 million</b>	<b>100 percent</b>	None
<b>Nevada</b>	<b>\$0.2 million</b>	<b>100 percent</b>	None
<b>Oregon</b>	<b>68 positions vs. 56 currently funded</b>	<b>82 percent (est)</b>	2 positions eliminated; permit delays for 400 construction sites, 25 small communities
<b>Washington</b>	<b>\$13.1 million</b>	<b>85 percent</b>	Fewer inspections, technical assistance, backlog in permits
<b>West Virginia</b>	<b>\$3.4 million</b>	<b>86 percent</b>	Positions Transferred so that funded by Fees
<b>Wyoming</b>	<b>\$5.5 million</b>	<b>29 percent</b>	Fewer inspections & less monitoring

Source: Author's Survey and Results

\* State responses varied in form, sometimes expressing shortages in personnel terms, sometimes in dollar terms. Responses are reproduced here as provided by the states.

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

- Nevada, which also is 100-percent fee-supported, also did not make any cuts; it reported that after the agency faced shortfalls four years ago, “[w]e were able to raise fees with the *support* of the regulated community. We also built in an automatic increase [of 3 percent] due to inflation. We are doing well (emphasis in original).”<sup>67</sup>

- New Jersey likewise has a fee program that ensures that the Department of Environmental Protection can recover all of the costs of administering its permit system (which covers both the NPDES program and state discharge requirements). Thus, its program has not been affected by recent state budget problems.<sup>68</sup>

- West Virginia (83 percent fee supported) reported that through its fee program it was able to save five positions that it otherwise would have been forced to cut because of reductions in general fund monies.

Other states are moving in the direction of greater reliance on fees.

- Oregon responded that “[a]s general funds become increasingly scarce, [we are] relying more heavily on fees.”
- California increased its fees in 2002 and again in 2003 to offset the severe shortfall facing the state’s general fund; the state’s 2003 Budget Act requires that the entire general fund portion of the state’s core water quality regulatory program be paid for by permit fees.<sup>69</sup>

Other states reported that fee increases are not currently feasible.

- Washington officials, after noting that its fee program is currently underfunded by roughly 20 percent, noted that increasing fees was not desirable, “especially in the current economy.”

To remedy the daunting resource gap facing them, states should shift the costs of implementing their NPDES programs to regulated entities through permit fee programs. Fees should be set at a level necessary to fully fund program costs, and revenue generated by the fees should be dedicated to NPDES

programs. The Clean Air Act, for example, requires states to impose permit fees sufficient to fund the costs of administering and enforcing their Title V permit programs.<sup>70</sup> Fee programs appropriately place the costs of program administration on those entities responsible for water pollution, and also can create incentives for pollution reduction, by imposing graduated fees based on the size of a facility’s discharges.

Most states currently collect some fees from NPDES-permitted facilities. The NAPA study referenced above found that of 37 states surveyed, 32 collect permit fees, but in many cases they cover only a portion of the state’s program costs. A more detailed survey by the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) in 2003 found that of 22 states responding, 17 had permit fees.<sup>71</sup> Of these 17, ten use the fee proceeds solely for NPDES related activities; in five states the proceeds can fund any water program activity; in five the fees were deposited into the general fund; and in two states the fee proceeds could be used only to a very limited extent or not at all for water quality programs. Where necessary, these existing programs should be redesigned to ensure that fees are set at a level that fully funds NPDES program costs, and that the fee revenues are dedicated to NPDES programs. States currently without fee programs should follow suit. In this era of scarce governmental resources, such dedicated permit fee programs are essential to bridging the gap between state resources and program needs.

### *Using the Power of Spotlighting to Reduce the Performance Gap*

As the above discussion illustrates, the clear Congressional and public desire for strong enforcement of the Clean Water Act is being undermined by deficiencies in enforcement efforts and resource shortfalls. How, then, can enforcement of the Clean Water Act be improved? Resource shortfalls seem likely to be a constant; if anything, they may grow to larger proportions as NPDES programs expand to cover thousands of additional

sources such as stormwater dischargers and Concentrated Animal Feeding Operations (CAFOs). Stricter federal oversight of state programs is desirable as well, but is unlikely to produce any dramatic changes given the past track record of EPA timidity in this area.

In recent years a lively debate has raged about what type of enforcement approach best achieves compliance with environmental laws.<sup>72</sup> EPA traditionally has favored a deterrence-based approach, one that relies on inspections, formal enforcement responses, and sanctions in the event of violations (although its commitment to this approach has been wavering under the current Bush Administration, at least among its top-level political appointees).<sup>73</sup> The states by and large have preferred a more conciliatory, cooperative-based model that relies more on incentives and technical assistance programs to achieve compliance. Interestingly, at least one recent public opinion survey indicates that there is substantial support for traditional government enforcement as compared to more flexible, “industry friendly” approaches.<sup>74</sup> Indeed, a deterrence-based approach, informed by positive elements of cooperation-based enforcement, is the best way to improve rates of compliance.<sup>75</sup>

There is also a third avenue, however, that can effectively serve as a supplement or adjunct to any type of primary enforcement mechanism – whether it be a deterrence-based approach; cooperation-based approach; or something in between. This third approach relies on the mechanism of mandatory disclosure of enforcement and compliance related data, and has yet to be exploited by environmental regulators. Yet as discussed below, it has the potential to significantly improve the results achieved by existing enforcement schemes while requiring relatively few resources to implement.<sup>76</sup>

The technique of using information disclosure – or spotlighting – to achieve environmental objectives has become increasingly popular in the past two decades. It enjoys support across the political spectrum – economists like it because it relies on the efficiency of market forces, while environmental

advocates favor it because it can promote citizen empowerment and create incentives for firms to reduce harmful activities. It also has proven to be quite effective in recent years. Indeed, the specter of having unfavorable information disclosed publicly has shown itself to be a very strong motivator of improved performance.

A spotlighting approach can be employed at a variety of institutional levels and for a variety of regulatory ends. This section describes three ways in which spotlighting should be utilized to remediate the performance gap in NPDES programs:

- EPA should spotlight the enforcement and compliance related records of regulated firms;
- EPA should spotlight the performance of state NPDES programs in achieving compliance among regulated firms within their states;
- The Securities and Exchange Commission should spotlight polluting companies by expanding the mandatory environmental disclosure requirements for publicly-traded corporations.

### ***Spotlighting Business Enforcement and Compliance History***

As recent experience has shown, mandated disclosure of data such as a facility’s emissions and exposures to toxic chemicals from consumer products or other sources has been quite successful in improving environmental performance. The most prominent example is the Toxic Release Inventory (TRI) program, enacted as part of the Emergency Planning & Community Right-to-Know Act in 1986. TRI requires manufacturing and certain other industrial facilities to annually disclose their releases and transfers of 654 specified toxic chemicals, subject to reporting thresholds. Facilities subject to this program from 1988 to 2001 have reported a remarkable 54.5 percent decline in their releases of covered chemicals.<sup>77</sup> California’s Proposition 65, which requires warnings prior to exposures to listed carcinogens and reproductive toxins, also has generated substantial reductions in industrial air

emissions and significant reformulations of consumer products containing toxic chemicals, including brass faucets, ceramicware, calcium supplements, water meters, water filters, baby rash powders and creams, anti-diarrheal medications, hair dyes, wooden playground structures, and portable classrooms, among other products.<sup>78</sup> One public interest attorney estimates that as a result of Proposition 65 enforcement actions filed against thirty facilities over the past five years, the facilities collectively reduced their emissions of perchloroethylene, a listed carcinogen, by approximately 640,000 pounds.<sup>79</sup>

Related, public disclosure of a firm's record of compliance can stimulate improved performance, as born out by a number of studies (additional studies showing how the stock market reacts negatively to poor environmental performance are discussed in the section below).<sup>80</sup> For example, when the Missouri Department of Natural Resources began issuing news releases about public water systems that violate monitoring requirements and posting these releases on the Internet, it found that notifying the violators in advance resulted in 80 percent of chronic violators coming into compliance within one month.<sup>81</sup> In another program, Indonesia's environmental agency developed a color-coded grading system for evaluating the environmental performance of industrial facilities.<sup>82</sup> The grades for the facilities were publicly disclosed, although there was a six-month delay in disclosing firms in the worst two categories to allow them an opportunity to improve their performance. Rates of compliance among participating factories increased from 35 percent to 51 percent, and discharges on average declined by 43 percent.<sup>83</sup> Likewise, a study of compliance and emission levels over a six year period by pulp and paper firms in British Columbia found significant impacts when the regional environmental agency published a list of firms significantly out of compliance. Being on the list of noncompliers led to significant emission reductions, reductions that actually exceeded those attributable to enforcement orders and penalties assessed against the firms.<sup>84</sup>

In another recent analysis, Professors Kagan, Gunningham, and Thornton assessed the

determinants of environmental performance of 14 pulp and paper manufacturing mills in several countries. They concluded that variations in social pressures (among other factors) had a significant effect on firms' relative performance. According to the authors, many mill managers spoke of having to meet not only the terms of their regulatory license but of their "social license" from the community. They report that managers at one facility "told us that the sanction it feared the most...were not legal sanctions but informal sanctions imposed by the public and media, and hence it was motivated less by avoiding regulatory sanctions per se as "anything that could give you a bad name."<sup>85</sup>

Perhaps the boldest enforcement-related spotlight is that launched by Great Britain's Environmental Agency. The Agency annually publishes a "Spotlight on Business Environmental Performance," detailing the environmental performance of various business sectors and the firms within them.<sup>86</sup> Within each sector, the report highlights good and bad performers, pollution accidents, and fines assessed. The performance of firms is graded according to a scoring system developed by the Agency, based on the inherent risks of processes at a facility, and the operator's ability to manage these environmental risks (one system for waste facilities, another for non-waste facilities).

Britain's "Spotlight" report goes well beyond disclosure efforts tried in this country to date, in a couple of significant ways. First, the government is actively involved in evaluating private firm performance; as a result, the evaluations are likely to have considerable credibility with the public.<sup>87</sup> Second, the environmental agency presents the information in comparative form, directly contrasting good and bad performers (including some case studies), and explicitly drawing attention to firms that were penalized the most or responsible for the most spills in the prior year. A few examples from the report are reproduced here (see table).

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

When the Environment Agency first turned the media spotlight on poor environmental performance five years ago, a chorus of disapproval rolled through the ranks of regulated industry. Five years on, *Spotlight on business environmental performance* has developed and expanded into a rounded assessment of performance, good and bad, and highlights positive action as well as failings. In its short lifetime the report has become a regular fixture in the environmental calendar, its findings keenly anticipated by some, anxiously awaited by others.

The latest report shows the positive trends of previous years continuing... [including] reductions in many pollutant and significant overall improvements in environmental management.

