The Twin Environmental Law Problems of Preemption and Political Scale

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Recommended Citation
Erin Ryan, The Twin Environmental Law Problems of Preemption and Political Scale Environmental Law, Disrupted (Keith Hirokawa & Jessica Owley, eds.) (2021), Available at: https://ir.law.fsu.edu/articles/717
After three years in office, the Trump Administration has dismantled most of the major climate and environmental policies the president promised to undo. Calling the rules unnecessary and burdensome to the fossil fuel industry and other businesses, his administration has weakened Obama-era limits on planet-warming carbon dioxide emissions from power plants and from cars and trucks, and rolled back many more rules governing clean air, water and toxic chemicals. Several major reversals [were finalized] as the country has struggled to contain the spread of the new coronavirus. [This] analysis, based on research from Harvard Law School, Columbia Law School and other sources, counts more than 60 environmental rules and regulations officially reversed, revoked or otherwise rolled back under Mr. Trump. An additional 34 rollbacks are still in progress.¹

These have been daunting times for the environmental movement in the United States. Since 2017, it has often seemed that federal environmental law is being systematically dismantled—most aggressively by the executive branch,² but with tacit support from much of the sitting legislature, and—


after record numbers of judicial nominees were elevated to the bench during the Trump Administration—likely with increasing support from the judiciary as well. For environmentalists, the unraveling of regulatory infrastructure built over decades of previous lawmaking has been cause for despair, but it also compels preparation for the challenges yet to come. Environmental advocates should especially brace for two federalism-related legal hurdles likely to frustrate their goals: the twin problems of preemption and political scale.

Preemption poses a real threat to state and local efforts to combat the rollback of federal environmental law through subnational regulation. Advocates must ensure that the campaign to dismantle federal law does not spill over into displacing state and local efforts to fill the void. Nevertheless, there still remains the problem of matching the large biophysical scale of many environmental problems with available political scale, now more limited than ever. Advocates must think creatively about how to accomplish the goals of national-level environmental policy without the benefit of nationwide federal authority. This may require thinking outside the box—but necessity has always been the mother of creativity, and the need has never been greater.

Written as a memo to environmentalists at this pivotal moment in time, this chapter reviews the twin federalism-related challenges that flow from the weakening of federal environmental law. Part I urges advocates to protect state and local environmental law from anti-regulatory preemption. Part II suggests new ways of marshaling large-scale responses to looming environmental problems through various means of coordinated local, regional, and private forms of environmental governance.

I. Problems of Preemption

The immediate federalism-related challenge is to ensure that the campaign to alter the fundamentals of federal environmental law is not partnered with a campaign to block state and local efforts to fill the resulting regulatory void through preemption.3 Environmentalists should be especially on guard against the expansion of ceiling preemption, which perverts the customary use of federal preemption to ensure minimum national environmental qual-

3. Although this chapter focuses on federal preemption, it is worth noting that state-law preemption of municipal actions can be equally problematic and deserves additional scrutiny. See, e.g., Richard Briffault, *The Challenge of the New Preemption*, 70 Stan. L. Rev. 1995 (2018) (noting that “[t]he past decade has witnessed the emergence and rapid spread of a new and aggressive form of state preemption of local government action across a wide range of subjects, including . . . environmental and public health regulation,” and that “[t]he rise of the new preemption is closely linked to the partisan and ideological polarization between red states and their blue cities”).

Electronic copy available at: https://ssrn.com/abstract=3397251
ity standards into maximum standards that restrict regional efforts to do better. To protect state and local autonomy to exceed minimum standards, advocates should also seek the inclusion of locally protective savings clauses in new federal statutes and regulations, and they should prepare to advocate for the judicial presumption against preemption where these issues are litigated. This section briefly reviews the role of preemption within American federalism and environmental law before advocating these three strategic points, illustrating the danger with discussion of current efforts to eliminate the Clean Air Act’s California Waiver.

A. Preemption and Environmental Federalism

Within federal environmental law, preemption plays a key role in effectuating the nationwide maintenance of minimum environmental quality standards, especially with regard to state boundary-crossing harms like air and water pollution. “Preemption” refers to the ability of a higher level of government to override contrary decisions made by a lower level of government. For the purposes of most federal environmental law, the federal government sets minimum standards to protect public health or safety, which preempts states’ authority to set lower legal thresholds. Preemption can either be “express,” if Congress overtly declares that it is preempting state law, or it can be implied, either because the laws give directly contradictory guidance (“conflict preemption”) or because the higher level of government has unambiguously occupied the entire field of regulation from interference by lower levels (“field preemption”).

These rules of engagement are important, because American governance operates through a multi-tiered system, with interdependent roles played by local, state, and federal actors in many areas of law. Preemption is especially important in environmental law, which almost always requires multilevel regulatory response to be effective. Environmental law copes with problems that demand local management expertise, such as local geographic and economic factors, while also requiring national jurisdiction to police spillover harms across state boundaries.\(^4\) Within this multilevel system, federal environmental laws have always been essential—but also insufficient. Strong, centralized guidance provided by federal laws like the Clean Air and Water

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Acts have been essential in setting goals and providing enforcement authority to improve the health of the environment and the American people.5 At the same time, they are insufficient, because the need for locally specific responses to regionally diverse harms has persisted.6

Effective multilevel environmental governance mixes the advantages of national and local capacity, mandating national environmental quality standards while enabling local autonomy to meet or exceed them, or to focus on goals beyond those set by federal law.7 Indeed, programs of cooperative environmental federalism partner regulators across the jurisdictional spectrum this way, assigning distinct but overlapping roles to federal, state, and local decisionmakers.8 Multilevel environmental governance requires a careful balance of federal preemption and local autonomy to work well. The best examples generally match the technical expertise and enforcement authority that only the national government can supply with protected space for local initiative and innovation that only state and municipal governments can marshal.9

In the context of environmental governance, then, changing the scope of preemption can shift the dynamic in important ways. Although some preemption is necessary for national standards to have any force, too much preemption can undercut the multilevel coordination and regulatory dynamism that is the hallmark of American environmental federalism.10 Which bring us to the first challenge that environmental advocates will likely face: the increasing threat of anti-environmental ceiling preemption.

