

SYMPOSIUM INTRODUCTION: CONTEMPORARY ISSUES AT THE INTERSECTION OF PUBLIC HEALTH AND ENVIRONMENTAL LAW

Patricia Ross McCubbin*

In February 2009, the Southern Illinois University School of Law held a one-day conference, co-sponsored by the SIU Center for Health Law & Policy and the SIU Law Journal, exploring contemporary issues at the intersection of public health and environmental law. The 60 attendees heard presentations from legal scholars, community advocates, scientists, private attorneys and government regulators on some of the most important issues of the day, including the obesity epidemic, global climate change, and pharmaceuticals in our waterways. On those issues and others, the experts proposed new ways of thinking about the interplay between health and environmental protections.

The modern environmental statutes were adopted in the 1970s after incidents such as the London “killer fog”¹ and the Donora, Pennsylvania, deadly smog inversion,² when many citizens died from exposure to air thick with industrial pollutants. With those tragedies in mind, policymakers could no longer ignore the connection between pollution and public health. As a result, Congress adopted the Clean Air Act in 1970, the Clean Water Act in

* Associate Professor of Law, Southern Illinois University School of Law; J.D., University of Virginia 1990. I thank Professors Jim May, Irma Russell and Ross Silverman for early suggestions on conference topics. I also extend thanks to the staff of the SIU Law School and the SIU Law Journal for help with conference arrangements, particularly Bob Menees, Bonnie Miller, Kyle Oehmke, Alicia Ruiz, Trish Sherk, Barb Smith, and Vanessa Sneed. Special gratitude goes to Jim Stivers, SIU Law Class of 2007, for his extraordinary service in identifying topics and speakers. Finally, this conference could not have been such a success without the hard work of each of the speakers. The brief summary provided in this introduction cannot do justice to their longer remarks, and any misstatements here are solely my responsibility.

1. See, e.g., Robin Kundis Craig, *Removing “The Cloak of a Standing Inquiry”: Pollution Regulation, Public Health, and Private Risk in the Injury-in-Fact Analysis*, 29 CARDOZO L. REV. 149, 224 n.48 (2007) (describing the 1952 incident in London, England, that “kill[ed] anywhere from 4000 to 11,000 people in four days”).
2. *Id.* (describing the 1948 incident that “kill[ed] 20 and hospitaliz[ed] over 7000 people in five days”). Of course, the early environmental statutes arose not just from these incidents but a whole confluence of factors, including Rachel Carson’s book *Silent Spring*, the political ambitions of Senator Edmund Muskie and President Richard Nixon, and the stunning images of Earth from the Apollo missions to the moon. See generally Christopher H. Schroeder, *Global Warming and the Problem of Policy Innovation: Lessons from the Early Environmental Movement*, 39 ENVTL. L. 285 (2009) (identifying influences in the early environmental movement).

1972, the Safe Drinking Water Act in 1974, and several other statutes designed to reduce birth defects, tumors, and other adverse health effects caused by contaminants in our air, waterways and lands. A central element of the Clean Air Act, for example, was designed to “protect the public health” with “an adequate margin of safety,”³ with the Supreme Court describing that statute as “a drastic remedy to what was perceived as a serious and otherwise uncheckable problem of air pollution.”⁴

More recently, however, the public health benefits of pollution control have received less attention. Instead, the environmental regulatory scheme has become so commonplace that requirements to reduce pollutants are taken for granted. Rarely do we stop to consider the countless lives that have been saved because raw sewage no longer regularly flows through our rivers, lead has been removed from the air, and dioxin can no longer be dumped onto the soil.

Despite these successes, we continue to struggle with public health concerns caused by long-standing environmental degradation—everything from mercury-laden fish to urban smog to PCB-contaminated soils. In addition, we face new, growing health threats, including the diabetes and heart disease plaguing overweight citizens, as well as the heat waves, floods, respiratory illnesses, and infectious diseases spurred by global climate change. These threats may not bring death as swiftly as the London killer fog or the Donora smog inversion, but they pose serious, long-term risks to far more citizens at home and around the world.

This conference, then, was designed to renew our appreciation for the synergies between the goals of protecting the public health and protecting the environment. The panelists identified opportunities to accomplish both goals, even in circumstances where the synergies were not initially evident. In particular, the expert speakers addressed the following topics:

Land Use Regulation and the Obesity Epidemic

This panel demonstrated that while some of the new public health threats, such as the obesity epidemic, may not initially appear to be *environmental* issues, the protection and appropriate use of our natural surroundings can improve our health. Dr. Mae Davenport, an assistant professor in the SIU Department of Forestry, and Lisa Feldstein, a lawyer by training and a community advocate in the San Francisco Bay area, discussed the steps that local governments and developers can take to build sustainable communities

3. 42 U.S.C. § 7409(b)(1) (2006).

