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Jeffrey G. Miller

Elisabeth Haub School of Law at Pace University, jmiller@law.pace.edu

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NEWS & ANALYSIS

Remedying Our Fragmented Governmental Structures to Deal With Our Nation-on-Edge Problems

by Jeffrey G. Miller

Editors' Summary: The argument against crafting federal regulations for problems stemming from development in disaster-prone areas (nation-on-edge problems) assumes that these types of problems are essentially local problems requiring unique local solutions. In this Article, Jeffrey G. Miller challenges this assumption, reasoning that a flexible framework of federal regulations would indeed be effective at remedying these problems. He suggests that such a framework could be modeled after the Clean Water Act's (CWA's) point source pollution control regime. A permitting system similar to that set out in the CWA would promote best management practices while still allowing local entities the freedom to determine which particular practices are most effective for them. He recommends that we reexamine our conception of federalism before abandoning hope of federal solutions to nation-on-edge problems.

I. Nation-on-Edge/World-on-Edge

This Article addresses the fragmented and ineffective nature of government programs and structures presently dealing with nation-on-edge problems and possible ways of making them cohesive and effective. This Article could just as well address the same issues for world-on-edge problems. Indeed, it might be better to do so, because many of the nation-on-edge problems are manifestations of international problems, rather than purely domestic concerns. Devastation from 2005's tsunami in the Indian Ocean is a world-on-edge problem and it is international in nature. Once the entire international relief effort is completed, people will return to their ocean-side abodes, another tsunami will come, and the devastation will recur. Devastation from annual monsoon floods on the Ganges Delta in Bangladesh is a world-on-edge problem. When the floods recede, the people will return, another flood will come, and the devastation will recur. Devastation from annual hurricanes in the Caribbean and Florida is a world-on-edge problem. When the relief efforts are completed, people will return to their homes, other hurricanes will come the following year, and the devastation will recur. Devastation from earthquakes in California, Iran, and Turkey are world-on-edge problems. When the relief efforts are complete, the people will return, more earthquakes will come, and the devastation will recur.

Jeffrey G. Miller is a Professor of Law and vice dean of Academic Affairs at Pace Law School.

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Wherever we look in the United States, we are on-edge in some way. But wherever we look in the world we are on-edge in the same and other ways. Although these natural disasters cannot be prevented, we can act to lessen their impact. For example, we could do the following: (1) try to prevent people from living in the areas most likely to suffer devastation; (2) have better warning systems; (3) have building codes requiring structures better able to withstand earthquakes, floods, and hurricanes; and (4) maintain wetlands to lessen the impact and volumes of floods.

II. World Climate Change Problems

The biggest disaster in the making is climate change. Forget the impact of tsunamis on the island states in the Indian Ocean, those islands will disappear beneath rising seas caused by global climate change. Many of the effects of climate change are unpredictable, but they range from serious to potentially catastrophic. They are not far distant problems, they are happening now. Currently, we are relocating the Alaskan native village of Shishmaref on the Bering Strait. The village is located on a barrier island, forming a lagoon between the island and the mainland. "Fast ice"—ice drifting from the Arctic Ocean and coming to rest against the shore—usually protects the island from erosion, however, with climate change, the fast ice arrives much later and autumn storms are eroding the land under the village, requiring its removal to the inland side of the lagoon. The villagers, known previously for their collective ownership and management of a caribou herd, are now known as the first American global climate change refugees. Several other native villages will soon follow. Other effects of

global warming are evident in Alaska. In summer 2004, forest fires in its northern area burned an area as large as the state of Connecticut. They caused a tundra fire beneath the permafrost, a fire that like a burning coal seam, is impossible to extinguish.¹