B. The Threat of Ceiling Preemption

Federal preemption of state and local law enables American federalism to work as intended, clearing the path for centralized decisionmaking in regulatory realms clearly enumerated to the national government, such as the

5. See Ryan, Environmental Federalism’s Tug of War Within, supra note 4, at 405-07 (discussing the federal role as the “senior partner” in cooperative federalism regimes that privilege federal authority, such as the CAA).
6. See, e.g., Ryan, Negotiating Environmental Federalism, supra note 4, at 22-24 (discussing the importance of local capacity in managing water pollution under the CWA).
7. See Ryan, Environmental Federalism’s Tug of War Within, supra note 4, at 400-12 (describing different regulatory approaches taken within cooperative environmental federalism in the United States).
8. Id.
9. Id. (describing how cooperative environmental federalism usually assigns federal responsibility for national goals and oversight while inviting state actors to decide how best to implement these standards to account for local circumstances).
coining of money or use of military force. Nevertheless, the overuse of preemption in contexts of jurisdictional overlap—where both the federal and state governments have legitimate regulatory interests or obligations—can distort the dynamic multilevel engagement that has enabled American federalism to adapt over time to the roiling dynamics of the regionally and politically diverse American plurality. Especially if preemption is used not to preserve minimum standards of environmental quality, but maximum standards.

In the early days of the environmental movement of the 1970s, advocates pinned their hopes on the big federal environmental statutes poised to remedy the interjurisdictional air, water, and hazardous waste pollution that states had not been able to tackle in isolation. When the first Earth Day was celebrated half a century ago, environmentalists viewed the preemption of failing state and local rules by federal environmental law as the only viable cure for the disease. Yet these new federal environmental laws mostly followed the model of “floor” preemption—setting a national floor of mandatory environmental quality that states could not fall below, but which they could always choose to exceed. By contrast, few of these laws prevented states from regulating more stringently than the federal standard. Federal environmental laws have generally permitted state and local governments to set more ambitious regulatory requirements to address local concerns or preferences, often using their own preferred methods.

While federal environmental laws do not usually prevent states from setting more stringent standards, there are uncommon examples of “ceiling preemption,” by which federal law prevents state and local regulations from exceeding the federal floor. The Clean Air Act’s (CAA) means of regulating pollution from automobile emissions offers one such example. The U.S. Environmental Protection Agency (EPA) has primary authority to set these standards, and states are generally forbidden from either raising or lowering them. But even here, there are exceptions. Section 209 of the

15. Id.
16. Id. at 1561-64, 1569-75 (noting that ceiling preemption was rare until relatively recently, but has gained traction in displacing state regulation of environmental and public safety risk tolerance regulation, such as the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Toxic Substances Control Act (TSCA), and the siting of Liquefied Natural Gas refineries under the Energy Policy Act of 2005).
CAA authorizes California to set a more stringent standard in light of its unique regional challenges, and Section 177 enables other states to elect California’s stricter standard in lieu of EPA’s “ceiling.” The availability of the California Waiver blunts the force of ceiling preemption in the context of motor vehicle emissions controls, enabling a limited forum for regulatory dynamism and competition that are a hallmark of American federalism.

With mounting hostility to environmental regulation, however, the paucity of ceiling preemption could change. Even before the new assaults beginning in 2017, Prof. William Buzbee observed the rise of ceiling preemption, or what he calls “unitary federal choice preemption,” as a mechanism for reining in more protective state regulatory choices:

Debate over floors versus ceilings was, until recently, largely hypothetical, due to the rarity of federal imposition of ceilings. During the past year, however, in settings ranging from product approvals to regulation of risks posed by chemical plants to possible climate change legislation regarding greenhouse gases, legislators and regulators have embraced the broad, preemptive impact of unitary federal choice preemption. The federal action regarding such risks would be the final regulatory choice. But under what theory of regulation and legislation can one be confident that placing all decisionmaking power in one institution at one time will lead to appropriate standard setting?

Buzbee and other risk regulation advocates warn about the pervasive risks associated with ceiling preemption. While floor preemption often enables helpful regulatory competition between state and federal rulemaking, ceiling preemption risks regulatory failures associated with federal legislative or executive inertia, regulatory uncertainty, information asymmetry, agency capture, and other problems. Buzbee notes that unitary federal choice preemption can create hazards for good governance, heightening the risk that

18. Id. §7507.
20. Ann E. Carlson, Iterative Federalism and Climate Change, 103 Nw. U. L. Rev. 1097 (2009) (describing the iterative federalism mechanics of the CAA and the California Waiver); Erin Ryan, Negotiating Federalism, 52 B.C. L. Rev. 1, 66-67 (2011) (discussing the implicit state-federal bargaining that takes place under the CAA through the California Waiver); RYAN, TUG OF WAR, supra note 11, at 308-10. The regulatory competition associated with the California Waiver is further explained infra at text accompanying notes 28-34.
21. Cf. Briffault, supra note 3. Prof. Richard Briffault notes that the trend of punitive, unitary state choice preemption of local law (roughly analogous to federal ceiling preemption) is closely linked to partisan contest between “red states and their blue cities”—a partisan conflict roughly analogous to that playing out between the deregulation interests directing federal policy and the state and local environmental regulations vulnerable to federal ceiling preemption.
22. Buzbee, supra note 14, at 1548 (abstract).
23. Id. at 1590-92.
unchallenged federal standard-setting will result in poor or outdated regulatory choices.\textsuperscript{24}