EPA and the states should follow the lead of Britain's Environmental Agency in its effort to spotlight the performance of regulated facilities. EPA has taken a very significant step in this direction with the development in 2002 of the Enforcement and Compliance History Online (ECHO) website,

The worst performing licensed waste management facilities in 2002\*

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

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

**Table 10** Companies in "other sectors" Fined £10,000 or more in 2002

Offender	Sector	Number of events leading to prosecution	Total fine
Faccenda Group (South) Ltd	Production (meat and poultry products)	4	£75,000
BP Oil (UK) Ltd	Wholesale (fuels and related products)	3	£60,000
Tata Fruit UK Ltd	Wholesale (fruit and related products)	3	£54,000
S H Pratt and Company (Banarag) Ltd	Wholesale (fruit and vegetables)	2	£53,000
Knoxpan Ltd	Manufacturing (wood products)	10	£46,000
Loar Corporation (Nottingham) Ltd <sup>1</sup>	Manufacturing (motor vehicles)	7	£40,000
Loar Corporation UK Interior Systems Ltd <sup>1</sup>	Manufacturing (motor vehicles)	7	£40,000
Fujin Welding & Fabrication Railway Ltd	Transport (railways)	3	£35,000
Europackaging plc	Manufacturing	2	£25,000
Computer 2000 Distributor Ltd <sup>1</sup>	Wholesale (electronics and others)	7	£25,000
Stationery Box Ltd <sup>1</sup>	Retail	9	£25,000
Greenvale Foods Ltd	Manufacturing (food products)	7	£24,500
Banham Poultry Ltd	Wholesale (meat and meat products)	2	£24,000
B & D Electroparts Ltd	Manufacturing (electrical)	1	£20,000
F & R Dunlop Services Ltd <sup>1</sup>	Retail	7	£17,000
Loar Corporation (UK) Ltd <sup>1</sup>	Manufacturing (motor vehicles)	3	£16,000
Bernsten Group plc <sup>1</sup>	Manufacturing (furniture)	5	£16,000
Rudge & Stone Ltd	Retail	1	£16,000
PW Greenhagh & Company Ltd	Manufacturing (textiles)	2	£15,000
E Harcor (York) Ltd	Other	3	£15,000
Hedon Salads Ltd	Wholesale, retail trade	6	£15,000
Bowood Event Hire Ltd	Service activities	1	£13,500
Juncors Ltd <sup>1</sup>	Wholesale (other)	3	£13,500
Yoplat Dairy Crest Ltd	Wholesale (food)	2	£13,000
Antel Telecommunications plc	Telecommunications	1	£12,500
St James Haulage Ltd	Other	3	£12,500
Honda Trading Europe Ltd	Service activities	1	£12,000
Nippon 2000 Sports and Tyres Company Ltd	Retail	4	£12,000
Paul Hartman Ltd <sup>1</sup>	Wholesale (pharmaceuticals)	7	£11,500
Coventry Framework Ltd	Manufacturing	1	£10,000
Tesco Stores Ltd	Retail	1	£10,000
Inscribew UK Ltd	Manufacturing (books)	1	£10,000
CPS Group Ltd	Cleaning	1	£10,000

<sup>1</sup> Prosecuted for Architectural responsibility offences

although as discussed below, it has stopped short of the British agency's efforts.<sup>88</sup>

ECHO, an outgrowth of a pilot project known the Sector Facility Indexing Project (SFIP), provides enforcement and compliance information under the Clean Water Act, Clean Air Act, and RCRA for about

800,000 regulated facilities.<sup>89</sup> While much of this information previously was publicly available, it was scattered in different places and hard to access. In particular, ECHO displays for the previous two years the following information: inspections or evaluations of the facility; its compliance status; violations detected; pollutants associated with the violations and whether they are significant; formal enforcement actions taken; penalties imposed as a result of the enforcement actions. It also provides data about the demographics of the community located within one, three, and five miles of the facility. During its first year, EPA reports that the site was accessed by over a million people.<sup>90</sup>

ECHO is not without its critics or flaws. Numerous regulated entities, in particular, have made complaints about presentation and searching issues (i.e. navigating the site), about its use of confusing terms, and about the accuracy and completeness of data,

including whether corrections are entered rapidly enough.<sup>91</sup> They also contend that the data presented are not meaningful to the public without additional context,<sup>92</sup> and fault EPA for providing too much data, arguing, for example, that the "site presents an excessive amount of information that is overwhelming to members of the general public who are not environmentally

sophisticated and trained in environmental law jargon.”<sup>93</sup>

On the other hand, as evidenced by the large number of positive comments filed with EPA after it launched the site was launched, disclosure can be enormously potent.<sup>94</sup> Numerous members of the public commented on the empowering function of the site. One wrote that “[t]his is a tremendous resource to help us track the actions of potential polluters in our watershed. It helps us identify persistent flaunters of environmental laws, and just as importantly, lets us know which industries are doing a good job at managing their pollution.”<sup>95</sup> Another commented that “I really appreciate the opportunity to see how well the companies in my community are complying with our environmental law.”<sup>96</sup> Others noted how ECHO had directly helped inform their decision making:

As a concerned citizen that is presently seeking to move north of my current community, this is an invaluable resource. My family & I have already terminated an agreement for a home purchase due to the excessive quantities of both lead and arsenic in the home’s drinking water. To have access to the various water-treatment facilities’ statistical information, it will assist countless individuals to make the best choices for their loved-ones.<sup>97</sup>

Interestingly, state and local agency staff also noted the value of ECHO’s information, such as reflected in the comment below: “As a state-level staff that handles facility NPDES permit compliance and enforcement, this website would definitely assist me in ensuring that correct and up-to-date data is in the federal system for facilities, as well as provide an at-a-glance overview of their 24 month compliance status.”<sup>98</sup> Another local government user noted that because of ECHO, “I was able to see many, many companies in my city and see what they are up to and what danger they might pose...,”<sup>99</sup> while another reported using ECHO “as a vital component of Title V [of the Clean Air Act] reviews [that] helps me understand which plants need the most scrutiny.”<sup>100</sup> Even a substantial number of regulated entities praised ECHO, one noting that “[t]his database is

revolutionary for environmental awareness,”<sup>101</sup> another commenting that “this is a great tool to review other operations and their problems so that we can be pro-active instead of re-active.”<sup>102</sup> EPA found in its review of public comments that “industry reported that companies were finding ECHO to be an efficient and cost-saving way to monitor the compliance records of their facilities scattered around the country.”<sup>103</sup>

ECHO is very impressive as far as it goes, but it stops short of the full potential that can be achieved by spotighting. While EPA has amassed a great deal of data in one place, it has not taken the next step of publicly evaluating and ranking the compliance records and performance of regulated firms. Spotighting is at its most powerful and effective when it draws clear distinctions among firms. As Professor Shelley Metzenbaum has written, comparison has great power to embarrass and motivate, just as the spotlight of comparison shopping by consumers spurs firms to improve their products.<sup>104</sup> Thus, EPA (and eventually states as well, when they develop adequate capacity) should take the next step, and begin publicly evaluating and comparing the compliance records of the best and worst regulated facilities. It should rank facilities based on factors such as number of violations, size of penalties assessed against them, length of time in significant noncompliance, frequency of repeat violations, degree to which discharges or emissions exceed permitted levels, absolute levels of excess emissions or discharges, and number of spills or accidental releases. These comparisons should be done both in tabular and graphic form, so that they are visually compelling.<sup>105</sup> EPA should begin with a key few priority sectors, as it did with the pilot SFIP that paved the way for ECHO.<sup>106</sup> While this type of analysis could in theory be performed by environmental organizations, it would involve considerable resources and more importantly, lack the credibility and objectivity of a report generated by the government.

### **EPA Spotlight on State Agency Performance**

The public spotlight on environmental enforcement and compliance efforts should go beyond

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

There are several types of criteria that can be used to evaluate state environmental programs – including bottom-line environmental indicators or conditions; rates of compliance and other behavioral changes by regulated entities; and levels of agency enforcement activities (such as number of inspections carried out, enforcement actions initiated, penalties assessed, etc.) A growing literature about the merits of these approaches has begun to emerge.<sup>107</sup> Certainly levels of compliance should be a very significant measure of the efficacy of enforcement programs. Although not without important limits,<sup>108</sup> compliance is a “bottom line” measure for state enforcement programs - reflecting the success of states in ensuring that regulated facilities adhere to the law.

EPA's traditional guidance for oversight of state enforcement programs,<sup>109</sup> as well as more recent guidance developed under the National Performance Partnership System (NEPPS), a new EPA/state oversight initiative, identify rates of compliance as one criterion for evaluating state program performance.<sup>110</sup> But historically, compliance rates have not played a central role in EPA's evaluation of state programs, and many states have not measured them in a reliable manner.<sup>111</sup> There are any number of reasons for this, including the technical challenges and resources involved in calculating accurate compliance rates.<sup>112</sup> If, however, states' authorization to implement federal programs or their access to federal funding were contingent on providing accurate and complete compliance information, the states would be spurred to calculate more reliable compliance rates.

Thus, EPA should insist as a condition of granting NPDES program authorization to the states that states (1) develop a methodology for accurately measuring compliance rates, (2) annually calculate

such rates, and (3) publicly report them. Some key compliance measures that should be reported include the overall rate of compliance and significant noncompliance among regulated facilities; the rate of compliance and significant noncompliance in priority sectors; the severity of noncompliance (i.e. how far in excess of permitted levels are unlawful discharges); and rates of repeat and recidivist violations.

EPA should compile the information reported by states and present in comparative form the compliance rates achieved within each state, perhaps grouping states by region of the country. This data should be posted on EPA's regional and national web pages, among other places, and otherwise widely disseminated to the public and media. As argued above, disclosure and comparison have great power to embarrass and motivate better performance.<sup>113</sup>

### **Expanding Securities Rules Governing Corporate Disclosure of Enforcement Information**

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

There is an expanding socially responsible investment movement that evaluates the social records of companies, including their record of environmental compliance and performance, when making investment decisions in the stock market. Approximately \$2.16 trillion of professionally managed assets in the U.S. is invested according to social criteria - approximately 11 percent of all such assets. This number has been steadily growing over the past decade.<sup>114</sup> A Gallup Poll in 2000 found that 9 percent of the public had bought or sold stocks based on the environmental record of the companies in the previous year.<sup>115</sup>

Beyond this socially responsible segment of the market, information about environmental performance can be quite relevant to other investors. A number of studies show that stock prices rise and

fall in response to the release of either positive or negative environmental information about firms' performance.<sup>116</sup> Events that have been shown to trigger significant reductions in the market value of firms include disclosures relating to the compliance record of firms, such as the initiation of enforcement actions against a company, or oil or chemical spills, as well as such as disclosures of high levels of routine emissions. For example, a study of stock market reactions to 730 EPA judicial actions for a sample of publicly traded firms from 1972 to 1991 found that the market value of the average affected firm dropped 0.43 percent during the week of settlement of the enforcement action. The estimated market penalty was larger for more recent actions and for repeat offenders.<sup>117</sup> Another recent investigation looked at the impact on stock prices of firms in three industrial sectors in India after a leading environmental group published ratings about their environmental performance – which generally showed poor performance. It found that in two of the three sectors examined, stock prices declined significantly after the ratings were published. The losses were more significant for firms with lower rankings; declines were as high as forty-three percent for those identified as the worst performers.<sup>118</sup> Similarly, another study found that the public announcement of penalties by the Occupational Safety and Health Administration (OSHA) led to a significant drop in stock prices.<sup>119</sup> There are numerous reasons why the disclosure of noncompliance or poor environmental performance may lead to stock losses. Investors may view it as a signal that the firm is more likely to face future enforcement actions, compliance and remedial costs, third party litigation, or a loss of future government contracts. Likewise, they may think that the firm will be perceived by government regulators and the public as a bad actor, making it more difficult for the company to obtain permits and regulatory approvals, subject to more enforcement scrutiny, or likely to face more community opposition. Or investors may regard this data as an indication that the firm is poorly managed, or operating inefficiently.