Global climate change is caused by both natural and man-induced actions. We can do nothing to stop natural climate change.² But we can act to reduce that part of climate change that is man-induced. Climate change is a global problem and man-induced causes of it are global as well. Reducing man-induced causes effectively will require coordinated action at the international, national, state, and local levels. The United Nations Framework Convention on Climate Change (FCCC)³ recognized the global nature of climate change and the necessity of a global response to address it. But the Framework Convention is not specific enough to produce action. That was left for later agreement, consummating in the Kyoto Protocol,⁴ which contains specific requirements and timetables for specific countries to reduce emissions of the greenhouse gases that cause climate change. The failure of the United States to ratify the protocol, however, dooms it to failure and isolates us from the international community.⁵

If we did sign the Kyoto Protocol, the Clean Air Act (CAA)⁶ would provide an intergovernmental regulatory framework for us to accomplish the greenhouse gas emission reductions required. The CAA, however, is such a complex statute that it is difficult to use as a model in a short article. Instead, this Article examines the less complex intergovernmental regulatory frameworks of the Clean Water Act (CWA),⁷ addressing water pollution. Indeed, the CWA offers a startling contrast in frameworks that hints at successful and unsuccessful means of knitting together federal, state, and local efforts to address pollution and possibly other nation-on-edge problems.

III. World and Domestic Water Problems

Both the world and the United States are on-edge with water as well as with climate. The two are intimately intertwined. Much of the world and much of the United States has either too much water or too little water. Too much water causes flooding in Bangladesh, just as too much water causes flooding in our own backyards. Too little water causes desertification in Saharan and sub-Saharan Africa and not enough water to go around in the U.S. Southwest. Climate change warms the polar ice caps, adding to water in the sea, causing coastal flooding. Climate change alters rainfall, transposing some of the areas getting too much or too little

water. Water pollution adds to the too little water problem, making some of the already too little water unusable. Again, we can't solve those parts of the too little or too much water problems caused by natural climate change, but we can solve part of the too little water problem by reducing water pollution.⁸

At the international level, the Law of the Sea Convention requires its signatories to reduce land based water pollution to reduce pollution of the seas.⁹ But, like the FCCC, its provisions are too general to be effective. Of course, we haven't ratified it either, although we have an extremely good water pollution control system.

IV. The Domestic Point Source Pollution Control Program

The CWA divides the water pollution source universe into two categories: point sources and nonpoint sources. Point sources generally are industrial, commercial, and municipal pollution added to water from pipes and similar conveyances, for instance, the discharge from a sewage treatment plant.¹⁰ Nonpoint sources are all other sources, for instance, stormwater runoff from a farm. Many sources in the middle could fall into either category¹¹ and the U.S. Environmental Protection Agency (EPA) has considerable discretion to place them in either category.¹²

When the U.S. Congress enacted the CWA in 1972, EPA and the Council on Environmental Quality (CEQ) estimated that the pollution added to the nation's waters was about evenly divided between pollution added by point and nonpoint sources.¹³ But it made an enormous difference under the CWA whether pollution originates from a point or a nonpoint source. The CWA regulates point sources with a strict federal/state/local scheme that has reduced point-source pollution by as much as 95%. As a result, waters formerly polluted primarily by point sources are largely clean. In Maine, for instance, 10 out of the 11 waters flowing into the Atlantic Ocean in 1972 were devoid of North Atlantic salmon, a native fish. That was because a pulp and paper mill polluted each of those 10 rivers, with each mill discharging more than the equivalent pollution load of the entire human population of the state. Pursuant to the CWA's requirements, the mills installed modern pollution control equipment, restoring the rivers. Today salmon spawn in all of Maine's rivers. On the other hand, the CWA does not establish a regulatory program requiring nonpoint sources to abate their pollution, because nonpoint source control often

1. Conversations and e-mails with Harry Bader, then-Northern Region Manager, Alaska Department of Natural Resources (Apr. 2005).

2. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, IPCC SECOND ASSESSMENT REPORT: CLIMATE CHANGE 1995 (United Nations Environment Program 1995).

3. 31 I.L.M. 849 (1992).