These concerns bring us squarely to the crisis facing today’s environmental advocates. Ceiling preemption has been rare in environmental law until now, but under the current push to rollback federal environmental standards, that could change. Using federal authority to block states and municipalities from protecting environmental values beyond those stated in federal law departs from tradition, but it may be the best option for those who wish to dismantle not only federal environmental law but environmental protection more generally. They need ceiling preemption to overcome the “regulatory backstop” feature of federalism, deriving from its elaborate system of checks and balances, which otherwise empowers both local and national actors to regulate in realms of jurisdictional overlap.\textsuperscript{25}

The architects of environmental deregulation have already succeeded in rolling back important federal standards,\textsuperscript{26} but thanks to our dynamic model of environmental federalism, they know that defusing federal standards alone will not be enough to accomplish their goal. State and local leaders are already hard at work resuscitating the very environmental governance initiatives that the federal government has abandoned. To take one high-profile example, the U.S. Climate Alliance is a coalition of 25 states and territories committed to upholding the objectives of the 2015 Paris Agreement within their borders, and it was formed the very day President Trump withdrew the United States from the accord.\textsuperscript{27} Absent preemption, nothing prevents state and local authorities from doing so.

For deregulation to fully succeed, then, its proponents must also keep state and local governments from taking up the vacated federal seat at the regulatory table. For that reason, they are unlikely to simply withdraw the federal government from the regulatory field entirely, which would swing open the door to state lawmaking. Instead, they will likely seek to partner weaker federal regulations with language that expressly preempts more protective state

\textsuperscript{24} Id.

\textsuperscript{25} Ryan, \textit{Tug of War}, supra note 11, at 42-43; Ryan, \textit{Environmental Federalism’s Tug of War Within}, supra note 4, at 364-65:

\textit{Federalism promotes a balanced system of checks on sovereign authority at both the state and federal level, enabling the useful tool of governance that I have previously called “regulatory backstop,” which protects individuals against government excess or abdication by either side. When sovereign authority at one level fails to protect the vulnerable, regulatory backstop ensures that it remains available to do so at a different level.}

\textsuperscript{26} See sources cited supra notes 1-2.

or local rules—in other words, ceiling preemption. And if they cannot muster the political capital to get express preemptive language into the text of a federal rule or statute, then they will probably attempt to persuade a reviewing court to find that federal law preempts the field entirely, or that contrary state or local regulation poses an obstacle to the goals of the federal rule.

I. The California Waiver

As a pertinent example, one of the Trump Administration’s first and most notoriously anti-environmental moves was to not only weaken EPA’s motor vehicle emissions standards under the CAA, but also to remove the California Waiver that enabled states to exceed them. As the Administration had long wanted to roll back an Obama-era rule increasing emission standards to 54 miles per gallon (mpg) by 2025, but rolling back the California Waiver was the necessary next step—or states could simply ignore EPA’s looser rules and follow California’s more stringent alternative. That is why the same proposed rule rolling back the 54-mpg standard also eliminates California’s ability to keep it, or otherwise tighten emission standards beyond the relaxed federal rule. As this book goes to press, the move is being challenged by a phalanx of state, municipal, and environmental plaintiffs in two separate federal lawsuits before the U.S. Court of Appeals for the D.C. Circuit. But if it survives, it will be a breathtaking expansion of federal preemption—in this case, by removing the historic handcuffs Congress had purposefully placed on the only major example of ceiling preemption in federal environmental law to date.

Losing the California Waiver would portend an enormous shift in the way the CAA has worked since the earliest days of national emissions controls, eliminating one of the most effective examples of dynamic cooperative federalism. As Professor Ann Carlson has shown, the California Waiver enables regulatory competition between state and federal regulators that has enabled a standard-setting dialogue to unfold over time. Congress acceded to automakers’ request for national preemption of up to 50 state standards, but as

noted, it moderated this rare example of ceiling preemption with an escape hatch authorizing California to set stricter standards—and other states to choose between the two. This created a limited forum for regulatory competition, which allowed the more efficient percolation of new scientific data, manufacturing capabilities, and consumer preferences into an overall regulatory trend toward tighter controls. As states shifted from EPA's weaker standards to California's, EPA was forced to adjust in ways it would not have had it maintained a full ceiling preemptive regulatory monopoly.

It is critical that environmentalists preserve the ability of states to continue pushing us forward on emissions controls and other environmental protections, even as the federal government attempts to take us backward. With all of this in mind, environmental advocates must identify and fortify the realms of federal environmental law most vulnerable to ceiling preemption after federal regulations are weakened. Their best bet, of course, is to marshal conventional political power at the ballot box to elect representatives that will oppose the weakening of federal environmental law to begin with. But if that fails, they should diligently oppose any federal moves to displace protective state and local regulation, ensuring that neither Congress nor EPA partner federal deregulatory efforts with language that could be read to either expressly or implicitly preempt subnational interference.

C. Savings Clauses and the Presumption Against Preemption

At a minimum, environmental advocates and their representatives should insist that all potentially harmful changes or new federal statutes and regulations include a savings clause clearly and unambiguously stating that the new rules are not intended to displace valid state or local laws. This effort should not be too far a reach, as the most famous examples of strong federal environmental laws already incorporate such clauses. Both the Clean Water Act (CWA) and the CAA include savings clauses clarifying that the statutes do not preempt parallel state regulation or common-law legal remedies.
example, the CWA includes a clause specifying that its regulations create a regime of floor preemption, rather than ceiling preemption, allowing stricter state or local regulation. The CAA further clarifies that the regulations and remedies it offers are not intended to preempt related causes of action based on state law brought in state court or by state officials.