At the same time, there is a growing body of evidence demonstrating that firms with superior environmental records perform better financially than their counterparts with weaker records - that

environmental performance can serve as a partial proxy for the riskiness of investing in a firm. In a review of the literature in 2000, EPA concluded that “[a] significant body of research shows a moderate positive correlation between a firm’s environmental performance and its financial performance, regardless of the variables used to represent each kind of performance, the technique used to analyze the relationship, or the date of the study.”<sup>120</sup> In their study of 652 manufacturing firms, for example, Professors Andrew King and Michael Lenox found that firms which had lower levels of emissions (both in an absolute sense and relative to other firms in their industry) had higher levels of financial performance.<sup>121</sup> Another recent analysis looked at the performance of close to 200 firms and found a positive relationship between environmental and economic performance, as measured by annual industry-adjusted stock returns. (The study also found that superior environmental performers disclose more pollution-related environmental information than do poor performers,<sup>122</sup> and that there was a positive relationship between past disclosure and current performance.<sup>123</sup>) Innovest, a financial advisory firm, has developed investment risk ratings for 1500 corporations, based on their environmental performance and viability. According to its grading system, investing in firms with high environmental ratings will yield returns from 1.5 to 3 points higher than investing in firms across the stock market.<sup>124</sup>

Thus, environmental performance information is important to both socially responsible and ordinary investors. Notably, a national survey of investors in 2000 found that 79 percent of respondents believed that information about corporate responsibility, including compliance with environmental standards, was necessary to make investment decisions.<sup>125</sup> As discussed below, this interest can and should be leveraged to encourage better environmental compliance by publicly traded firms, by requiring greater disclosure of environmental compliance related information.<sup>126</sup>

Currently, securities law requires that publicly traded firms disclose a range of information when

companies first issue securities and on a regular basis thereafter. The disclosure requirements are contained in one omnibus regulation issued by the Securities and Exchange Commission (SEC), Regulation S-K.<sup>127</sup> Unfortunately, the current rules bearing most directly on disclosures about environmental enforcement and compliance related issues are unduly narrow. Item 103 requires companies to disclose any material environmental legal or administrative proceedings, either pending or known to be contemplated, including actions involving the government which involve potential monetary sanctions that are likely to exceed \$100,000, and any claims for damages or sanctions that exceed 10 percent of the company's assets.<sup>128</sup> Firms are also required by Item 101 to make "appropriate disclosure" about the material effects that complying with environmental requirements may have upon the firm's capital expenditures, earnings, and competitive position.<sup>129</sup> Item 303 also requires firms to disclose any known trends or uncertainties that the company *reasonably expects* will have a material impact on the company, which can include potential enforcement actions or future regulatory compliance costs.<sup>130</sup> The rules do not, however, mandate disclosure of other information about a firm's environmental compliance record that may be equally relevant to investors.

The SEC should expand Item 103 in three ways. First, it should include in the category of legal proceedings with sanctions likely to exceed \$100,000 citizen-initiated enforcement actions, as well as government proceedings.<sup>131</sup> (Under current rules, citizen actions for penalties that exceed 10 percent of a company's assets would have to be disclosed, but in many instances this is a much higher threshold.) As Professor Jim May has documented, citizen actions to enforce the Clean Water Act have grown dramatically in size and significance over the past two decades; between 1995 and 2003, for example, citizen enforcers filed 1,428 sixty day notices of intent to sue under the Clean Water Act.<sup>132</sup> Second, *any* criminal enforcement action for violation of environmental laws should be considered "per se" material and subject to disclosure, regardless of the amount. Criminal actions may not lead to significant monetary sanctions, but may reflect far more serious and deep-

seated corporate misbehavior than civil actions over \$100,000. Last, "sanction" should be interpreted to include not merely penalties but remedial clean-up costs, environmentally beneficial projects, and other expenditures that result from government actions. (Under current rules, these costs have to be disclosed if they exceed the 10 percent threshold of a company's assets.) For investors seeking to evaluate the environmental performance of a company, information about such expenditures may be as consequential as sanctions prompted by enforcement actions.

Beyond amending Item 103 to reflect the above changes, there are larger questions of what enforcement-related data should be subject to mandatory disclosure given the heightened investor interest in environmental performance. Reformers such as the Coalition for Environmentally Responsible Economies (CERES) and the Corporate Sunshine Working Group have persuasively argued for the adoption of broader disclosure rules that go well beyond current requirements. These include requiring firms to disclose the total number of private and government enforcement actions filed against the firm; the total value of penalties, Supplemental Environmental Projects (SEPs), and other payments assessed against the firm or paid pursuant to civil settlements; and summaries of compliance and monitoring reports that firms are required to prepare under various environmental statutes.<sup>133</sup> Some major institutional investors, including State Treasurers, also have begun calling for the SEC to broaden its disclosure requirements.<sup>134</sup>

In the past, the SEC has resisted efforts to mandate disclosure of this type of information on the grounds that it was not material to investors. As discussed above and as articulated by Michelle Chan-Fischel, "the same argument clearly cannot be justified today... [B]oth traditional and socially responsible investors seek and incorporate nonfinancial information as an essential part of their investment analysis and decisionmaking.<sup>135</sup> Indeed, the bottom line "[e]vidence that information about compliance with the law is material is found in the

typical stock market reaction to a company's announcement of illegality: the stock price drops."<sup>136</sup>

One final but critical point is that no matter what rules are in place, they will have little impact if they are not followed. Even the limited disclosures currently required by SEC rules seem to be ignored by most companies, as documented saliently by a 1998 EPA investigation. The study looked at disclosure in firms 10-K statements of legal proceedings involving three types of monetary sanctions in excess of \$100,000: penalties; Supplemental Environmental Projects (SEPs); and corrective actions under the Resource Conservation & Recovery Act (RCRA).<sup>137</sup> Over a two-year period, non disclosure rates were high: 74 percent for proceedings involving penalties; 84 percent for proceedings involving SEPs, and 96 percent for RCRA corrective actions. Even fewer companies accurately disclosed the required information (i.e. correctly identified the statute violated and the amount of the sanction).<sup>138</sup> In another study of 26 firms involved in initial public offerings who were known potentially responsible parties under the federal Superfund law, only 12 made any sort of disclosure about this potential environmental liabilities, and even among those firms, the information disclosed was quite limited. The authors chose to examine this group because of the heightened scrutiny surrounding firms when they first go public. They concluded that "the empirical evidence is unequivocal: the same relatively low level of disclosure by companies already admitted to the public securities markets is mimicked by those firms that are "going public" for the first time. The more intense scrutiny, the higher stakes involved in an [Initial Public Offering] and the enhanced due diligence procedures apparently are of no consequence in prompting a greater amount or quality of environmental disclosure."<sup>139</sup> Complaints filed with the SEC and investor lawsuits have alleged that in numerous other instances, companies have failed to disclose material environmental matters, including government enforcement actions.<sup>140</sup>

Thus, it is essential for the SEC to more vigorously police its disclosure rules with respect to environmental enforcement and compliance matters –

to systematically screen public filings by firms to ensure that they disclose environmental matters, and, even more importantly, to take enforcement action against violators.<sup>141</sup> The SEC appears to acknowledge to at least some degree that environmental disclosure is an issue worthy of closer attention. It indicated in 2001 that it would devote more resources to this issue,<sup>142</sup> and in comments issued on the annual reports of Fortune 500 companies filed in 2002, the SEC reported that a number of companies had not adequately disclosed their environmental liabilities, and that the SEC had asked them to enhance their disclosures.<sup>143</sup>

Nonetheless, the agency almost never brings enforcement actions against firms based on failure to disclose environmentally-related information. According to a study by Robert Repetto and Duncan Austin of the World Resources Institute, out of over 5,000 administrative enforcement actions initiated by the SEC from 1975 to 2000, only three were based on inadequate disclosure of environmental risks or liabilities. Over the same period, the SEC brought only one civil enforcement case for insufficient environmental disclosure rules. Three of these four actions were brought before 1980.<sup>144</sup> Repetto and Austin conclude that "[s]uch a small number of enforcement actions does not suggest vigorous enforcement activity...[e]xamples of incomplete disclosure brought to the SEC's attention have not resulted in any discernible enforcement action."<sup>145</sup> As one EPA enforcement lawyer remarked, "the SEC's non-enforcement...undermines EPA operations to encourage corporate compliance with US environmental laws...it sets a disincentive for others to comply if competitors aren't."<sup>146</sup>

For its part, EPA should be more proactive in trying to encourage SEC vigilance and firm compliance with disclosure rules. The agency has expressed its view that "[i]ncreased scrutiny of corporate environmental information, particularly legal proceedings, by the public, shareholders, and investors will likely provide an incentive for companies to handle environmental problems in a more expeditious manner, and provide a deterrent to future noncompliance."<sup>147</sup> In early 2001, EPA began

notifying parties subject to EPA-initiated administrative enforcement actions of their potential duty to disclose the proceeding in accordance with SEC rules.<sup>148</sup> But EPA does not regularly provide information to the SEC about its enforcement actions,<sup>149</sup> and the EPA does not follow up with the SEC to see if firms subject to enforcement actions have complied with the SEC's disclosure rules. Indeed, after a period of considerable interest and activity in this area in the late 1990s,<sup>150</sup> EPA has done relatively little since then to promote greater corporate disclosure.

### **Conclusion**

Three decades of experience under the Clean Water Act have demonstrated both the Act's strengths and deficiencies. One important shortcoming is the

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

### **About the Center for Progressive Regulation**

*Founded in 2002, the Center for Progressive Regulation is a nonprofit research and educational organization of university-affiliated academics with expertise in the legal, economic, and scientific issues related to regulation of health, safety, and the environment. CPR supports regulatory action to protect health, safety, and the environment, and rejects the conservative view that government's only function is to increase the economic efficiency of private markets. Through research and commentary, CPR seeks to inform policy debates, critique anti-regulatory research, enhance public understanding of the issues, and open the regulatory process to public scrutiny. Direct media inquiries to Matthew Freeman at [mfreeman@progressiveregulation.org](mailto:mfreeman@progressiveregulation.org). For general information, email [info@progressiveregulation.org](mailto:info@progressiveregulation.org). Visit CPR's website at [www.progressiveregulation.org](http://www.progressiveregulation.org). The Center for Progressive Regulation is grateful to the Deer Creek Foundation for its generous support of this project and CPR's work in general.*



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## About the Author

Clifford Rechtschaffen is a Member Scholar of the Center for Progressive Regulation and a Professor and Director of the Environmental Law Program at Golden Gate University School of Law. He is also Co-Director of Golden Gate's Environmental Law and Justice Clinic. Golden Gate's environmental law program has been ranked among the top 20 in the nation by *U.S. News & World Report* in two of the past four years.