4. *Union Elec. Co. v. EPA*, 427 U.S. 246, 256 (1976).

that promote active living *and* ecological values. Communities designed, for example, to allow citizens to walk to work, schools and shopping help reduce the incidence of obesity and also help the environment by reducing car emissions. Similarly, locales that set aside open spaces for recreation likewise provide wildlife habitat and improve water quality.

Importantly, however, the speakers emphasized that although citizens may not support these land use changes solely to preserve wildlife or other ecological values, voters more often *do* approve such measures to protect the health of their friends and families. Thus, jurisdictions seeking to implement similar land use programs should act in the name of public health, rather than simply on behalf of the environment.

Global Climate Change and Sustainable Local Commerce

Building on the first panel, this second presentation identified measures that communities can implement to encourage local commerce that provide health, environmental and economic benefits. Professor Peter Appel, of the University of Georgia (UGa) School of Law, and Dr. T. Rick Irvin, an industry consultant and adjunct professor in the UGa Interdisciplinary Program in Toxicology, focused on local efforts to develop commerce in renewable energy supplies, thereby working to reduce the emissions of greenhouse gases contributing to global climate change. The speakers emphasized that local governments have great discretion to implement public health initiatives—even more authority, in fact, than provided by environmental regulatory regimes. Consequently, measures adopted on behalf of the public health not only win support at the ballot box, as noted in the first panel, but also in the courtroom.

In addition, in their article published in this symposium volume, Professor Appel and Dr. Irvin discuss community programs that can preserve natural resources or minimize the generation of wastes. For all these local efforts to develop sustainable commerce, they posit five “foundations” for success that integrate public health and environmental legal authorities and policy rationales.

Environmental Justice and Public Health

Ms. B. Suzi Ruhl was the luncheon keynote speaker. At the time of the conference, Ms. Ruhl was the Director of the Public Health and Law Program and Senior Attorney for the Environmental Law Institute in Washington, D.C., one of the nation’s premier institutes dedicated to environmental issues. Soon after the conference, she joined the U.S. Environmental Protection Agency (EPA or the Agency) as Senior Attorney and Policy Adviser in the Office of

Environmental Justice. She spoke about the environmental degradation that often disproportionately affects communities of low socioeconomic status, resulting in a cascade of health problems. Ms. Ruhl provided examples of successful citizen efforts to address local environmental and public health problems, emphasizing that much of the success depended on giving stakeholders adequate information about the harms around them and a place at the table when governments design programs to minimize those harms.

Public Health Valuation in EPA Enforcement Decisions

This panel provided an important reminder of the public health benefits gained from EPA's enforcement of environmental requirements—benefits, as noted earlier, that we often take for granted. First to speak was T. Leverett Nelson, one of two Branch Chiefs with the Office of Regional Counsel in EPA's Region 5, where he supervises approximately 50 attorneys bringing civil and criminal enforcement actions under various federal environmental statutes in six Midwestern states. Mr. Nelson explained how the Agency sets its enforcement priorities based, in large part, on the significance of harm caused by the violator. He also gave detailed examples of successful EPA enforcement actions that offered substantial public health benefits. Of particular note is EPA's recent settlement with American Electric Power (AEP) for violations of the Clean Air Act, which will eliminate 654,000 tons of sulfur dioxide from AEP's smokestacks in the future, helping to avoid respiratory illnesses, improve visibility, and protect crops and other plants from acid rain.

Next, Professor Robin Kundis Craig, the Attorneys' Title Insurance Fund Professor of Law and Co-Director of the Land Use and Environmental Law Program at the Florida State University College of Law, presented an important study of EPA's efforts to communicate the public health benefits of its enforcement actions nationwide. In particular, in her article in this symposium volume, Professor Craig analyzes the Agency's annual reports on civil and criminal enforcement over the last decade, concluding that EPA frequently fails to provide meaningful information about the impacts of its actions. Instead, the Agency offers mere "bean counting" by, for example, reporting the total number of administrative orders issued in a given year, the number of civil and criminal judicial actions filed, the dollar value of settlements, and so on. That data, while somewhat useful, fails to reflect the powerful health benefits behind those numbers.

Professor Craig identifies occasional exceptions when the Agency, in fact, highlights the types of pollutants addressed in an enforcement action, the harms caused by those pollutants, and the number of citizens benefitting from

EPA's actions, sometimes going so far as to assign a monetary value to those effects. She persuasively argues that EPA should more regularly make those public health benefits evident to Congress and the American people, even if only qualitatively, so as to strengthen public support for aggressive enforcement of federal environmental requirements.