Savings clauses like these have real meaning in court, as demonstrated by the U.S. Court of Appeals for the Third Circuit’s 2013 decision in *Bell v. Cheswick Generation Station*. There, the court rejected a coal-fired power plant’s argument that the plaintiffs’ tort claims, based on the deposition of ash and other contaminants from the plant onto their neighboring properties, were preempted by the CAA’s comprehensive regulatory scheme governing air emissions from power plants. The Third Circuit’s analysis hinged on the fact that the CAA included a savings clause protecting “the right of any State or political subdivision thereof to adopt or enforce any standard or limitation respecting emissions of air pollutants” and the rights of all persons to seek common law redress for related harms. Two years later, the U.S. Court of Appeals for the Sixth Circuit similarly concluded that the CAA did not preempt neighbors’ state-law claims against ethanol emissions by a whiskey factory, thanks to the clear language of the CAA’s savings clauses.

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37. 33 U.S.C. §1370:
Except as expressly provided in this chapter, nothing in this chapter shall (1) preclude or deny the right of any State or political subdivision thereof to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution [except those less stringent than the regulations set forth in this chapter]; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.

38. 42 U.S.C. §7604(e):
Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any emission standard or limitation or to seek any other relief (including relief against the Administrator or a State agency). Nothing in this section or in any other law of the United States shall be construed to prohibit, exclude, or restrict any State, local, or interstate authority from (1) bringing any enforcement action or obtaining any judicial remedy or sanction in any State or local court, or (2) bringing any administrative enforcement action or obtaining any administrative remedy or sanction in any State or local administrative agency, department, or instrumentality, against the United States, any department, agency, or instrumentality thereof, or any officer, agent, or employee thereof under State or local law respecting control and abatement of air pollution.

39. 734 F.3d 188 (3d Cir. 2013).
40. *Id.* at 196-97.
41. *Id.* at 195 (internal parentheses omitted).
Even without an explicit savings clause, advocates litigating against preemption can point to the “presumption against preemption” canon of interpretation that has long been recognized by federal courts. As early as the 1947 case of *Rice v. Santa Fe Elevator Corp.*, the U.S. Supreme Court stated its “presumption against preemption” in the context of federal and state jurisdictional overlap, holding that traditional state sovereignty should remain in effect over subjects of shared jurisdiction between federal and state law unless: (1) Congress had unambiguously expressed its intent to preempt the state law in that context; (2) Congress implied its intent through a federal scheme that saturates the entire field; or (3) if state law directly conflicted with the federal law. In the 1996 case of *Medtronic v. Lohr*, the Court affirmed this presumption in fields where states have traditionally regulated unless there has been a finding of clear congressional intent to preempt. The Court has further clarified that this presumption also applies against the casual displacement of local regulations and ordinances.

Yet preserving space for subnational environmental regulation is only half of the federalism-related problem with which environmental advocates will wrestle in the coming years. They will also need to think about how to get even bigger things done with much smaller tools.

II. Problems of Political Scale

With the diminishing force of federal environmental law, it becomes incumbent on environmental advocates to think more seriously about how to continue pursuing solutions to national-level environmental problems by means other than federal authority. This will doubtlessly be painful for those who championed the strong federal environmental laws that once helped make urban air breathable and our lakes and rivers drinkable—and whose successes have made us complacently vulnerable to today’s backlash. Yet now more than ever, we are facing interjurisdictional challenges that cannot be managed effectively in a piecemeal manner.

44. Id.
46. In *Medtronic*, the Court ruled that the preemption provisions of the 1976 Medical Device Amendments (MDA), which prevented states from establishing any device safety or effectiveness requirement that is different from those of the MDA, did not preempt state tort law claims of negligent design or manufacturing, nor failure to warn claims. Id. at 487-91.
This part assesses the possibilities for coordinated action beyond federal law to address large-scale environmental problems. It considers uniform regional governance using model rules, such as the Sustainable Development Model Code, and even collective private governance, coordinated by nongovernmental agents such as homeowner associations and professional organizations. In many cases, these options provide a second-best strategy, chosen by necessity when first-best options are unavailable. Nevertheless, they are better than no strategy, and in some cases, may new provide tools for environmental engagement that could complement or even exceed what is possible under federal law alone.

A. Uniform Regional Governance

Some 50 years ago, we conceded that problems like air and water pollution, species loss, and climate change went beyond any single state’s boundaries and regulatory capacity. After the failure of the patchwork-of-states approach, iconic federal laws like the CAA and the CWA recognized the importance of centralized national authority to cope with these problems. But—to ask the question haunting so many environmental advocates—what if national authority ends? Less dramatically, what if it goes dormant for an undetermined period of time? Disheartening as it may be, advocates need to think about new strategies for large-scale environmental governance that don’t rely on federal law. They should certainly keep fighting to get federal environmental law back—but in the meanwhile, the environment cannot wait.

The clearest alternative is regional governance. Of course, that approach has significant drawbacks; the regulatory patchwork rejected in the 1970s had proved ineffective at managing environmental spillover harms, and it was challenging for industry to follow multiple sets of rules generated by different states. The failure of regional environmental governance in the past casts a long shadow over its potential for success in the future, but what if we do things differently this time? Instead of a patchwork of multiple sets of rules generated by different states, what if these different states adopted the same basic rules?

Multi-state adoption of similar rules would ease the burden on industry, and the more individual states adopt them, the more effectively they could prevent spillover harms from undermining the overall system. Marshaling that degree of coordination among the states is no small feat, but there are precedents—such as the development of uniform state laws or model codes.

Advocates should explore the possibility of drafting proposed uniform laws or model rules to allow states to address broad environmental problems like climate change, water pollution, and transportation issues on a broader regulatory scale than they can accomplish individually.

Successful examples like the Uniform Commercial Code, the Model Rules of Professional Conduct, and other widely adopted laws provide a deliberated, tested model for states seeking sound, consensus-based policies in complex realms of law. States could also form interstate compacts to manage regional environmental issues at the regional level, as many already do in managing cross-boundary problems like water allocation and waste management. State actors could collaborate through the various professional associations that already enable coordinated state and municipal activity, such as the National Governors Association, the National Conference of State Legislatures, the U.S. Conference of Mayors, and the Environmental Council of the States.