Professor Rechtschaffen has taught a variety of environmental, toxics, natural resource, and environmental clinical courses for the past ten years. He has written in the areas of environmental enforcement, federal/state relations, environmental justice, information disclosure and right-to-know laws, and control of lead-based paint poisoning.

In 1994 Professor Rechtschaffen co-founded and now co-directs Golden Gate's in-house Environmental Law and Justice Clinic, which provides direct representation to low-income communities and communities of color on environmental justice, public health, toxics, and air quality matters. The clinic has received awards from the American Bar Association, the U.S. Environmental Protection Agency, and the San Francisco Board of Supervisors.

In 1999, he helped draft legislation requiring California to publish an annual state of the environment report (passed by the legislature but vetoed by Governor Gray Davis). He has advised the election campaigns of Governor Davis in 1998 and Attorney General Bill Lockyer in 1998 and 2002 on environmental issues. He has been an informal consultant to the California Attorney General's Office Task Force on Environmental Justice.

## End Notes

<sup>1</sup>Compare David B. Spence, *The Shadow of the Rational Polluter: Rethinking the Role of Rational Actor Models in Environmental Law*, 89 Calif. L. Rev. 917 (2001) & Bruce M. Diamond, *Confessions of an Environmental Enforcer*, 26 Env'tl. L. Rep. 10,252, (1996) with Clifford Rechtschaffen, *Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement*, 71 S. Cal. L. Rev. 1182 (1998). See also Joel Mintz, *Scrutinizing Environmental Enforcement: A Comment on a Recent Discussion at the AALS*, 30 Env'tl. L. Rep. 10639 (2000)(summarizing different points of view); James Salzman, et. al, *Regulatory Traffic Jams*, 2 Wyo. L. Rev. 253 (2002) (arguing systemic obstacles, particularly the sheer number of regulations, lead in some cases to involuntary noncompliance).

<sup>2</sup>See Mintz Statement, *supra* note 62.

<sup>3</sup>See Rechtschaffen, *Deterrence v. Cooperation*, *supra* note 1.

<sup>4</sup>See Christopher H. Schroeder, *Third Way Environmentalism*, 48 U. Kan. L. Rev. 801, 817-821 (2000) (describing information disclosure strategies as promising "third way" solution that bridges the gap between prescriptive regulation and reliance on the common law to deal with environmental problems).

<sup>5</sup>33 U.S.C. §1251(a) (2003).

<sup>6</sup>See, e.g., 33 U.S.C. §1342(b); 40 C.F.R. §123.22 et seq. (describing authorization requirements for state administration of NPDES program).

<sup>7</sup>U.S. Env'tl Protection Agency, NPDES State Program Status at <http://cfpub.epa.gov/npdes/statstats.cfm> (last updated April 14, 2003).

<sup>8</sup>5 U.S.C. §558(c) (2003).

<sup>9</sup>This figure is for minor facilities that have individual permits, not those that are covered by general permits. U.S. Env'tl Protection Agency, *Backlog Status Report for Minor Facilities*, at <http://cfpub.epa.gov/npdes/permitissuance/backlog.cfm> (last visited Dec. 13, 2003). For minor facilities covered by general permits, approximately 19 percent of permits are outdated, see *Backlog Status Report for Minor Permits Including Facilities Cover by Non-stormwater General Permits*, at *id.*

<sup>10</sup>U.S. Env'tl Protection Agency, *Backlog Status Report for Majors* — *January 2002* (Jan. 2002) (copy on file with author).

<sup>11</sup>Quoted in William Andreen, *Water Quality Today— Has the Clean Water Act Been a Success?* \_\_\_ U. ALAB. L. REV\_\_\_ (2003) at 205.

<sup>12</sup>U.S. Gen. Acct. Off., *Water Pollution: Many Violations Have not Received Appropriate Enforcement Attention*, GAO/RCED-96-23 at 3 (1996).

<sup>13</sup>Robert W. Adler, Jessica C. Landman & Diane M. Cameron, *The Clean Water Act: 20 Years Later* 166-168 (1993).

<sup>14</sup>Many Violations Have not Received Appropriate Enforcement Attention, Quoted in William Andreen, *Water Quality Today— Has the Clean Water Act Been a Success?* \_\_\_ U. ALAB. L. REV\_\_\_ (2003) at 4, 7.

<sup>15</sup>Richard Caplan, U.S. Pub. Interest Research Group, *Permit to Pollute: How the Government's Lax Enforcement of the Clean Water Act is Poisoning Our Waters* (2002). A study two years earlier found virtually identical results from September 1997 to December 1998, *see* U.S. Pub. Interest Research Group, *Poisoning Our Water: How the Government Permits Pollution* 137 (2000), while an earlier review found that during a 15 month period from 1995 to early 1996, close to 20 percent of major dischargers were in significant noncompliance in at least one quarter, and that 21 percent of major industrial dischargers exceeded their discharge limits by 50 percent 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).

<sup>16</sup>U.S. Pub. Interest Research Group, *In Gross Violation: How Polluters are Flooding America's Waterways with Toxic Chemicals* (2002).

<sup>17</sup>This includes facilities regulated by states authorized to implement the NPDES program and by EPA regional offices in states that have not received authorization to implement the program. U.S. Env'tl Protection Agency, Office of Enforcement & Compliance Assurance, *A Pilot for Performance Analysis of Selected Components of the National Enforcement and Compliance Assurance Program* (Feb. 2003) (copy on file with author).

<sup>18</sup>*Id.*, at 1, 7, 11-12. The raw data show an increase in the rate of significant noncompliance between 1994 and 1997, but this is due to changes in the definition of significant noncompliance. *Id.*, at 2. Of the 25% in significant noncompliance, 16 to 29 percent remained in that status for two years or longer. Major facilities include industrial, municipal and federal facilities.

<sup>19</sup>*Id.*, at 6-7.

<sup>20</sup>*Id.*, at 17-19. For all environmental media, EPA inspections have declined over the past five years, by about 24 percent since 1998, and 12 percent since 2000. Summary of EPA Enforcement

Statistics for Fiscal Year 2002, 34 BNA Environment Reporter 332, 334 (Feb. 7, 2003).

<sup>21</sup>*See* A Pilot for Performance Analysis, *supra* note 16, at 17-19. The study looked at the combined total of EPA informal actions, state informal actions, and EPA formal actions. Informal responses are those without legal force, designed simply to bring the violator into compliance. They include phone calls, site visits, warning letters, and notices of violations. Formal responses have legal effect and are accompanied by procedural safeguards to protect regulated entities. They can include administrative, civil or criminal actions. A 2003 Knight-Ridder investigation found that in approximately the first three years of the Bush Administration, EPA averaged 35 notices of CWA violations per month, compared to approximately 134 notices per month during the Clinton Administration and the first Bush Administration (a 74% decline). Seth Borenstein, *Fewer Polluters Punished Under Bush Administration, Records Show*, Common Dreams News Center (Dec. 9, 2003) available at <http://www.commondreams.org/headlines03/1209-02.htm>.

<sup>22</sup>*See* A Pilot for Performance Analysis, *supra* note 16, at 17-19.

<sup>23</sup>*Id.*, at 3.

<sup>24</sup>*Id.*, at 7.

<sup>25</sup>*Id.*, at 27. Likewise, three of five EPA regions with the worst overall compliance records also had the lowest relative activity levels, while two of the five regions with the lowest activity levels also had the worst compliance records. *Id.*

<sup>26</sup>For a general discussion, see Clifford Rechtschaffen, *Competing Visions: EPA and the States Battle for the Future of Environmental Enforcement* 30 Env'tl. L. Rep. 10803, 10807-09 (2000). These problems are not limited to water quality programs.

<sup>27</sup>Tony Dutzik, CoPIRG Foundation, *The State of Environmental Enforcement: The Failure of State Governments to Enforce Environmental Protections and Proposals for Reform*, 17, 19, 24 (Oct. 2002).

<sup>28</sup>Minnesota Pollution Control Agency, *Progress Report: Wastewater Point Source Permitting, Compliance and Enforcement* 16 (Feb. 2003), available at <http://www.pca.state.mn.us/hot/legislature/reports/2003/index.html> (citing 2002 report by Office of Legislative Auditor).

<sup>29</sup>Jennifer Abbruzzese, et. al., *Keeping Pace: An Evaluation of Maryland's Most Important Environmental Problems and What We Can Do to Solve them*, Executive Summary 4 (2003), available at <http://www.law.umaryland.edu/environment/>

<sup>30</sup>State of Louisiana Legislative Auditor, *Dep't of Env'tl. Quality, Performance Audit* 6, 19 (March 2002).

<sup>31</sup>New Jersey's law, adopted in 1990, provides for mandatory minimum penalties for serious violations and significant noncompliance and requires that penalties recover the economic benefit resulting from violations N. J. Stat. Ann. §58:10A *et seq.* (West 1999). A serious violation is an exceedance of an effluent limit by 20 percent or more for hazardous pollutants and 40 percent or more for non-hazardous pollutants. *Id.* §58:10A-3v. A significant noncomplier is a permittee who (1) commits a serious violation for the same pollutant at the same discharge point in any two months of any six-month period; (2) exceeds the monthly average in any four months of the six-month period, or (3) fails to submit a completed discharge monitoring report in any two months of any six-month period. *Id.* § 58:10A-3w. New Jersey's law also requires annual inspections of permitted facilities and inspections of facilities at which significant noncompliance is identified within 60 days. California's law, first adopted in 1999, requires minimum fines of \$3,000 for serious or repeat violations of state water pollution control requirements. Cal. Water Code §§13385(h)-(i) (West 1999). Serious violations include discharges that are 20 or 40 percent in excess of effluent limits, depending on the pollutant, as well as failure to file certain discharge monitoring reports. *Id.* §13385(h)(2). In 2003, California expanded the reach of this law to cover noncompliance with additional reporting requirements. 2003 Cal. Legis. Serv. Ch. 609 (A.B. 1541) (West).

<sup>32</sup> New Jersey Dep't of Env'tl. Protection, 1998 Annual Report of the Clean Water Enforcement Act 19-34 (1999). The 1998 Report shows decreases from 1992 to 1998 in serious violations, instances of significant noncompliance, and penalties assessed, and decreases from 1993 to 1998 in total violations and enforcement actions. The report also credits the department's expanded compliance assistance activities for playing a significant role in improving compliance.