4. Kyoto Protocol to the Framework Convention on Climate Change (1997). U.N. Doc. FCCC/CP/L7/Add. 1 (Dec. 10, 1997).

5. Even if the United States did ratify the protocol, however, existing international environmental treaties and institutions may be too weak and unenforceable to succeed. See James Gustave Speth, *International Environmental Law: Can It Deal With the Big Issues?*, 28 Vt. L. Rev. 779 (2004).

6. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618.

7. 33 U.S.C. §§1251-1387, ELR STAT. FWPCA §§101-607.

8. Part of solving the water pollution problem means solving the air pollution problem. The biggest sources of mercury pollution in the Great Lakes, for instance, are air emissions from coal burning power plants.

9. 1982 United Nations Convention on the Law of the Sea, U.N. Sales No. E.83 V.5 (1983).

10. CWA §502(14), 33 U.S.C. §1363(14).

11. Runoff from piles of material such as coal, for instance, could be considered nonpoint source pollution because it is naturally occurring stormwater. See *Appalachian Power Co. v. Train*, 545 F.2d 1351, 6 ELR 20732 (4th Cir. 1976). It also could be considered point source pollution because the runoff forms channels conforming to the manner in which humans placed the piles. See also *Abston Constr. Co. v. Sierra Club*, 640 F.2d 41 (5th Cir. 1980).

12. *Natural Resources Defense Council v. Costle*, 568 F.2d 1369, 8 ELR 20028 (D.C. Cir. 1977).

13. CEQ, ENVIRONMENTAL QUALITY, 9th ANNUAL REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY 118-19 (1978).

implicates land use decisions and traditionally we have regarded land use decisions as being peculiarly a state and local matter.

The CWA's point source control program has been very successful. In a nutshell, it consists of:

- a national goal of restoring and maintaining the physical, biological, and chemical integrity of the nation's waters¹⁴;
- a permit program administered by states that EPA determines meet criteria established in the CWA, with EPA overseeing the approved state programs and acting as the default administrator in the absence of an approved state program (90% of the states have approved programs)¹⁵;
- uniform national standards established by EPA to be met by comparable industries, based on the best available control technology for the particular industrial sector, applied to individual sources in permits¹⁶;
- water quality standards established primarily by states to achieve water uses designated by states, again applied to individual sources in permits¹⁷;
- regulatory programs by municipal sewage treatment plants to require industrial sources adding pollution to the plants to meet EPA-established technology-based standards, programs established in permits issued by approved states or EPA to the plants¹⁸;
- a complete array of EPA enforcement authorities, authorizing federal enforcement against violations of EPA or state-issued permits¹⁹; and
- requirements for transparency and citizen participation,²⁰ including authority for citizens to sue EPA for failing to carry out a mandatory duty under the statute or pollution sources for violating the statute.²¹

The resulting system is not perfect. States complain about EPA dominance, while EPA complains about state underperformance. Environmentalists complain neither EPA nor states completely perform their duties. Indeed, EPA performance varies under different presidents. Performance also varies among states, and varies within individual states under different governors and attorneys general. But transparency signals to citizens when the government is not doing its job and when members of the regulated public violate the statute. The ability of citizens to sue EPA when its neglect threatens to make the system break down and to sue violating pollution sources when the government doesn't,

helps make the program work and helps to keep the government an adequate controller of pollution. Although not perfect, the system works and has achieved remarkable results.

V. The Domestic Nonpoint Source Pollution Control Non-Program

When it comes to nonpoint sources, however, the CWA establishes no regulatory requirements. The physical means of controlling nonpoint source pollution are well known. Buffer zones between waterways and nonpoint sources, for instance, may greatly diminish pollution that reaches waterways from activities such as construction and farming. To some that smacks of land use control, a matter better left to state or local governments. The CWA made token federal grants available for a short period to encourage state and regional governments to control nonpoint source pollution.²² But that program was short-lived and ineffective. When it enacted the CWA, Congress must have assumed to achieve the national goal of clean water, state and local governments, on their own, would take whatever steps are necessary to control pollution from nonpoint sources.

