

As I wrote earlier this week, environmental enforcement is not nearly as effective as it should be. EPA and others have been working on finding creative ways of obtaining compliance, often with the help of new technology.

One aspect of enforcement that has become clear is the need to focus on small, dispersed sources that may cumulatively cause major problems. EPA has focused its past efforts on the largest non-complying facilities. But EPA has found serious noncompliance in terms of water pollution at about 45% of smaller facilities, with significant impacts on water quality (especially where there are clusters of facilities). Small, dispersed sources can also be major contributors to toxic air pollutants. Often, smaller sources simply don't know what the rules are or what they need to do to comply. In one some industries with numerous small emitters, EPA simply sent letters to firms with suggestions about low-cost methods of compliance; the letters were inexpensive but produced noticeable results.

As this example indicates, there has also been considerable interest in use of cooperative compliance strategies. There are a number of economic reasons why some firms may wish to comply voluntarily, or even go beyond strict legal requirements, such as a desire to improve brand image, avoidance of potential future litigation or penalties, and attracting investors by signaling effective risk management systems. The empirical evidence on the relative effectiveness of these two enforcement strategies is unclear. Regulators seem to use a mix of these strategies; for instance, a study of chemical manufacturing facilities found that 39% of firms reported cooperative attitudes with regulators. The same study found that firms were more likely to employ stringent internal monitoring when subject to more cooperative enforcement, with little difference in other compliance activities between cooperative and adversary enforcement. Empirical research in this area is hampered by lack of data and by the likelihood that regulators may adjust their enforcement strategies based on the compliance activities of companies, so that high compliance may result in cooperative relationships rather than vice versa. Indeed, some enforcement systems explicitly tie external monitoring and enforcement strategies to the quality of a firm's compliance management.

Another approach is to make use of third-party certification efforts. According to one recent observer, "[w]hile not an entirely new practice, third-party verification seems to be increasingly attractive to Congress and federal agencies in light of inadequate agency resources and other persistent barriers to reliably monitoring regulatory compliance." Of course, there are obvious pitfalls to avoid, including concerns about auditor independence and competence. But careful program design can help with

these problems.

Technology can also be helpful. For instance, EPA has deployed solar-powered monitors that can upload via cell phones and infrared cameras that allow it to identify pollution plumes. Another technique is to mine social media for messages that might indicate exposure to bad air or polluted water, then using the results to focus enforcement efforts.

Apart from what regulatory agencies can do themselves, there are also ways that courts could help. The judiciary has placed a series of limitations on the availability of citizen suits, and has made it harder to get attorneys fees for those suits. More sympathetic courts could reverse that trend and reinvigorate this supplement to governmental enforcement.

There's no panacea for environmental enforcement. Ultimately, EPA and state agencies can only do so much with the limited budgets they have available. But there are ways of making the money go further. Strong enforcement is only fair, so that businesses that do choose to comply with environmental laws aren't disadvantaged compared with the others.