Working together, states could adopt single-issue model rules or interstate compacts, perhaps responding to a specific withdrawal of federal environmental law, such as the rules overturned by the Trump Administration that required oil and gas companies to report methane leaks, limited toxic emissions from industrial facilities, or prohibited hydrofluorocarbons as replacements for ozone-depleting compounds. Alternatively, states or

municipalities could adopt a model code setting forth a universal suite of sustainability best practices.

I. A Model Sustainability Code

While an interstate compact would be the more ambitious approach, the foundations for a model sustainability code are already coming into view. In 2019, an interdisciplinary partnership between universities and practitioners from across the country produced the first Sustainable Development Code (SDC), providing a rigorously researched set of concrete models that can be incorporated into state and local planning efforts.60 Launched in May 2019, the SDC “aims to help all local governments, regardless of size and budget, build more resilient, environmentally conscious, economically secure and socially equitable communities.”61 This section introduces the SDC and invites a thought-experiment on the scope of change it could help accomplish.

The SDC is composed of 32 subchapters targeting specific sustainability objectives, each of which provides proposed measures, amendments, examples currently in use by model cities, and other informational resources to help communities adopt and amend their development codes for sustainability and adaptation.62 As the code explains its own structure:

Each of the recommendations . . . has a brief designed by and for public officials, staff, experts and the public. The briefs consist of three key sections: introduction, effects, and examples. The introduction explains the recommendation to amend the code. The effects section explains how adopting the recommended ordinance may affect the community and code. Each brief then provides 2-3 examples of local governments, which have adopted the recommendation. The SDC explains each example in plain language. In addition, the SDC concludes with an additional 3-6 examples of local governments, which have adopted the recommendation. Here, the SDC provides citations, links, and one sentence describing the ordinance.63


62. Id. (noting that recommendations are categorized as “removing obstacles” (what in the existing code is harming your community), “create incentives” (where can we look to encourage developer, homeowner, and others’ actions), and “fill regulatory gaps” (what are the minimum standards your community will accept).

63. Id.
The SDC thus provides local governments with tools to “think globally while acting locally,” or to begin implementing uniform sustainable goals on an individualized basis, as part of a loosely coordinated larger scale effort.\textsuperscript{64} It partners proposed elements that seem attainable for most communities, such as recycling programs, with more aspirational elements that may take more time to actualize, such as transit-oriented development. Some of the elements most likely to hold universal appeal, such as proposals for managing solid waste, facilitating water conservation, or increasing energy efficiency, may be good starting points around which environmental advocates might begin building state-level uniform laws. They could then lobby their individual legislatures to adopt the proposed model as a matter of state planning law, providing guidance, resources, and requirements for municipalities to implement at the local level.

For example, the SDC Solid Waste Management and Recycling subchapter suggests measures for permitting local recycling centers; recycling and reusing construction materials; and increasing recycling in multi-family housing and commercial buildings.\textsuperscript{65} Improving local recycling systems offers obvious environmental benefits to local communities, many of which already have robust recycling programs and plans for increasing local recycling capacity.\textsuperscript{66} Helping communities improve local recycling programs is low-hanging fruit that can help solve a variety of environmental ills, by repurposing items that would otherwise become landfilled, reducing greenhouse gas emissions by vehicles transporting recycling elsewhere, and encouraging sustainable practices locally through role modeling, increased convenience, and improved efficiency.\textsuperscript{67}

\textsuperscript{64} Many code elements are already being adopted piecemeal by local governments across the country, and many of these are listed in the SDC website. For example, under the subchapter proposing water conservation landscaping measures, the website reports that Sanibel, Florida, requires 75% of vegetation be native when land is developed or redeveloped in certain zones, and Scottsdale, Arizona, requires a permit before removing any native plant. Alec LeSher, \textit{Require Water Efficient Landscaping}, \textit{Sustainable Development Code}, \url{http://sustainablecitycode.org/brief/require-water-efficient-landscaping-2/} (last visited May 14, 2019).

\textsuperscript{65} \textit{Solid Waste Management and Recycling}, \textit{Sustainable Development Code}, \url{http://sustainablecitycode.org/chapter/chapter-1/1-6/} (last visited May 14, 2019).

\textsuperscript{66} For example, Fresno, California permits recycling facilities as a primary use in some zoning code areas. \textit{Fresno, Cal., Code of Ordinances} §15-2750(C)(1)-(2) (2017). Madison, Wisconsin created a specific use category for recycling centers in its general plan. \textit{Madison, Wis., Zoning Code} tbl. 28F-1 (2017). Reaping the environmental benefits of recycling demands more work from U.S. communities now that many processing plants in Asia have restricted imports of foreign waste, but Americans can still invest in the benefits of recycling and reuse by more local means.

\textsuperscript{67} Adam S. Weinberg et al., \textit{Urban Recycling and the Search for Sustainable Community Development} 21-22 (2000). Collecting and processing waste is an especially energy-intensive project, so local governments can also cumulatively reduce national emissions by facilitating recycling and composting and setting waste diversion and reduction goals. \textit{Energy Star Delivers Big for America:}
Yet imagine the cumulative beneficial impacts if these efforts were scaled up to a regional or even national scale. If a modest city of 150,000 non-recycling households were to follow even some of the code’s recommendations—marketing the program to residents, providing household recycling bins, and encouraging a 50% participation rate—that one city could annually prevent over 5,000 tons of trash from entering a landfill and over 12,000 metric tons of carbon dioxide (CO$_2$) from entering the atmosphere through transport. 68 Now imagine scaling those numbers up to regional or national levels. Eighty percent of America’s 127 million households live in cities, 69 so even if we imagine that only 50% of those 101.6 million households recycle, it would still mean that those 50.8 million households would save nearly 2 million tons of trash and over 4 million metric tons of greenhouse gas emissions. That’s similar to the annual emissions from 850,000 cars, or 420,000 homes, 70 which will not forestall the worst effects of climate change on its own—but it is a whole lot more than nothing, and from activity as modest as separating cans, paper, and plastic. Imagine—what if all those households also focused more directly on conserving energy?