The continued degradation of many of our waterways, polluted primarily by nonpoint sources, suggests that this did not happen. To test this hypothesis, one of this author's students recently conducted a study of a stream originating in Connecticut and flowing through three towns in Westchester County, New York, and then into Long Island Sound.²³ The stream is polluted by nonpoint sources, with no point source pollution identified. There is no articulated program to abate pollution of the stream. There is no indication that EPA is aware of the stream or its polluted nature. New York has established water quality standards for the stream and is aware it does not meet the standards, but has established no program to assure it will meet the standards. Westchester County is aware the stream does not meet the standards, but has established no program to assure it will meet them. Of the three towns in New York, one takes and analyzes samples from the stream, demonstrating that it does not meet the standards. All three towns have authority to control some nonpoint source pollution and all three do require some controls, primarily on stormwater runoff from construction sites. Some of their programs appear to be effective, but they only cover a few types of nonpoint sources and they are uncoordinated. The end result is that 30 years after the enactment of the CWA, the stream is no closer to achieving water quality standards than before. There is no coherent program in place to assure that it will do so and, without a regime change, there never will be.

Point sources and nonpoint sources intersect when implementing water quality standards. When a waterway has not achieved the criteria adopted by the state to achieve the water's designated use, the permit writer must reduce the authorized effluent sufficiently for the criteria to be met.²⁴ If the permit issuing agency has no authority to reduce nonpoint source pollution, it must place the entire burden of achieving water quality standards on point sources. This is particularly significant today, when most of the progress in

14. CWA §101(a), 33 U.S.C. §1251(a).

15. *Id.* §402, 33 U.S.C. §1342.

16. CWA §§301(b) & 304(b), 33 U.S.C. §§1311(b) & 1314(b).

17. *Id.* §§301(b)(1)(C), 303 & 304(a), 33 U.S.C. §§1311(b)(1)(C), 1313 & 1314(a).

18. *Id.* §§307(b) & 401(b)(8), 33 U.S.C. §§1317(b) & 1342(b)(8).

19. *Id.* §309, 33 U.S.C. §1319.

20. *Id.* §101(e), 33 U.S.C. §1251(e), requires sweeping opportunities for public participation in the administration of the water pollution control program. Data on effluents from the regulated public is public information, *id.* §308(b), 33 U.S.C. §1318(b).

21. *Id.* §505, 33 U.S.C. §1365.

22. *Id.* §208, 33 U.S.C. §1288.

23. See Kara E. Murphy, A New York Environmental Case Study: The Blind Brook, A Local Perspective of Environmental Protection (unpublished paper) (on file with the author).

24. CWA §301(b)(1)(C), 33 U.S.C. §1311(b)(1)(C).

reducing effluent limitations in point source permits is a result of efforts to achieve water quality standards.²⁵

VI. Can the Point Source Control Model Work for Nonpoint Sources?

We assume that the point source program model is not applicable or appropriate to control nonpoint source pollution for several reasons. First, because control of nonpoint sources involves land use decisions, it faces the constitutional barrier of the requirement of just compensation for the taking of land or placing restrictions on its use that amount to a taking. Second, because control of nonpoint sources involves land use decisions, it faces the political barrier of the traditional belief that land use decisions are the province of state and local governments, perhaps constitutionally so. Third, many believe that a federally driven program would stifle the creative juices of state and local authorities. Fourth, the sheer number of sources could defeat implementation of any permit program. And finally, the command-and-control nature of federal standards and permit programs seems retrograde.

These assumptions, however, bear close scrutiny because of importance of achieving the federal, state, and local objectives of decent water quality, coupled with the overwhelming success of point source pollution control and the lack of success of nonpoint source pollution control. The assumptions, however, are questionable. Where they are valid, modifications in the point source pollution control to accommodate the nonpoint source regime may remove the objections.