<sup>33</sup> Assembly Floor Analysis, AB 1541, [http://info.sen.ca.gov/pub/bill/asm/ab\\_1501-1550/ab\\_1541\\_cfa\\_20030910\\_014035\\_asm\\_floor.html](http://info.sen.ca.gov/pub/bill/asm/ab_1501-1550/ab_1541_cfa_20030910_014035_asm_floor.html). Environment California was the prime supporter of the legislation.

<sup>34</sup> Office of Inspector Gen., U.S. Env'tl. Protection Agency, Water Enforcement: State Enforcement of Clean Water Act Discharges Can Be More Effective [2001-P-00013] 38 (Aug. 2001).

<sup>35</sup> *Id.* at 19-21. Although many states were developing their own systems, they did not fill the information void. *Id.* at ii.

<sup>36</sup> Office of Inspector Gen., U.S. EPA, EPA Should Take Further Steps to Address Funding Shortfalls and Time Slippages in Permit Compliance System Modernization Effort (Memorandum Report No. 2003-M-000014) (May 20, 2003).

<sup>37</sup> Office of Water, U.S. Env'tl. Protection Agency, The Quality of Our Nation's Water: A Summary of the National Water Quality Inventory: 1998 report to Congress [EPA841-S-0-001] 5 (June 2000) available at <http://www.epa.gov/305b/98report/98brochure.pdf>.

<sup>38</sup> Cited in EPA, STATE ENFORCEMENT OF CLEAN WATER ACT, *supra* note 33, at 12

<sup>39</sup> See Clifford Rechtschaffen & David L. Markell, Reinventing Environmental Enforcement and the State/Federal Relationship 117-119, 168 (2003).

<sup>40</sup> *Id.* at 118-119. As Professor Joel Mintz has observed, the attitudes and preferences of regional EPA administrators are often significantly shaped by state politicians and state environmental officials, whose support helped them get appointed in the first place. Joel Mintz, Enforcement at the EPA: High Stakes and Hard Choices 13, 74-75 (1995).

<sup>41</sup> Rechtschaffen & Markell, *supra* note 38, at 339.

<sup>42</sup> E-mail from Gary Jonesi, Senior Counsel for Strategic Litigation, Office of Regulatory Enforcement, U.S. EPA (Nov. 24, 2003) (listing overfilings initiated by EPA from Jan. 20, 2001 to Nov. 24, 2003) (copy on file with author).

<sup>43</sup> Rechtschaffen & Markell, *supra* note 38, at 330.

<sup>44</sup> *Id.*, at 289.

<sup>45</sup> Office of Inspector Gen., U.S. Env'tl. Protection Agency, EPA Region 6 Needs to Improve Oversight of Louisiana's Environmental Programs, No. 2003-P-00005, at 3-11 (2003). In October 2001, the Tulane Environmental Law Clinic filed a petition with EPA requesting that it withdraw authorization for Louisiana's water program. In February, 2003, EPA informed Louisiana that unless it made a series of improvements to its water program, EPA would consider initiating withdrawal proceedings. Mark Schleifstein, *EPA Puts Pressure on State DEQ*, Times-Picayune, Feb. 15, 2003, at 1, available at 2003 WL 3993211.

<sup>46</sup> ECOS estimates that from 1986 to 1996, state spending on environmental and natural resource programs increased from \$5.2 billion to \$12.5 billion. R. Steven Brown, *The States Protect the Environment*, ECOSStates, Summer 1999, <http://www.sso.org/ecos/publications/statesarticle.htm> (last modified June 6, 2000).

<sup>47</sup> R. Steven Brown, *States Put Their Money Where Their Environment Is*, ECOSStates, Spring 2001, at 22, 26 <http://www.sso.org/ecos/publications.htm> (last visited Dec. 14, 2003); R. Steven Brown, *Coping With the Budget Crunch: When the Axe Falls— How State Environmental Agencies Deal with Budget Cuts*, Ecostates, Winter 2002, at 16, 16 <http://www.sso.org/ecos/publications.htm> (last visited Dec. 14, 2003).

<sup>48</sup> R. Steven Brown, *Coping With the Budget Crunch: When the Axe Falls— How State Environmental Agencies Deal with Budget Cuts*, Ecostates, Winter 2002, at 16, 17 <http://www.sso.org/ecos/publications.htm> (last visited Dec. 14, 2003).

<sup>49</sup> R. Steven Brown & Michael J. Kiefer, *ECOS Budget Survey: Budgets are Bruised, but Still Strong*, Ecostates, Summer 2003, at 10, 17

available at <http://www.sso.org/ecos/>

<sup>50</sup>*Id.*, at 10

<sup>51</sup>*Id.*, at 11, 15. During this period, the federal share of total state environmental and natural resources spending increased from 25% to 33%. *Id.*, at 15.

<sup>52</sup>Approximately 37 states responded to a survey about their actual expenditures, and 22 provided information needed to complete an extensive model of future resource needs. Funding shortfalls for Clean Water Act enforcement has been a persistent problem; as pointed out by Susan Hunter and Richard Waterman, a General Accounting Office report in 1980 found that staff vacancies at state agencies in the area of water control ranged from 7 to 20 percent. Susan Hunter & Richard W. Waterman, *Enforcing the Law: The Case of the Clean Water Acts 223* (1996).

<sup>53</sup>Ass'n of State and Interstate Water Pollution Control Adm'rs, *State Water Quality Management Resource Analysis: Interim Report on Results* (April 1, 2002), at 4-7, available at [http://www.asiwpca.org/programs/programs/programs.htm](http://www.asiwpca.org/programs/programs.htm)<http://www.asiwpca.org/programs/docs/gap.pdf>. The analysis covers only state management activities, not spending on infrastructure improvements. A review of the Gap Analysis by the National Academy of Public Administration (discussed below) concluded that its estimate of the resource gap is sound, and if anything, is probably low because it does not include the costs of new and expanding water programs and may also underestimate the costs of state employees. National Academy of Public Administration, *Understanding What States Need To Protect Water Quality 1* (2002).

<sup>54</sup>Environmental Council of States, *Comments on the Environmental Protection Agency FY 2005 Budget Request* (June 27, 2003) (copy on file with author).

<sup>55</sup>National Academy of Public Administration, *Understanding What States Need to Protect Water Quality 25-26* (2002). The Gap Analysis found that of total state spending, 40% came from state tax revenues; 31% from federal contributions; 19% from state fee programs, and 10% from other sources. Ass'n of State and Interstate Water Pollution Control Adm'rs *supra* note 52, at 6-7. There is additional anecdotal evidence of overwhelmed state agencies. The Detroit News recently found that the Michigan Department of Environmental Quality has five employees to handle enforcement of a range of water quality and water pollution issues, including permit limits, drinking water quality and wetlands protection. The department's enforcement unit acknowledged that "[t]here are a substantial number of violations we cannot adequately address with our current staff resources." Lack of state resources has also led to infrequent evaluations of facility discharge monitoring reports. Brad Heath, *Great Lakes Polluters Dump Without Fear, Part 2*, Detroit News, Oct. 5, 2003, available at <http://www.detnews.com/specialreports/2003/polluters/index.htm>.

<sup>56</sup>*States Urge EPA to Push White House for Sufficient Funds in FY 05*, 24 INSIDE EPA, No. 33 (Aug. 15, 2003).

<sup>57</sup>John Pendergrass, *Budget Woes: MO Gives Back SMCRA*, 20 Env'tl. F. 6, 6 (Sept/Oct. 2003).

<sup>58</sup>Environmental Council of States, Comments, *supra* note 62.

<sup>59</sup>Office of Inspector Gen., U.S. EPA, *Congressional Request on EPA Enforcement Resources and Accomplishments*, Report No. 2004-S-00001, at 7-9 (Oct. 10, 2003).

<sup>60</sup>See Robert Perks & Gregory Wetstone, Natural Resources Defense Council, *Rewriting the Rules, Year-End Report 2002: The Bush Administration's Assault on the Environment 26* (2003) available at <http://www.nrdc.org/legislation/rollbacks/rr2002.pdf>.

<sup>61</sup>Request on EPA Enforcement Resources, *supra* note 62, at 15.

<sup>62</sup>Statement of Joel A. Mintz, Professor of Law, Nova Southeastern University Law Center and Member Scholar, Center for Progressive Regulation to the U.S. House of Representatives Subcommittee on Energy Policy, Natural Resources and Regulatory Affairs, submitted to the record for hearing held in Boston, Mass. (Oct. 14, 2003) (copy on file with author). The 2003 Knight-Ridder study mentioned above found that most indices of enforcement activity for the CWA (as well as other statutes) had dropped in the first three years of the Bush Administration. See Borenstein, *supra* note 17.

<sup>63</sup> According to the Gap Analysis, expenditures associated with NPDES programs, including permitting, compliance, and enforcement activities, represent approximately 37 percent of total state water quality expenditures. Ass'n of State and Interstate Water Pollution Control Adm'rs *supra* note 52, at 6.

<sup>64</sup>Telephone Interview with Pam Wright, Program Administrator, Maryland Department of Environment (Dec. 2, 2003).

<sup>65</sup>Notably, current staff levels for California's wastewater discharge program are only about 55% of the level (49.3/87.4) that the state committed to in its Memorandum of Agreement with EPA (the document spelling out the state's obligations for implementing the NPDES program once it receives authorization from EPA).

<sup>66</sup>Wisconsin Dep't of Natural Resources, Bureau of Watershed Management, *Wisconsin Expenditure Data and State Water Quality Management Workload Model Summary of Needs*, (May 11, 2001) (on file with author). Another report to the California legislature by the State Water Resources Control Board in 2000 estimated that the state would need 1,674 positions, plus \$8.6 million in annual spending on outside contracts, to comply with both current and anticipated future mandates for its core water regulatory program (a large portion of which is the state's NPDES program). To put this in context, at the time of the report, these programs were staffed by 414 people. California State Water Resources Control Board, *Final Report, Core Regulatory Programs' Needs Analysis 1, 9*

(2000), available at <http://www.swrcb.ca.gov/legislative/docs/finalcoreg.pdf>.

<sup>67</sup>The Bureau of Water Pollution Control apparently was able to win support among regulated entities for a fee increase by holding out the prospect that the state's NPDES program otherwise would have to be returned to EPA to administer. Telephone Interview with Darrell Rasner, Technical Services Branch Supervisor, Nevada Bureau of Water Pollution Control (Nov. 26, 2003).

<sup>68</sup>Under New Jersey law, the Department of Environmental Protection is authorized to assess fees necessary to administering the permit program. In the past, the State Department of Treasury funded some portion of the costs of the program (in 2002, approximately 20 percent), meaning that the Department could assess fees at a somewhat lower level. According the Chief of the New Jersey Bureau of Permit Management, over the past two years, the State has required that the permit program fully recoup its operating costs through fees. Telephone Interview with William F. Boehle, Chief, Bureau of Permit Management, New Jersey Department of Environmental Protection (Nov. 26, 2003).

<sup>69</sup>See Cal. Water Res. Control Board Res. No. 2003-0064 (citing Budget Act) (Sept. 30, 2003) available at <http://www.swrcb.ca.gov/resdec/resltn/2003/03res.html>.