Indeed, the SDC provides ambitious direction for energy conservation measures. The Energy Conservation and Efficiency subchapter includes proposed measures for providing tax exemptions for renewable energy systems, increasing tree cover, tracking and requiring reductions in commercial energy usage, and encouraging third-party certifications in commercial buildings, such as Leadership in Energy and Environmental Design (LEED). 71

68. These estimates were gathered using the interactive calculator at The Recycling Partnership, https://recyclingpartnership.org/greenhouse-gas-water-savings-tool/ (last visited May 14, 2019). The interactive calculator estimates the tonnage of recyclables and related greenhouse gas savings based on the EPA Waste Reduction (WARM) model, as adjusted for traditional residential recyclables. For a community of 150,000 households using conventional curbside bins, assuming 50% participation and public education campaigns about contamination, the calculator estimates savings of 5,569 tons of landfill trash and 12,196 metric tons of CO$_2$ emissions.


70. What Does One Ton of CO2 Really Mean? ASSN. FOR THE ADVANCEMENT OF SUSTAINABILITY IN HIGHER EDUCATION (Sept. 18, 2009), https://www.aashe.org/one-ton-co2-really-mean/:

    So, just how much is 4.6 million metric tons of CO2? According to the EPA, that’s the same as the annual energy use of 422,542 homes. It's the same as the annual ghg emissions of 850,501 passenger vehicles. It's also the amount of carbon sequestered annually by 32,390 acres of forest preserved from deforestation (epa.gov).

To harvest low-hanging conservation fruit at the household level, the SDC recommends incentivizing consumers to replace old appliances with more energy-efficient models approved by the Energy Star program, a voluntary labeling program by which EPA helps consumers make informed purchasing choices.\footnote{72}{Energy Star Delivers Big for America: $34 Billion in Annual Consumer and Business Savings, NATIONAL RESOURCE DEFENSE COUNCIL (Mar. 2018), https://www.nrdc.org/sites/default/files/energy-star-delivers-big-fs.pdf.} Since the program’s inception in 1995, it is estimated to have helped households save over 27 million metric tons of CO$_2$,\footnote{73}{Id.} or the annual GHG emissions of nearly 6 million cars. Again, that will not halt global warming by itself, or even come close to the 3 billion metric tons of reduced emissions that the Obama Administration’s U.S. Department of Energy had promised through issuing new federal energy conservation standards.\footnote{74}{Office of the Press Secretary, FACT SHEET: U.S. Reports Its 2025 Emissions Target to the UNFCCC—State Department Submits President Obama’s Ambitious 2025 Target to Cut U.S. Climate Pollution by 26-28 Percent From 2005 Levels, THE WHITE HOUSE (Mar. 31, 2015), https://obamawhitehouse.archives.gov/the-press-office/2015/03/31/fact-sheet-us-reports-its-2025-emissions-target-unfccc (“The Department of Energy set a goal of reducing carbon pollution by 3 billion metric tons cumulatively by 2030 through energy conservation standards issued during this Administration.”).} But those 27 million metric tons were saved just by consumers voluntarily choosing energy efficient appliances at the store. Imagine—what if all those consumers also lived in energy efficient LEED buildings?

In fact, 70% of the electrical load in the United States is used in buildings, mostly to heat and cool them, and buildings account for nearly 40% of all greenhouse gas emissions nationally, more than either the transportation sector or the industrial sector.\footnote{75}{Buildings and Climate Change, U.S. GREEN BUILDING COUNCIL, https://www.cesi.org/files/climate.pdf (last visited May 14, 2019): The commercial and residential building sector accounts for 39% of carbon dioxide (CO2) emissions in the United States per year, more than any other sector. U.S. buildings alone are responsible for more CO$_2$ emissions annually than those of any other country except China. Most of these emissions come from the combustion of fossil fuels to provide heating, cooling and lighting, and to power appliances and electrical equipment. By transforming the built environment to be more energy-efficient and climate-friendly, the building sector can play a major role in reducing the threat of climate change.} The Department of Energy has found that LEED buildings use 25% less energy than average buildings,\footnote{76}{LEED Facts, U.S. GREEN BUILDING COUNCIL (Aug. 07, 2013), https://www.usgbc.org/articles/leed-facts.} so encouraging energy-efficient buildings is an important element of the SDC. It points to innovative models in use across the country, such as Miami Beach, Florida, which charges a hefty development fee of up to 5% of construction costs for certain new projects, but then refunds portions of the fee on a scaled basis tracking the level of LEED certification achieved.\footnote{77}{Miami Beach, FL, CODE OF ORDINANCES §133-6(a) (2016).} Imagine if all major cit-
ies, where real estate has become increasingly valuable, incentivized shifts toward LEED efficiency. Now that’s the kind of collective action that could start to make a real dent in climate conditions.

Delivering water to municipal customers is also an energy-intensive enterprise, so any reduction in water consumption promises a corresponding reduction in energy consumption,78 in addition to the critical environmental benefits of conserving water for its own sake. Because one-third of all household water use in the United States is for nonagricultural landscaping,79 the SDC recommends landscaping for water conservation and xeriscaping, or the replacement of non-native plant species (like water-loving grasses) with native species adapted for local climatic conditions.80 Localities can implement sustainable landscaping goals not only by educating residents about the importance of water conservation (and the resulting financial benefits to them personally),81 but by requiring developers to submit landscaping plans as part of development applications.82 EPA estimates that 8.5 billion gallons of water are used for nonagricultural outdoor purposes on a daily basis.83 If communities could halve that figure through native landscaping and xeriscaping, Americans could save 4.25 billion gallons of water per day, or 1.551 trillion gallons of water per year in the United States84—roughly equivalent to the amount of water used by 17 million homes annually, and 50% greater than the amount of water wasted every year through household water leaks.85