Pharmaceuticals in Waterways

While the previous panels documented the synergies between protecting the environment and protecting the public health, this panel addressed an apparent conflict between those two goals. Attorney Richard Davis, a nationally-recognized Clean Water Act expert, and Dr. Al Alwan, a chemist with EPA Region 5's Water Division, discussed the emerging threat from antibiotics, hormones and other pharmaceuticals contaminating our waterways. Although the drugs are vital to a functioning healthcare system, they often are poured down the sink or excreted from our bodies, and then pass through sewage treatment plants into the rivers and lakes that provide our drinking water, potentially harming humans and biota alike. As one example, endocrine disruptors from birth control pills and other sources have been linked to abnormal development in fish and frogs.⁵ They may also harm humans by adversely affecting "male and female reproduction,. . . [the] thyroid, metabolism and obesity," among other things.⁶

Mr. Davis and Dr. Alwan explained that EPA's current efforts under the Clean Water Act do not effectively regulate pharmaceuticals for two main reasons.⁷ First, the process of setting traditional standards, pollutant-by-pollutant, is resource intensive, and it is unrealistic to expect that process, within any reasonable time-frame, to address the thousands of pharmaceuticals and other naturally-occurring substances that are biologically active. Moreover, a separate and very real concern stems not from each contaminant in isolation at the treatment facility, but the interaction of multiple pharmaceuticals in the receiving waters. Thus, Dr. Alwan proposed an alternative approach that would use "sensitive biological endpoints" to detect pharmaceutical mixtures in the water column by, for example, assessing the estrogenicity of a given stream or lake. Once estrogenicity is identified within

5. Nicholas D. Kristof, *It's Time to Learn from Frogs*, New York Times (June 28, 2009), <http://www.nytimes.com/2009/06/28/opinion/28kristof.html> (last visited July 17, 2009).

6. *Id.* (quoting a recent, "landmark" report from "the Endocrine Society, an organization of scientists specializing in this field").

7. Mr. Davis and Dr. Alwan spoke in their individual capacities, and their views do not necessarily represent the positions of EPA or any other party.

a particular waterbody, he then suggested expanding the inquiry to the entire surrounding watershed to identify all the potential sources of the estrogenic pharmaceuticals—whether from human use, agriculture or industrial applications. With the key sources identified, control mechanisms capable of addressing those sources could be engaged.

Second, the Clean Water Act normally reduces harms from water pollutants by requiring the installation of sophisticated equipment at sewage treatment plants to remove the harmful substances before they enter the receiving waters, and by limiting upstream uses (at least sometimes) so the treatment facilities receive fewer pollutants to start. That scheme, however, works poorly in these circumstances because the drugs excreted from our bodies cannot be eliminated altogether, and sewage treatment plants may not have effective treatment methods to prevent discharges of all the pharmaceuticals. Thus, the speakers suggested that rather than trying to *avoid* the harms altogether, EPA should try to *locate and minimize* the harms by focusing not on the treatment plant but on the receiving waters themselves, working with local officials and stakeholders to properly use and manage the resource in light of the particular conditions revealed through the biological endpoint testing. In short, while the Clean Water Act might at first appear ineffective against this emerging threat, Mr. Davis and Dr. Alwan proposed innovative solutions under the existing statutory scheme to respond to the unique circumstances of pharmaceuticals.

Global Climate Change and the Clean Air Act

Finally, in my own contribution to this symposium volume, I likewise deal with an apparently imprecise fit between public health goals and the current framework of a federal environmental statute. In particular, I address the Clean Air Act and global climate change, which threatens public health in the United States and abroad with the spread of infectious diseases, more intense and frequent heat waves and floods, degraded air quality and more asthma cases, the loss of agricultural production, and other adverse effects.⁸ As noted earlier, that statute was adopted more than 40 years ago to protect the public by regulating harmful air pollutants. Yet EPA, as well as many states, environmental organizations, and industries, believe that trying to use a central program of the Act—the so-called “national ambient air quality standards”—would be fundamentally inappropriate for greenhouse gases. My article challenges that claim, building on the skepticism of EPA’s climate

8. See Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Proposed Rule, 74 Fed. Reg. 18,886, 18,901–02 (April 24, 2009).

change record that was evident in the Supreme Court's seminal decision of *Massachusetts v. EPA*.⁹ I argue that even though applying the statutory scheme to greenhouse gases poses challenges, the national standards might be sufficiently tailored so as to prove useful in our efforts to mitigate global climate change.

My article also analyzes whether EPA will be legally required to adopt national standards for greenhouse gases now that it has proposed finding that those pollutants, at least when they are emitted from cars and trucks, endanger the public health and welfare. I offer an interpretation of the relevant statutory provisions and the legislative history that has not been previously discussed by EPA, judges or commentators, and that answers a nagging question left unresolved by the one court that has considered the issue. The article concludes that, given a likely scrivener's error in the Clean Air Act, EPA very well may be obligated to adopt those national standards, which, despite the Agency's doubts, could actually help protect the public.

Summary

In sum, this conference demonstrated that protecting public health and protecting the environment go hand-in-hand. Today's environmental statutes offer opportunities to address emerging health threats such as pharmaceuticals in waterways or greenhouse gases in the atmosphere. In addition, emphasizing the protection of public health can strengthen support for EPA's enforcement actions and for local government actions designed to build sustainable communities and encourage sustainable commerce.

9. 549 U.S. 497 (2007).