The first assumption is that the Fifth Amendment of the U.S. Constitution²⁶ requires just compensation for constraints imposed on land use. Typical governmental takings of land requiring just compensation are physical takings, where the government assumes ownership of or physically intrudes on the property. But it can also effectuate a taking by regulating the use of land sufficiently to remove its value. Routine land use regulation does not intrude sufficiently on the value of land to effectuate a taking.²⁷ Similarly, environmental regulation requiring pollution control measures is not a taking, for it allows rather than forbids particular uses of land, by conditioning the use on appropriate pollution control measures.

The second assumption that nonpoint source controls intrude on traditional state and local land use decisions, is the stalking horse for political opposition to a federal presence in nonpoint source control. The argued federal intrusion is questionable on two grounds. First, many of those controls don't intrude on land use decisions any more than point source controls intrude on them. Most of the controls come after a land use decision has been made. If the decision is to

use land for an industrial plant, the point source control requires the plant to use pollution control technology. If the decision is to use land for a cultivated farm field, the nonpoint source control requires the farmer to provide a buffer between the field and an adjacent waterway. In neither case does the pollution control requirement intrude on the local land use decision; it merely provides that no matter what use is made of the land, controls must be implemented to prevent pollution of the adjoining waterway.²⁸ Second, there may be a valid interest in nonpoint pollution control beyond the state or locality making land use decisions. Where nonpoint pollution in an upstream state prevents attainment of the water quality standards of a downstream state, that interest is at its strongest.

Some believe that federal intrusion on state and local land use decisions actually violates the Tenth Amendment,²⁹ which left states with the powers not specifically given to the federal government by the Constitution. This argument was decisively defeated recently in the context of CWA regulations over storm sewers, imposing requirements very much like those suggested here for nonpoint sources.³⁰

The third assumption, that a federally driven program would stifle the creative juices of state and local governments, is equally questionable. First, the means of controlling most nonpoint source pollution are well known. Second, flexibility can be built into any system to encourage rather than discourage creativity. In the point source program, for instance, some assume that uniform federal standards based on the best technology available for a particular industrial sector stifle creativity in that sector. But the standard doesn't require use of the best available technology, instead it requires a pollution control level comparable to that achieved by the best available technology, leaving the industrial permit holder free to use any technology it wants as long as it achieves that level. Indeed, it even allows a two-year extension of compliance deadlines for innovative approaches to pollution control.³¹ That has encouraged creativity, leading to the development of more effective and less-expensive controls. Nonpoint source standards also could allow such flexibility. Finally, flexibility can be allowed in state and local regulatory mechanisms. In the point source program, for instance, municipal sewage treatment plants may regulate their industrial dischargers by issuing permits, but they may also do so by contracts or equivalent mechanisms.

The fourth assumption, that the vast number of nonpoint sources defies the ability of any permit program to control, is based on mistaken assumptions about the inflexibility of permit programs. Granted, issuing individual permits to all nonpoint sources would be a monumental task, particularly if done by a federal agency. But even the point source program uses general permits as well as individual permits,³² as does the CWA's system of permits for filling wetlands.³³

25. For an exhaustive analysis of the implementation of water quality standards, see Oliver A. Houck, *TMDLs: The Resurrection of Water Quality Standards-Based Regulation Under the Clean Water Act*, 27 ELR 10329 (July 1997); Oliver A. Houck, *TMDLs: Are We There Yet? The Long Road Toward Water Quality-Based Regulation Under the Clean Water Act*, 27 ELR 10391 (Aug. 1997); Oliver A. Houck, *TMDLs III: A New Framework for the Clean Water Act's Ambient Standards Program*, 28 ELR 10415 (Aug. 1998).