   Nationally, outdoor water use accounts for 30 percent of household use yet can be much higher in drier parts of the country and in more water-intensive landscapes. For example, the arid West has some of the highest per capita residential water use because of landscape irrigation.
82. See, e.g., Fort Lauderdale, Fla., Unified Land Development Code § 47-39.A.13 (C) (2009). Fort Lauderdale’s code also requires that the applications include plans for using native species, diversifying the kind of species planted, and implementing xeriscaping.
84. Statistics calculated by dividing 8.5 billion in half and then multiplying it by 365 days to equal the yearly totals.
Imagine—what if the same households also fixed the dripping faucets in their homes, a far easier task than water conservation landscaping? It is good to be able to envision scaling up the local environmental progress already happening around the country, but of course, accomplishing these results through piecemeal regional governance will not be easy. Achieving the ambitious emission reduction goals set out in the 2015 Paris Agreement will be an especially difficult task for local governments acting without the support of a uniform national program. Yet under the current political circumstances, it may be the only way that Americans can join the global community in the massive undertaking needed to prevent the worst impacts of climate change. As noted in part I, the State Climate Alliance coalition of 25 states and territories has already committed to upholding the objectives of the Paris Agreement within their borders, signaling that resolve. Uniform laws and model rules, including the broad adoption of researched proposals in the new SDC, may provide the means for state and local actors to scale up to a uniform national response without the benefit of federal authority.

B. Coordinated Action Through Private Environmental Governance

Uniform laws provide the most obvious model for coordinated but nonfederal national response, yet we might even consider less conventional means. Legal pluralism heralds the possibility of multiple sources of normative policymaking operating simultaneously, including sources that go beyond the sovereignty-based law of nations, states, or local governments. Could private or non-governmental policymaking contribute to large-scale environmental action?

In the herculean effort to achieve national-level results without the tools of national authority, it is worth considering the supporting role that private governance could play. Perhaps there is a role for meaningful environmental guidance or rulemaking by professional associations like the American Law Institute.
Institute, the American Bar Association, or the American Medical Association, all of whom share interests in managing public health and safety. Commercial associations could become involved, such as the Risk and Insurance Management Society, which advises risk management professionals throughout the world and whose members would share an interest in moderating the accelerating environmental risks associated with climate change.

Trade organizations like the National Association of Tax Professionals, arts and culture organizations like the Screen Actors Guild, nongovernmental legal institutions like the Council of Mayors, colleges and universities, athletic teams and their fans, and others could all play a role. International service organizations like the Rotary Club could engage local business and community leaders to act as ambassadors for a chosen strategy to their distinct social networks. Religious environmental organizations have been especially proliferating in recent years, including the interdenominational National Religious Partnership for the Environment, providing environmental inspiration, education, and leadership within different communities of faith.90

 Organizations like these could adopt a an SDC, either a general program or a subset of rules tailored to their own specialty. They could disseminate it among their own members, who could role model their behavior within their own professional networks and personal communities. Disseminating norms this way could begin the process of meaningfully shifting cultural norms involving waste, transportation, or energy use from the bottom up, where it may stick even more effectively than norm transitions that come only from the top down.

This section closes with a concrete example that ties some of the ideas in this chapter together: the large-scale deployment of consistent sustainability protocols through collectively organized but privately acting homeowner associations.

C. Sustainable CC&Rs as Climate Policy

Of all the large-scale environmental challenges we face, climate change is the grandest, ideally calling not only for national but also for international


The National Religious Partnership for the Environment brings together a diverse alliance of faith institutions and leaders in order to bring voice and action on behalf of caring for God’s Creation. NRPE offers resources and accounts of how people of faith are acting upon God’s mandate to be stewards of God’s Earth. NRPE also fosters the religious voice on environmental issues.
policymaking. Yet a substantial volume of climate-relevant decisionmaking occurs within individual homes and neighborhoods. And in the United States, a large volume amount of that decisionmaking takes place through private homeowner associations (HOA)s.

HOAs create responsibilities and restrict choices among residents through the private law tools of restrictive covenants and equitable servitudes, generally through formal conditions, covenants, and restrictions (CC&Rs). One in five Americans lives on property subject to HOA governance, but many HOAs operate without sufficient legal expertise or guidance. Recognizing this problem, many states enact statutes; many municipalities provide guidance; and many private organizations sponsor training materials for HOA board members, to help them make better decisions that strengthen their communities. But what if they could get additional guidance about making good environmental choices?

In other words, if we cannot get national-level climate policy through the federal government, and we cannot get enough states or cities on board to do the entire job at the regional level, maybe we could bridge the remaining gap to implement effective national-scale policy by harnessing the private law influence of HOA decisionmaking. Borrowing from the insights of the Sustainable Development Code discussed above, experts could draft a Model HOA Sustainability Code of best practices that address such climate-related topics as water use, recycling, energy conservation, renewables, transportation design, and other issues that implicate climate footprint. A Model HOA Sustainability Code could encourage landscaping practices that are consistent with water conservation and that limit pesticide and nutrient loading of waterways. It could provide guidance for increasing recycling and composting, mandate LEED-certified construction and Energy Star Appliances, and incentivize the use of hybrid or electric vehicles.

A Model HOA Sustainability Code could also discourage HOAs from preventing solar panels, clothes lines, rain barrels, compost bins, or other sustainable practices that some HOAs have previously forbidden for aesthetic


Not all HOAs impose aesthetic guidelines, nor do all HOAs consider sustainable practices like installing solar panels to be unaesthetic, but enough have taken steps to limit them that an increasing number of states have enacted legislation preventing it. A Model HOA Sustainability Code must be sensitive to the value that many HOA residents place on aesthetic uniformity, which they see as beautifying their neighborhoods, ensuring that all owners properly maintain their property, and preserving their overall property values. Model Code proposals encouraging compost bins or rain barrels could face opposition, but HOAs can overcome it by ensuring a strict style of uniformity in the implementation of sustainable practices.