<sup>70</sup>42 U.S.C. §7661a (b)(3)(A); 40 C.F.R. §70.4(b)(7).

<sup>71</sup>Association of State and Interstate Water Pollution Control Administrators Fee Survey Results (May 6, 2003), available at <http://www.asiwpca.org/home/docs/NPDESFeeSurveySummary.pdf>

<sup>72</sup>Compare David B. Spence, *The Shadow of the Rational Polluter: Rethinking the Role of Rational Actor Models in Environmental Law*, 89 Calif. L. Rev. 917 (2001) & Bruce M. Diamond, *Confessions of an Environmental Enforcer*, 26 Env'tl. L. Rep. 10,252, (1996) with Clifford Rechtschaffen, *Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement*, 71 S. Cal. L. Rev. 1182 (1998). See also Joel Mintz, *Scrutinizing Environmental Enforcement: A Comment on a Recent Discussion at the AALS*, 30 Env'tl. L. Rep. 10639 (2000) (summarizing different points of view); James Salzman, et. al, *Regulatory Traffic Jams*, 2 Wyo. L. Rev. 253 (2002) (arguing systemic obstacles, particularly the sheer number of regulations, lead in some cases to involuntary noncompliance).

<sup>73</sup>See Mintz Statement, *supra* note 62.

<sup>74</sup>In that survey, conducted in 2000, respondents were asked to describe which approach comes closer to their view: (1) Government should strongly enforce environmental laws and require industry and businesses to follow those laws, and (2) Government should work with industry and business to meet environmental goals using flexible regulations and economic incentives. The results are set forth below:

Government strongly enforce much      34%

Government strongly enforce somewhat	28
Flexible regulations somewhat	19
Flexible regulations much	12
Both (vol.)	5
Don't know/Refused	2

Tarrance Group & Greenberg-Quinlan Research, Inc., November 12-19, 2000 ( $n = 1,200$  national registered voters): Q28, available at <http://www.greenbergresearch.com/publications/reports/fqlcvfcpoll111200.pdf>.

<sup>75</sup>Clifford Rechtschaffen, *Deterrence vs. Cooperation and the Evolving Theory of Environmental Enforcement*, 71 S. CAL. L. REV. 1182 (1998).

<sup>76</sup>See Christopher H. Schroeder, *Third Way Environmentalism*, 48 U. Kan. L. Rev. 801, 817-821 (2000) (describing information disclosure strategies as promising "third way" solution that bridges the gap between prescriptive regulation and reliance on the common law to deal with environmental problems).

<sup>77</sup>See U.S. Env'tl Protection Agency, Toxic Release Inventory, TRI On-site and Off-site Releases, 1988, 1998 and 2000-2001, available at <http://www.epa.gov/tri/tridata/tri01/press/rel-table8801.pdf> (last visited Dec. 17, 2003). Professor Bradley C. Karkkainen describes TRI as a "watershed" in efforts to enhance environmental performance. Bradley C. Karkkainen, *Information as Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 Geo. L. J. 257, 260 (2001). See also Mary Graham and Catherine Miller, *Disclosure of Toxic Releases in the United States*, 43 Environment 8, 11-12 (Oct. 2001) (concluding that "[a] close examination of TRI data [from 1988 to 1999] confirms a core of positive trends); but see Alexander Volokh, *The Pitfalls of the Environmental Right-to-Know*, 2002 Utah L. Rev. 805, 814-819 (2002) (arguing that it is difficult to know if the reported reductions in TRI releases are real or accurate, and that data generated by TRI and other right-to-know laws is "irredeemably misleading").

<sup>78</sup>Clifford Rechtschaffen, *The Warning Game: Evaluating Warnings Under California's Proposition 65*, 23 Ecology L. Q. 303, 341-343 (1996) & *How to Reduce Lead Exposures with One Simple Statute: The Experience of Proposition 65*, 29 Env'tl. L. Rep. (Env'tl. L. Inst.) 10581 (1999); David Roe, *Toxic Chemical Control Policy: Three Unabsorbed Facts*, 32 Env'tl. L. Rep. (Env'tl. L. Inst.) 10232 (2002); Center for Environmental Health – Prop 65 Case Highlights (undated memo, on file with author); Jane Kay, *Sierra Club Picks Activist President; Marin Man Uses Lawsuits to Force Action*, SF Chronicle, May 22, 2003, at A21. A 2000 Gallup Poll found that 73 percent of the public in 2000 bought a product specifically because they thought it was better for the environment than competing products, cited in DEBORAH LYNN GUBER, *THE GRASSROOTS OF A GREEN REVOLUTION* 22 (2003) at 50. See also *id.* at 51 (1992 survey reported that 3/4 of public were at least sometimes influenced by environmental claims in marketplace and most appeared willing to spend at least five percent more for products known to be environmentally safe).

<sup>79</sup>Telephone Interview with Michael Freund, December 5, 2003. The sources of perchloroethylene were dry cleaners, degreasers, and the motion picture industry (perchloroethylene is used to clean film).

<sup>80</sup>This discussion is in part adapted from Clifford Rechtschaffen & David L. Markell, *Reinventing Environmental Enforcement and the State/Federal Relationship* 117-119, 168 (2003).

<sup>81</sup>Environmental Council of the States, *Ensuring Compliance: State Best Practices* 2, 15-16 (May 2000) (copy on file with author).

<sup>82</sup> Shakeb Afsah & Jeffrey R. Vincent, Harvard Inst. Int'l Dev., *Putting Pressure on Polluters: Indonesia's PROPER Program* (last modified Sept. 23, 1999) [http://www.worldbank.org/nipr/work\\_paper/vincent/index.htm](http://www.worldbank.org/nipr/work_paper/vincent/index.htm). The colors were chosen because they had cultural connotations in Indonesia analogous to the environmental performance levels they signified.

<sup>83</sup>Shakeb Afsah, *PROPER Program for Pollution Control Environmental Evaluation and Rating: A Model for Promoting Environmental Compliance and Strengthening Transparency and Community Participation in Developing Countries* 18 (copy on file with author); Shakeb Afsah et al., *Regulation in the Information Age: Indonesian Public Information Program for Environmental Management* 9 (1997), available at [http://www.worldbank.org/nipr/work\\_paper/govern/](http://www.worldbank.org/nipr/work_paper/govern/).

<sup>84</sup>Jerome Foulon et al., *Incentives for Pollution Control: Regulation And (?) Or (?) Information*, World Bank Policy Research Working Paper No. 2291 (Feb. 1, 2000), available at <http://econ.worldbank.org/docs/1042.pdf>.

<sup>85</sup>Robert Kagan, Neil Gunningham, & Dorothy Thornton, *Explaining Environmental Performance: How Does Regulation Matter?*, UC Berkeley Public Law Research Paper No. 78 (2002), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=29923](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=29923).

<sup>86</sup>The Environment Agency, *Environmental Crime Should Not Pay: Spotlight on Business Environmental Performance: Spotlight 2002*, at <http://www.environment-agency.gov.uk/business/444255/518536/> (last visited Dec. 17, 2003).

<sup>87</sup>In the U.S., by contrast, environmental agencies have not attempted to qualitatively judge the environmental performance of regulated entities.

<sup>88</sup>The website is available at [www.epa.gov/echo/](http://www.epa.gov/echo/).

<sup>89</sup>ECHO focuses on information at Clean Air Act stationary sources; Clean Water Act major dischargers; and RCRA hazardous waste handlers. Most violations at minor CWA dischargers are not included.

<sup>90</sup>Press Release, Luke C. Hester, Env'tl Protection Agency, *EPA's ECHO Resonates with Public One Million Searches Recorded in First Year*

*of Enforcement/Compliance Web Database* (Nov 19, 2003) at <http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/e6bf84f19616f3b985256de30055afcd?OpenDocument>.

<sup>91</sup>See, e.g., Comments of James W. Conrad, Jr, American Chemistry Council, submitted in response to EPA's request for public comment about pilot ECHO website (March 29, 2003), available at <http://www.epa.gov/compliance/resources/comments/echo/acc-conrad-cmt.pdf>.

<sup>92</sup>See, e.g., Comments of Mark A. Greenwood, Coalition for Effective Environmental Information, submitted in response to EPA's request for public comment about pilot ECHO website (March 31, 2003) available at <http://www.epa.gov/compliance/resources/comments/echo/ceei-grnwood-cmt.pdf>.

<sup>93</sup>Regulated Entity User, Response to Solicited EPA Question regarding ECHO public database (Jan. 23, 2003), available at [http://www.epa.gov/echo/info/echo\\_comments\\_1\\_23\\_03.html](http://www.epa.gov/echo/info/echo_comments_1_23_03.html).

<sup>94</sup>EPA reported receiving over 10,000 e-mails supporting continuation and enhancement of ECHO during its first year. See EPA Press Release, *supra* note 89.

<sup>95</sup>Unaffiliated User, Public Comment regarding ECHO public database (Jan. 9, 2003), at [http://www.epa.gov/echo/info/echo\\_comments\\_1\\_9\\_03.html](http://www.epa.gov/echo/info/echo_comments_1_9_03.html). Another wrote: "Hooray for the EPA and their new Echo Web site. Citizen monitoring is an important element in protecting our communities from noxious poisons and other pollution. Easy access to information about what is going on in our communities is an important democratic principle. I applaud the EPA in providing a useful tool for protecting public health and safety. What we don't know truly can hurt us." (Dec. 6, 2002), at [http://www.epa.gov/echo/info/echo\\_comments\\_12\\_6\\_02.html](http://www.epa.gov/echo/info/echo_comments_12_6_02.html).

<sup>96</sup>Unaffiliated User, Public Comment regarding ECHO public database (Nov. 29, 2002), available at [http://www.epa.gov/echo/info/echo\\_comments\\_11\\_29\\_02.html](http://www.epa.gov/echo/info/echo_comments_11_29_02.html). Another commentator wrote: "I think the ability of citizens to access the kind of information is extremely important. Please continue this service, which lets community residents take action regarding their health and well being." Unaffiliated User, Public Comment regarding ECHO public database (March 13, 2003) at [http://www.epa.gov/echo/info/echo\\_comments\\_3\\_13\\_03.html](http://www.epa.gov/echo/info/echo_comments_3_13_03.html).

<sup>97</sup>Unaffiliated User, Public Comment regarding ECHO public database (Jan. 30, 2003) at [http://www.epa.gov/echo/info/echo\\_comments\\_1\\_30\\_03.html](http://www.epa.gov/echo/info/echo_comments_1_30_03.html)

<sup>98</sup>State Government User, Comment regarding ECHO public database (Jan. 9, 2003) at [http://www.epa.gov/echo/info/echo\\_comments\\_1\\_9\\_03.html](http://www.epa.gov/echo/info/echo_comments_1_9_03.html)

<sup>99</sup>Local Government User, Comment regarding ECHO public database (March 6, 2003) at <http://www.epa.gov/echo/info/>

echo\_comments\_3\_6\_03.html

<sup>100</sup>Local Government User, Comment regarding ECHO public database (Dec. 6, 2002) at [http://www.epa.gov/echo/info/echo\\_comments\\_12\\_6\\_02.html](http://www.epa.gov/echo/info/echo_comments_12_6_02.html)

<sup>101</sup>Regulated Entity User, Comment regarding ECHO public database (March 13, 2003) at [http://www.epa.gov/echo/info/echo\\_comments\\_3\\_13\\_03.html](http://www.epa.gov/echo/info/echo_comments_3_13_03.html).