26. The Fifth Amendment applies only to takings by the United States. But the Fourteenth Amendment carries this requirement to takings by states as well. U.S. CONST. amends. V & XIV, §1.

27. The U.S. Supreme Court's takings jurisprudence is opaque, to say the least. See the recent case, *Lingle v. Chevron U.S.A., Inc.*, 125 S. Ct. 2974, 35 ELR 20106 (2005), for the Court's latest restatement of when regulation of property amounts to a taking.

28. The Court has recognized this. "Land use planning in essence chooses particular uses for the land; environmental regulation, at its core, does not mandate particular uses of the land but requires only that, however, the land is used, damage to the environment is kept within prescribed limits." *California Coastal Comm'n v. Granite Rock Co.*, 480 U.S. 572, 587, 17 ELR 20563 (1987).

29. U.S. CONST. amend. X.

30. *Environmental Defense Ctr. v. EPA*, 319 F.3d 398, 33 ELR 20269 (9th Cir. 2003).

31. CWA §301(k), 33 U.S.C. §1311(k).

32. 40 C.F.R. §122.28 (2005).

The point source permit program has also become adept at controlling multiple sources of pollution with a single permit. Permits issued to municipal sewage treatment plants, for instance, require the cities to regulate industrial discharges to their sewers to meet federal standards.³⁴ Permits issued for municipal storm sewers may be issued on a systemwide basis rather than for each sewer outfall.³⁵ Indeed, storm sewer permits require management practices to reduce pollution from stormwater runoff, much like the practices appropriate for nonpoint source regulation.³⁶ Finally, nonpoint permitting systems could piggy-back existing state and local permit systems. Even now, for instance, locally issued building permits normally include requirements for barriers to prevent silt-laden runoff from construction sites from reaching adjacent waterways.

The final assumption, that national standards and permits are retrograde command-and-control mechanisms, begs the question. Those mechanisms demonstrably work well in the point source universe. We know the physical means of reducing nonpoint source pollution, but 30 years of experience has not produced regulatory mechanisms to accomplish the task, except on an isolated local basis for subsets of nonpoint sources. Moreover, when properly understood, the point source system may not be as command and control or as retrograde as assumed, e.g., federal technology-based standards are not requirements to use particular technologies but to achieve the pollution control performance of those technologies. If the point source model can be adapted to the nonpoint universe to achieve water quality goals, why wouldn't it be tried, command and control or not, retrograde or not? Of course, the point source model might be modified to adopt it to the nonpoint source universe, removing some of its assumed command-and-control or retrograde nature.

VII. Modifying the Point Source Model to Deal With Nonpoint Sources

Even though the assumptions underlying the knee-jerk reaction that the point source model is inappropriate for nonpoint source control may not be well founded, the point source model would have to be modified to suit the nonpoint source universe. Although considerable thought and care would be required to perfect such modification, an initial suggestion is possible at this point.

Federal legislation could establish:

- that nonpoint sources must use the best available means of reducing pollution to water bodies not meeting water quality standards, according to a reasonable but definite schedule;
- which governmental entity(ies) will determine the best available means of reducing pollution and the criteria governing that determination;
- the mechanisms by which the resulting standards will be translated to regulatory controls on nonpoint sources;

- the roles of various levels of government in implementing the resulting program, inducements for state and local governments to participate, and of the federal agencies in overseeing implementation by nonfederal agencies;
- the mechanisms available to the federal agency(ies) to enforce against violations of the program; and
- the mechanisms for public participation in implementing the program, including citizen enforcement.

Considerable flexibility exists in establishing each of these requirements, although each has bedrock necessities to be effective.