For example, HOAs could encourage residents to compost or line dry clothes but require that compost bins or clotheslines be kept behind homes or out of street view. They could encourage residents to use rain barrels, but require a uniform size, shape, or color. They could encourage the installation of solar panels but require reasonable uniformity in placement or other aesthetic factors, and perhaps even negotiate volume discounts for their residents with providers who can specialize their services to community aesthetic guidelines. Implementing sustainable practices without sacrificing aesthetic value is both possible and desirable, and helping HOAs do so through a Model Code could helpfully shift the culture of how HOA residents engage with sustainability.

Following the guidance in a Model HOA Sustainability Code, HOAs could even be encouraged to provide sanctuary for the biodiversity that is increasingly threatened in areas undergoing rapidly residential development. Larger HOAs often manage green spaces beyond the yards of individual

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homeowners, which, if properly managed, can become home to native plant and animal species. One study even found an increase in biodiversity on well-managed HOA grounds. When managed with native landscaping and without the over application of pesticides, HOA grounds provide fertile ground for bird and wildlife habitat, which can both promote environmental values and provide increased enjoyment for residents. In these ways, HOAs can be managed compatibly with environmental values, and they can become a resource and a role model for encouraging sustainability within their communities.

Conventionally, HOAs have been seen more often as protectors of private real estate interests than as friends of the environment, but of course, we are increasingly seeing how the two are interrelated. Imagining HOAs at the forefront of national-level sustainable governance may require vision, but it is hard to imagine a more pressing moment for environmental visionaries. The call for that scale of thinking, that degree of creativity, and that reach of ambition is here. Now is the time to try everything, because we have absolutely everything to lose.

III. Conclusion

In the current political context, the threat of federal preemption of subnational regulation poses serious problems for environmental governance, as do the governance-scale challenges of managing national-level environmental crises without the benefit of federal authority. Overcoming them will require novel ideas and ambitious plans of action. Yet it is a moment in which the benefits of environmental federalism—and American federalism in general—are especially revealed. Preserving local, state, and regional authority to respond to the environmental problems left unchecked at the federal level will be key, as will be tapping the potential capacity of private environmental governance by non-governmental actors and individuals.

As this chapter details, subnational actors are already taking up the gauntlet thrown down by the recent wave of federal environmental repeals. The goal is not to replace federal environmental law, which will always be needed for dealing with environmental harms that spill over into subnational jurisdictional boundaries, or that require international cooperation, or for pro-

101. Homeowner Groups Can Support Native Species in Suburbia, supra note 100.
viding certain regulatory capacity, in terms of rulemaking, financing, and research tools of good governance. The goal is to produce enough regulatory redundancy to withstand lapses in federal or state involvement as necessary.

As the federal government withdraws itself from the regulatory arena, it confers an opportunity on state, local, and even private and professional actors to experiment with the limits of their own regulatory capacity, and to show the world what might be possible. For example, environmental advocates worldwide were shattered when the Trump Administration withdrew the United States from the Paris Agreement, but a separately acting coalition of states, companies, and municipalities quickly pledged to honor the agreement anyway, doing what they could with the capacity available to them. As halting and disjointed as these efforts may seem, they represent a hopeful harbinger for more coordinated nonfederal environmental governance in the future.

To be sure, there are limits to what local governments and private governance can do in attempting to fulfill the promises made on behalf of an entire nation—in this case, to reduce greenhouse gas emissions 26% below 2005 levels by 2025, by mandating improved appliance efficiency, higher fuel economy in motor vehicles, and reduced emissions from power generation. The very collective action problems of hold-out and free-riding that inspired the strong federal authority conferred by the U.S. Constitution threaten to undo purely local efforts.

Yet while states, cities, and even HOAs lack the power of the federal government to, for example, reenact the Clean Power Plan that the Obama Administration had drafted to effectuate our Paris Agreement commitment, they also have advantages that the federal government lacks. Local actors can respond more nimbly to the needs of individual communities when implementing emission reducing actions, especially in the context of energy reform. Local governments can play an enormously important role in creating transportation options and fostering local, renewable, energy pro-


In areas where local production is not possible, municipalities can negotiate with investor-owned utilities to provide renewable energy that align with their community goals.

As the Sustainable Development Code demonstrates, both public and private actors can encourage developers to build more energy-efficient buildings, through both tax incentives and private demand. Waste management, an energy-intensive endeavor, is another realm in which local actors can cumulatively facilitate national emissions reductions. By setting waste diversion and reduction goals, local governments can encourage citizens to locally recycle, compost, and produce less waste than they do today, saving the energy otherwise required to collect, transport, and process it. Encouraging citizens to produce less waste will require cultural shifts over time, but local governments can accelerate the process by charging a fee for single-use grocery bags or building local compost facilities to reduce methane emissions from food waste.

In the end, achieving the U.S. emission reduction goals set out in the Paris Agreement will be a difficult task for subnational actors, but until environmental advocates regain federal authority, it is their best—and perhaps our only—alternative. Joining forces with the rest of the global community to combat climate change will require creativity and experimentation. It will not be easy for Americans, but we can follow multiple pathways toward better energy consumption, water usage, emissions reduction, and waste management, organizing through the media of uniform laws, model sustainability codes, or private law alternatives organized through, to take one example, HOA-based private governance.

The ideas and examples offered here are just the beginnings of the brainstorm of how state, local, private, and professional actors can aggregate environmental reform across communities. But as noted above, necessity breeds creativity—and right now, the need is humbling. If trends continue, a return to laissez-faire, pre-environmental movement policies looms just as the unabated climate crisis portends new levels of environmental catastrophe. So with alarm bells for inspiration, environmental advocates must work together as never before to find a path forward.

108. Id.