<sup>102</sup>Regulated Entity User, Comment regarding ECHO public database (Dec. 12, 2002) at [http://www.epa.gov/echo/info/echo\\_comments\\_12\\_12\\_02.html](http://www.epa.gov/echo/info/echo_comments_12_12_02.html)

<sup>103</sup>EPA Press Release, *supra* note 89.

<sup>104</sup>Shelley Metzenbaum, Making Measurement Work: The Challenges and Promise of Building a Performance-Focused Environmental Protection System 42 (Brookings Institution's Center for Public Management, Oct. 1998) at <http://www.brook.edu/dybdocroot/gscpm/metzenbaum.pdf>.

<sup>105</sup>See Shelley H. Metzenbaum and Tiffin Shewmake, Realizing the Value of the Permit Compliance System Upgrade, Environmental Compliance Consortium at 8 (2002) available at <http://www.complianceconsortium.org/ECCArticles/Comments.asp> (arguing that agencies should generate and post graphs showing the top twenty percent of facilities with the greatest noncompliance, or the facilities that exceeded their permit limits more than twenty percent of the time). Metzenbaum and Shewmake also suggest that agencies should routinely generate and post graphs showing a facility's discharge/emission trends in relation to its permit level, – graphs that “make it easy to see which facilities have the most significant or enduring problems.” Shelley H. Metzenbaum and Tiffin Shewmake, *More Nutritious Beans*, Environmental Forum, March/April 2003 at 18, 31 available at <http://www.complianceconsortium.org/ECCAauthored/MoreNutritiousBeans.pdf>

<sup>106</sup>The SFIP focused on five industrial sectors: petroleum refining; iron and steel production; primary nonferrous metals smelting and refining; pulp manufacturing, auto assembly, as well as some major federal facilities. See [http://www.epa.gov/sfipmtn1/intro\\_and\\_overview.html](http://www.epa.gov/sfipmtn1/intro_and_overview.html)

<sup>107</sup>For a discussion of these issues, see Rechtschaffen & Markell, *supra* note 39, at 296-312.

<sup>108</sup>Compliance rates do not tell the full story about the efficacy of a state's environmental program. If a state's underlying permit requirements are weak, or outdated, for instance (and recent studies indicate that a distressingly high number of Clean Water Act permits are outdated), a high rate of compliance may not be particularly meaningful or informative about the condition of the state's environment.

<sup>109</sup>Memorandum from James Barnes, Deputy Administrator to Assistant Administrator, et al., *Revised Policy Framework for State/EPA Enforcement Agreements* (Aug. 25, 1986).

<sup>110</sup>In 1995, EPA and the states created a new, ostensibly more flexible framework to govern federal/state relations, the National Environmental Performance Partnership System (NEPPS). See U.S. Env'tl. Protection Agency, *Joint Commitment to Reform Oversight and Create a National Environmental Performance Partnership System* (visited on May 10, 2002), available at <http://www.epa.gov/ocirpage/nepps/ovrsight.htm>. As part of that framework, EPA and the state agreed to a set of “core accountability measures” for evaluating state enforcement and compliance activities, which include rates of compliance. U.S. EPA, Office of State and Local Relations, Office of Enforcement and Compliance, FY 2000 Accountability Measures for Enforcement and Compliance Assurance, <<http://www.epa.gov/ocir/nepps/enflist.html>

<sup>111</sup>See Rechtschaffen & Markell, *supra* note 39, at 187 (noting that 18 states were unable to provide any data on significant noncompliance with environmental laws to ECOS in 2001 survey).

<sup>112</sup>*Id.*, at 302-304.

<sup>113</sup>For the reasons discussed above, there also should be a bigger spotlight on EPA's own enforcement record, including its success in achieving compliance with CWA permit requirements. The performance record of EPA regional offices should be compared to other regional offices, as well as to that of the states. Notably, EPA has been working over the past few years to improve its methodology for measuring compliance rates and otherwise measure the bottom line success of its enforcement program. See *id.* at 182-183.

<sup>114</sup>Social Investment Forum, 2003 Report on Socially Responsible Investing Trends in the United States, at i-ii, available at [http://www.socialinvest.org/areas/research/trends/sri\\_trends\\_report\\_2003.pdf](http://www.socialinvest.org/areas/research/trends/sri_trends_report_2003.pdf). According to the Social Investment Forum, assets in socially screened portfolios increased by 7 percent from 2001 to 2003, while assets in all professionally managed portfolios fell 4 percent. *Id.*

<sup>115</sup>Deborah Lynn Guber, *The Grassroots of a Green Revolution* 22 (2003) at 50.

<sup>116</sup>Paul Lanoie et al., *Can Capital Markets Create Incentives for Pollution Control?*, 26 *Ecological Econ.* 1, 35-36 (1998). (providing a discussion of various studies that reach this conclusion). For example, Professor James Hamilton found that firms suffered statistically significant negative stock returns of between 0.2 and 0.3 percent, an average loss per firm of \$4.1 million in stock value, when TRI data was first disclosed in 1989. James T. Hamilton, *Pollution as News: Media and Stock Market Reactions to the Toxics Release Data*, 28 *J. Env'tl. Econ. & Mgmt.* 98, 109 (1995). A later study looking at chemical firms reported similar results following disclosure of TRI data in the years 1990 to 1994. Madhu Khanna et al., *Toxic Release Information: A Policy Tool for Environmental*

*Protection*, 36 J. Envtl. Econ. & Mgmt. 243, 244 (1998). Firms with more releases had more negative returns.

<sup>117</sup> S.G. Bandrinath & P.J. Bolster, *The Role of Market Forces in EPA Enforcement Activity*, 10 J. Reg. Econ. 165, 167 (1996).

<sup>118</sup> Shreekant Gupta & Bishwanath Goldar, *Do Stock Markets Penalise Environment-Unfriendly Behaviour? Evidence from India*, Working Paper No. 116 at 16 (Centre for Development Economics, March 2003).

<sup>119</sup> Wallace N. Davidson III, Dan Worrell, and Louis T.W. Cheng, *The Effectiveness of OSHA Penalties: A Stock-Market Based Test*, 33 *Indust. Rel.* 283 (1994). The size of the market decline, however, did not depend on the size of the penalties imposed. Other researchers found in a study of developing countries that stock values rise when positive environmental performance is publicized by the government, and fall in response to citizen complaints about firms. Susmita Dasgupta et al., *Pollution and Capital Markets in Developing Countries* (World Bank 1997).

<sup>120</sup> Environmental Capital Markets Committee, U.S. Envtl Protection Agency, EPA-100-R-00-021, *Green Dividends? The Relationship Between Firms' Environmental Performance and Financial Performance*, at I (May 2000).

<sup>121</sup> Andrew A. King & Michael J. Lenox, *Does it Really Pay to Be Green? An Empirical Study of Firm Environmental and Financial Performance*, 5 J. Indus. Ecol. 105, 110-111 (2001). The authors cautioned that they could not conclude what caused the higher financial returns - whether it was because more profitable firms invest more in environmental performance, or because better environmental performance leads to greater profits.

<sup>122</sup> Sulaiman A. Al-Tuwaijri, Theodore E. Christensen, and K.E. Hughes, II, *The Relations Among Environmental Disclosure, Environmental Performance, and Economic Performance: A Simultaneous Equations Approach* (2003) at 3. The authors measured disclosure based on information reported in SEC Forms 10-K relating to oil and chemical spills, penalties, toxic waste generated and transferred or recycled, and designation as a responsible party for cleanup of hazardous waste sites.

<sup>123</sup> *Id.* at 24-25. The authors posit that prior disclosure establishes a lower bound for performance that if breached might challenge the expectations of investors.

<sup>124</sup> Innovest has also found that the financial performance of the top rated chemical companies is 16 percent higher than those in the bottom half. Cited in William Greider, *The Greening of American Capitalism*, 25 *Onearth* 20, 22 (Fall 2003). Likewise, a study by the Alliance for Environmental Innovation concluded that superior performing environmental firms outperformed their peers on the stock market by as much as two percent. Cited in Claudia Deutsch, *Investing it: For Wall Street, Increasing Evidence that Green Begets Green*, *N.Y. Times*, July 19, 1998, at 3-7.

<sup>125</sup> American Institute of Certified Public Accountants, *Findings of National Investor Poll on Auditing and Financial Reporting* (2000), at [http://www.aicpa.org/auditor\\_independence/report.htm](http://www.aicpa.org/auditor_independence/report.htm), quoted in Michelle Chan-Fischel, *After Enron: How Accounting and SEC Reform Can Promote Corporate Accountability While Restoring Public Confidence*, 32 *Envtl. L. Rep.* 10965, 10968, n.37 (2002); see also, *id.* at 10969 (“Many [Socially Responsible Investors] monitor companies’ social and environmental performance with the belief that good management of environmental or “soft” issues is a proxy of good overall management capacity, which is a driver of financial out-performance”), and 10975 (noting that large institutional investors use nonfinancial data as a basis of up to 35% of their asset allocation decisions).

<sup>126</sup> It is beyond the scope of this article to examine the extent to which broader environmental disclosures, such as a firm’s use and generation of toxic chemicals, use of recycled materials, the effects that their activities may have on the environment, etc., should be required.

<sup>127</sup> 17 C.F.R. §§ 229.10-229.702

<sup>128</sup> 17 C.F.R. § 229.103. Companies must disclose the court or agency where the proceedings are pending, the date instituted, the principal parties involved, a description of the alleged facts, and the relief sought. For government enforcement actions, a company must disclose any proceeding unless it “reasonably believes” that such proceeding will result in no sanctions or sanctions less than \$100,000. See *id.*, Instructions 5(C). For claims for damages or sanctions in excess of 10% of current assets, multiple actions that present in large degree the same factual and legal issues should be considered together. *Id.*, Instruction 2. The Supreme Court has ruled that information is material “if there is a substantial likelihood that a reasonable investor would deem the information significant in the total mix of available information, see *TSC Industries, Inc. v. Northway, Inc.*, 426 U.S. 438 (1976).

<sup>129</sup> 17 C.F.R. § 229.101(c)(1)(xii). This would include the costs of installing pollution control equipment, cleanup costs under CERCLA or other statutes, and other costs of noncompliance. See John W. Bagby, Paula C. Murray & Eric T. Andrews, *How Green Was My Balance Sheet?: Corporate Liability and Environmental Disclosure*, 14 *Va. Envtl. L.J.*, 225, 289-290 (1995).

<sup>130</sup> 17 C.F.R. § 229.303(a)(3)(ii). The rule also requires disclosure of any “unusual events” that materially affect a company’s income. *Id.*, at 229.303(a)(3)(i).