Different formulations than “best available means” of reducing pollution could be required. The most stringent of “best available means” or reduction necessary to achieve water quality standards could be required either at the same time or in stepped progression. Such dual requirements would be theoretically more faithful to the goals of the CWA, although for the sake of simplicity in a large and complicated program it would be far easier to deal with just a best available means requirement. That would probably achieve water quality standards in most waterways. If it did not, the provision could always be amended later to require further controls where necessary to achieve and maintain water quality standards. The statute could impose one deadline for achieving best available means or it could authorize regulation of different categories of nonpoint sources each year for several years, each with its own compliance deadline. This would allow regulatory agencies to prioritize addressing nonpoint sources in the order of their importance in pollution reduction.

The best available means of pollution reduction for most nonpoint sources often would be management practices or flow controls, as opposed to treatment technologies. Many are well known and readily available, e.g., buffer zones. Criteria for designating a best available means would include such factors as practicality, cost relative to both pollution control and the activity requiring the control, and effectiveness in pollution reduction. These factors could require variations of a best available means to reflect differences in both climate and geography. Many of these variations could be established in national guidelines. Even so, a means of providing local variations, reflecting differences not considered when developing the guidelines, would be desirable. EPA would be a logical choice for developing the national guidelines, a task in which it is well experienced. State environmental agencies could develop variations reflecting their different situations. This type of presumed national standard with state variations is already in place regarding water quality criteria.³⁷ A similar relationship between state and local governmental entities also appears to be appropriate, although which local entities are appropriate may vary from state to state. The two main difficulties here are ensuring that states allow roles for appropriate local authorities rather than retaining authorities at the state level, as they tended to do with the CWA's §208 program, and ensuring a rough parity in the pollution reduction achieved by variations from the national standards.

The U.S. Army Corps of Engineers uses “nationwide” permits to authorize minor filling of wetlands by common

33. CWA §404(e), 33 U.S.C. §1344(e).

34. *Id.* §402(b)(8), 33 U.S.C. §1342(b)(8).

35. *Id.* §402(p)(3)(B), 33 U.S.C. §1342(p)(3)(B).

36. For an account of the stormwater permit program, see John Nolon, *Cooperative Federalism or Devolution Double-Dealing? Federal Control of Local Land Uses*—Environmental Defense Center v. EPA, N.Y. L.J., Apr. 16, 2003.

37. 40 C.F.R. §131.11(b) (2005).

activities.³⁸ EPA used “general” permits to authorize similar pollution sources to discharge in identified geographic areas, subject to similar pollution controls.³⁹ These mechanisms are actually hybrids of permits and regulations. Like regulations, they are promulgated using a notice-and-comment procedure. Like permits, they may require individual pollution sources to file applications or notifications with regulatory agencies to be covered by them and often require sources to file compliance reports with the agencies. State and local governments have a plethora of existing permit and licensing programs, such as building permits, which could be modified to include nonpoint pollution requirements. These types of regulatory mechanisms initially require public education, but can be administered efficiently by regulatory agencies.

Nonpoint source control ideally has the federal government establishing program goals and standards, encouraging and overseeing state and local implementation, and stepping in where needed to assist or where others don’t act. It can encourage state and local participation by funding and providing degrees of implementation flexibility commensurate with the degrees to which state and local governments undertake program implementation. For instance, it could allow implementing agencies to adopt control measures different than required by national standards, upon a showing that they would provide equivalent pollution reduction,⁴⁰ or exempt watersheds from controls when water quality standards are achieved and maintained. The ideal role of a state is to provide both itself and local governments with authority to implement and enforce nonpoint source controls, develop variations in national standards appropriate to local climate and geographic conditions, and to develop a network of regional and local governments with adequate resources and expertise to implement much of the program. Without direction from above and implementation from below, nonpoint source control will continue to be a pipe dream.

Existing federal enforcement authorities are adequate to address many violations, but should be augmented with mechanisms that are more suited to a large universe of small pollution sources. Small, easily assessed “traffic tickets” are well suited to many components of such a program, modeled on the field citation mechanism in the CAA.⁴¹ Allowing penalties to be used to augment local nonpoint source controls or otherwise benefit the local environment would make penalties less Draconian and produce real pollution control benefits.⁴² Revoking or conditioning other state and local permits for a violating activity can be an added inducement for compliance.⁴³ Carrots, as well as sticks, can also be ef-

fective at the local level; rewarding local successes and using them as local models is as important as deterrence.