<sup>131</sup> Golden Gate University LLM student Terra Pfund brought this suggestion to the author’s attention in a paper on this topic, see Terra Pfund, *Corporate Environmental Accountability: Expanding SEC Disclosures to Promote Market-Based Environmentalism* (on file with author).

<sup>132</sup> James R. May, *Now More Than Ever: Environmental Citizen Suit Trends*, 33 *Envtl. L. Rep.* 10704, 10712 (2003).

<sup>133</sup>See Cynthia Williams, *The Securities and Exchange Commission and Corporate Social Transparency*, 112 Harv. L. Rev. 1197, 1300-1302 (1999)(citing CERES recommendations); Chan-Fischel, *supra* note 124 at 10977 (quoting Corporate Sunshine Working Group recommendations). Some firms may fail to disclose liabilities because of uncertainty about how to estimate environmental liabilities and potential risks. As a recent report by the Rose Foundation for Communities and the Environment argues, to address this problem, the SEC should adopt voluntary industry guidelines for estimating environmental liabilities that have been developed by the American Society for Testing and Materials International (ASTM). The guidelines set forth standard methodologies and also require disclosure when cumulative environmental liabilities, penalties, settlements, fines and violations exceed regulatory thresholds. The report notes that the guidelines would “help to close one of the biggest loopholes in environmental reporting today—piecemeal accounting of environmental liabilities—[and] show companies how they *can* estimate and report environmental liabilities despite uncertainty.” The Rose Foundation for Communities & the Environment, *The Environmental Fiduciary: The Case for Incorporating Environmental Factors into Investment Management Policies* 56(2002).

<sup>134</sup>See Statement of Denise L. Nappier, Connecticut State Treasurer, Congressional Symposium - Securities and Exchange Commission Social and Environmental Disclosure: Meeting the Information Needs of Today’s Investors (July 10, 2003), *available at* <http://www.corporatesunshine.org/sympresstate.pdf> (urging the SEC to create a Blue Ribbon Task Force to formally review its existing disclosure rules and enforcement policies related to social and environmental issues, and recommend changes to ensure that shareholders receive the information necessary to make informed investment decisions); *see also* <http://www.corporatesunshine.org/sympall.pdf> (noting support of California Treasurer and New York City Controller for Rose Foundation petition urging SEC to adopt ATSM guidelines for estimating environmental liabilities).

<sup>135</sup>Chan-Fischel, *supra* note 124, at 10975. In rulemaking proceedings in the mid 1970s, the SEC rejected various proposals to broaden required environmental disclosures, including disclosure of noncompliance with environmental regulations and disclosure of all environmental litigation. Bagby, *supra* note 128, at 276-278. The SEC argued, in part, that discretion to regulate disclosures was limited to information that bears on the economic value of investments. *Id.*; Williams, *supra* note 132, at 1263-1269. Professor Williams has argued that in light of the rapidly expanding social investment movement, a significant portion of investors would find information of this type material. She additionally argues that even if that were not true, the social goals underlying the federal securities acts empower the SEC to require disclosure of matters that do not bear directly on the economic value of an investment. The underlying goals of the acts include providing investors with full and fair information necessary to make informed investment decisions and to cast well-informed votes about management, and to pressure management to adopt

new strategies. Professor Williams argues that each of these goals is advanced by providing investors with a full range of important information on the way companies are being managed, including what environmental practices are being followed that may have negative ramifications in the future or be of ethical concern. *Id.*, at 1265-1268, 1272. *See also* Chan-Fischel, *supra* note 124, at 10974 - 977 (refuting arguments against expanded disclosure).

<sup>136</sup>See Williams, *supra* note 132, at 1278-79.

<sup>137</sup>Form 10-K statements refer to annual reports that publicly traded companies are required to file.

<sup>138</sup>The study found that firms correctly disclosed the required information in only 16% of proceedings involving penalties; 4% of cases involving SEPS, and 1% of RCRA corrective actions. Nicholas Franco, Corporate Environmental Disclosure: Opportunities to Harness Market Forces to Improve Corporate Environmental Performance, American Bar Association Section on Environment, Energy, and Resources, Conference on Environmental Law, Keystone, Colorado (March 8-11, 2001), *available at* <http://www.corporatesunshine.org/epaaba.pdf>.

<sup>139</sup>Martin Freedman & A.J. Stagliano, Environmental Disclosure of Companies Involved in Initial Public Offerings 19 (1996), *available at* <http://panopticon.csustan.edu/cpa96/papers.htm/freedman.htm> (last visited Dec. 19, 2003). *See also*, Robert Repetto & D. Austin, Coming Clean: Corporate Disclosure of Financially Significant Environmental Risks 13, 23-24 (World Resources Inst. 2000) (study of thirteen pulp and paper companies found that most failed to disclose or adequately discuss the impacts of known, pending environmental issues, although many did report prospective Superfund liabilities).

<sup>140</sup>These are discussed in Chan-Fischel, *supra* note 124, at 10971-10973. *See also* Nappier Statement, *supra* note 159 (“[W]e find that many companies either fail to report material information or underreport information important to shareholders.”) The General Accounting Office is currently preparing a report that examines corporate compliance with the SEC’s environmental disclosure requirements. *See* Proposed Agenda & Background Materials, Congressional Symposium - Securities and Exchange Commission Social and Environmental Disclosure: Meeting the Information Needs of Today’s Investors (July 10, 2003), *available at* <http://www.corporatesunshine.org/sympagenda.pdf>.

<sup>141</sup>See Nappier Statement, *supra* note 133 (“[T]he SEC should adopt clear and definite consequences for incomplete or inaccurate compliance with its disclosure rules, regardless of the stringency of the requirements.... While I believe that strengthened reporting is necessary, at a minimum the SEC must take steps to ensure that current reporting requirements are met.”)

<sup>142</sup>See Chan-Fischel, *supra* note 124, at 10973 (noting that in 2001, SEC representatives announced that the SEC would begin screening company 10-K filings for compliance with a number of different criteria, including environmental disclosure, and that the

SEC had created a dedicated telephone helpline to assist firms to properly reporting environmental issues).

<sup>143</sup> See Securities & Exchange Comm'n, Summary by the Division of Corporation Finance of

Significant Issues Addressed in the Review of the Periodic Reports of the Fortune 500 Companies, available at <http://www.sec.gov/divisions/corpfin/fortune500rep.htm>. The SEC indicated that it had issued comments about inadequate disclosure of environmental liabilities to a number of oil and gas and mining companies, as well as to several manufacturing companies. *Id.*

<sup>144</sup> See Repetto & Austin, *supra* note 138, at 11.

<sup>145</sup> *Id.* at 11.

<sup>146</sup> Donald Sutherland, *Beyond Enron: The Next Scandal*, 17 Earth Island J. 21 (Summer 2002) (quoting Shirin Venus, attorney with EPA's Office of Planning, Policy Analysis and Communications).

<sup>147</sup> See U.S. Env'tl. Protection Agency, Office of Compliance & Assurance, Guidance on Distributing the "Notice of SEC Registrants' Duty to Disclose Environmental Legal Proceedings" in EPA Administrative Enforcement Actions (Jan. 19, 2001), available at <http://www.epa.gov/compliance/resources/policies/incentives/programs/sec-guid-distributionofnotice.pdf#page=6> (last visited Dec. 17, 2003).

<sup>148</sup> *Id.* U.S. Env'tl. Protection Agency, Office of Compliance & Assurance, Enforcement Alert (EPA 300-N-01-008), *U.S. EPA Notifying Defendants of Securities and Exchange Commission's Environmental Disclosure Requirements*, (Oct. 2001), available at <http://www.epa.gov/Compliance/resources/newsletters/civil/enfalert/2001eds.html>.

<sup>149</sup> According to one EPA enforcement attorney, EPA shares information about enforcement proceedings with the SEC "from time to time, as appropriate." (Telephone Interview with Fran Jonesi, Office of Enforcement and Compliance Assurance, Dec. 12, 2003).

<sup>150</sup> This is reflected, among other things, in the *Green Dividends* report that EPA commissioned, *see supra* note 119; the EPA investigation of compliance by firms subject to enforcement actions with the SEC's disclosure rules, *see supra* note 137; and the EPA policy of notifying firms subject to enforcement actions of their potential disclosure obligations under SEC rules, *see supra* note 172.

**Appendix: State Survey**

**EPA Enforcement Survey**

**Dr. Clifford Rechtschaffen**

**1. Can you explain whether your state’s NPDES program is operating under a Memorandum or Agreement (MOA), Performance Partnership Agreement (PPA), or other program/grant agreement with EPA?**

\_\_\_\_\_MOA \_\_\_\_\_PPA \_\_\_\_\_ Other (Please specify)

**2. In your MOA, PPA, or grant agreement with EPA, what staff levels did you commit to in order to administer the NPDES program? (If the agreement breaks down staff levels for various functions, such as permitting, monitoring, enforcement, compliance assistance, etc., could you please provide that information?)**

Permitting \_\_\_\_\_

Monitoring \_\_\_\_\_

Enforcement \_\_\_\_\_

Compliance Assistance \_\_\_\_\_

Other (please specify) \_\_\_\_\_

**3. For the years 2000, 2001, and 2002, can you provide:**

**a. The overall funding level for your NPDES program, including funding for the following activities: permitting; monitoring; enforcement and compliance assistance:**

<b>Permitting</b>			
<b>Monitoring</b>			
<b>Enforcement</b>			
<b>Compliance Assistance</b>			
<b>Total</b>			

**b. The sources of funding for your NPDES program (i.e. special funds, general funds, federal grants, permit fees, etc); how much do you obtain from source; and how funding from each of these sources has changed from 2000-2002.**

Special Fund			
General Fund			
Federal Grants			
Permit License or Fees			
Other (please specify)			
Total			

4. If you charge a permit, licensing or other fee to entities regulated by your NPDES program, could you please describe such fee? If you do not currently charge such a fee, has one been considered in your state as a means of raising revenue to support your NPDES program?
5. Has your state considered other ways of funding your NPDES program? If so, what are they?
6. What do you estimate is the total number of regulated facilities subject to your NPDES program, including the number of individual facilities holding individual permits vs. general permits?

Individual Permits \_\_\_\_ General Permits \_\_\_\_ Stormwater permits \_\_\_\_

7. For each of the following areas of your NPDES program, could you provide the number of agency personnel allocated to each function, and the number of these positions that currently are filled:

	Positions Allocated	Positions Currently Filled
<b>Permitting</b>		
<b>Monitoring</b>		
<b>Enforcement</b>		
<b>Compliance Assistance</b>		
<b>Total</b>		

8. Can you provide any specific examples of how recent budgetary shortfalls have impacted your NPDES program, i.e. permitting, monitoring, inspection, enforcement, compliance assistance, new initiatives, or other programs that have been cut back, number of personnel that have been reassigned or laid off, etc?
9. In your opinion, what is the level of funding for your state’s NPDES program that would be necessary to adequately meet all federal and state statutory mandates?



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