Citizen participation has been important in assuring the success of the CWA in controlling point sources. It provides citizens with information on how EPA is (or is not) implementing the water pollution program and on compliance by the regulated public. Citizens provide information and comments on proposed standards and permits. Citizens appeal regulations and permits not meeting statutory criteria. They also sue EPA when it fails to carry out its mandatory duties and sue members of the regulatory public who violate their regulatory requirements in the absence of government enforcement. The latter has proven to be a particularly useful antidote when some administrations have turned their back on enforcing environmental requirements.⁴⁴ The opportunities for lack of government implementation of a nonpoint source program and for violations by the regulated public make it particularly important that robust citizen participation is authorized.

VIII. Conclusion

The point source control model is known and effective. Congress adopted it to deal with hazardous waste management⁴⁵ and to control air pollution, after attempts to control it with more flexible approaches failed.⁴⁶ The same type of program, with appropriate, interrelated roles to play by all levels of government, could be adopted to fit almost any nation-on-edge problem. Indeed, most such problems cannot be solved by any one level of government; however, success can be achieved if all three levels are working together in a coherent fashion. The same can be said for world-on-edge problems. Climate change and international water pollution problems, for instance, cannot be solved by any one nation. All nations who have a part in creating a problem must work together in a coherent fashion to solve it. General aspirational treaties and conventions are not sufficient. They must define the goals, allocate goal achievement among nations, define response mechanisms, measure results, and prod lagging national compliance. But only nations can implement the resulting programs and if they are federal nations, like the United States, they probably can do so only by securing the enthusiastic participation of state and local governments.

You may wonder how we can get our fractured nation to work together to solve nation-on-edge problems, and may wonder even more how we can get our fractured world to work together to solve world-on-edge problems. The framework suggested above is one possibility, albeit a difficult one to achieve. However, one thing is certain—if we don’t solve these problems, like the island nations of the Indian Ocean, eventually we all will sink into our metaphoric rising seas.

38. CWA §404(e)(1), 33 U.S.C. §1344(e)(1). 33 C.F.R. §330.5 & .6 (2005).

39. 40 C.F.R. §122.28.

40. EPA does that now for water quality criteria. 40 C.F.R. §131.11(b).

41. CAA §113(d)(3), 42 U.S.C. §7413(d)(3).

42. Because the Miscellaneous Receipts Act, 31 U.S.C. §3302(c)(1), requires that penalties assessed under federal statutes be deposited in the U.S. Treasury, courts do not have authority to order that penalties be redirected to such projects. *Middlesex County Sewerage Auth. v. National Sea Clammers Ass’n*, 453 U.S. 1, 14 n.25, 11 ELR 20684 (1981). EPA, however, will settle cases with agreements that allow portions of penalties otherwise due to be used for such “supplemental environmental projects.”

43. See CWA §402(b)(1)(C), 33 U.S.C. §1342(b)(1)(C).

44. When the first Reagan Administration virtually stopped enforcing the environmental statutes, environmental groups organized a national private enforcement campaign, using citizen suit authorities. They soon were filing more judicial actions than the government. *CITIZEN SUITS: AN ANALYSIS OF CITIZEN ENFORCEMENT ACTIONS UNDER EPA-ADMINISTERED STATUTES* (Env’t. L. Inst. 1984).

45. The Resource Conservation and Recovery Act’s (RCRA’s) permit program, §§3005 & 3006, 42 U.S.C. §§6925 & 6926.

46. The CAA’s permit program, CAA Title V, §§501-507, 42 U.S.C. §§7661-7661f, Pub. L. No. 101-549, §501, 100 Stat. 2635.