Federalism and Local Environmental Regulation

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From green building initiatives to local farmers’ markets, local governments have become major players in addressing the most pressing environmental and public health concerns. For example, in the absence of national climate change legislation, municipalities are leading the way in transportation and development strategies to mitigate and adapt to climate change. Local governments have also used their zoning authority to ban or restrict land uses that pose environmental risks. Recognizing this trend, environmental law scholars have also begun exploring the positive potential of local governance in addressing a range of contemporary environmental problems.

Despite this recognition, few legal scholars have focused on the place of local authority within our federal system of government. Questions of scale and allocation of governmental authority generally focus on the state-federal relationship, ignoring local governments or simply subsuming them within the state. Historically, the federalism literature — both within and outside environmental law — has reflected an assumption that theories of federalism simply do not speak to questions of local authority and power separate from state authority. This Article interrogates this assumption by asking whether federalism theories have implications for the place of local governments in the modern regulatory state.

It is a question worth asking not only because localities are playing a larger role in regulating activities that affect the environment and human health, but also because they sometimes seek to pass laws and regulations that go beyond what their respective state governments desire. For example, local laws banning unconventional oil and natural gas drilling (often referred to as hydraulic fracturing or “fracking”) have been challenged in court as preempted by state law. In cases such as these, state preemption of local authority may be effective unless local governments can call upon the

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federal government. This raises the difficult question of whether the federal government should be able to preempt state authority to limit local laws that further local environmental objectives.

To answer this question, Part I explores different descriptive and normative theories of federalism to understand their implications for local authority and power. While functional theories, which are focused on the values underlying a vertical division or sharing of powers, tend to offer the clearest justification for federal empowerment of local authority, more formal approaches to state-federal power do not necessarily preclude it. Part II connects the traditional federalism literature to the literature on dynamic federalism in environmental legal scholarship.

Based on the analyses in Parts I and II, Part III proposes a framework for justifying federal empowerment of local authority in the environmental context. Under this framework, federal empowerment is most appropriate when it furthers one or more important federalism values, namely liberty, democratic participation, and economic efficiency, without undermining any one of them. To illustrate how application of the framework can resolve the difficult question of when federal empowerment is appropriate, this Part contains an analysis of two examples in the environmental context: state preemption of local ordinances governing concentrated animal feeding operations (“CAFOs”) and state preemption of local ordinances prohibiting unconventional oil and natural gas drilling. In both cases, the application of the federalism framework strongly justifies federal preemption of state law restricting localities’ authority.

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INTRODUCTION

From green building initiatives to local farmers’ markets, local governments have become major players in addressing the most pressing environmental and public health concerns. In the absence of national climate change legislation, municipalities are leading the way in transportation and development strategies to mitigate and adapt to climate change.\(^1\) With little hope of much-needed toxics reform at the federal level, some cities have banned or limited the use of toxic chemicals.\(^2\) Local governments have also used their zoning authority to ban or restrict land uses that pose environmental risks. Recognizing this trend, environmental law scholars have also begun exploring the positive potential of local governance in addressing a range of contemporary environmental problems.\(^3\)

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2. See Thomas M. Gremillion, Setting the Foundation: Climate Change Adaptation at the Local Level, 41 ENVTL. L. 1221, 1239-47 (2011); Trisolini, supra note 1, at 703-04, 715; see also Colleen O’Connor, Colorado’s Turf Wars over Pesticide Use Trigger Fears of Total Ban, DENV. POST (Feb. 10, 2013), http://www.denverpost.com/news/ci_22557278/colorados-turf-wars-over-pesticide-use-trigger-fears (discussing recent limits on pesticide use imposed by two Colorado municipalities).
Despite this recognition, few legal scholars have focused on the place of local authority within our federal system of government. Questions of scale and allocation of governmental authority generally focus on the state-federal relationship, ignoring local governments or simply subsuming them within the state. Historically, the federalism literature — both within and outside environmental law — has reflected an assumption that theories of federalism simply do not speak to questions of local authority and power separate from state authority. Rather, as political subdivisions of states, local authority is simply one incarnation of state authority for purposes of federalism.

But in many cases, local governments do not look or act like mere agents of states. Instead, pursuant to broad delegations of authority, they regulate a range of activities and interact with state and federal institutions in complex ways. If federalism theory and doctrine do not address this reality, courts and legislatures will struggle to reconcile regulatory practices with the Constitution’s vertical division of political authority. As an emerging trend in legal scholarship therefore recognizes, the reality of contemporary local power should prompt reconsideration of the view that local authority is purely a matter of state sovereignty. This Article adds to this body of scholarship, as well as the federalism literature inside and outside environmental legal scholarship, by examining the place of local authority in federalism theory and doctrine. It interrogates the assumption that local authority is necessarily subsumed under state authority by asking whether federalism theories say something (even if implicitly) about the place of local governments in the modern regulatory state.

\[4\] Nestor Davidson and Roderick Hills, Jr., are notable exceptions. Both scholars have addressed the question of whether and to what extent the federal government may collaborate with and empower localities in the face of state opposition. See Nestor M. Davidson, Cooperative Localism: Federal-Local Collaboration in an Era of State Sovereignty, 93 VA. L. REV. 959, 964 (2007); Roderick M. Hills, Jr., Dissecting the State: The Use of Federal Law to Free State and Local Officials from State Legislatures’ Control, 97 MICH. L. REV. 1201, 1201 (1999) [hereinafter Dissecting the State].

It is a question worth asking not only because localities are playing a larger role in regulating activities that affect the environment and human health, but also because they sometimes seek to pass laws and regulations that go beyond what their respective state governments desire. In these situations, state legislators can preempt local measures by passing laws that explicitly displace local authority or conflict with local law. Two contemporary examples in environmental law include state limitation of local authority to regulate concentrated animal feeding operations (“CAFOs”) and state preemption of local zoning authority over unconventional drilling that extracts oil and gas using a process called hydraulic fracturing. In both cases, local governments decided to be more protective of human health and the environment than their state governments had decided to be.6

States sometimes have good reasons to preempt local laws. Local governments are not likely to consider the extraterritorial effects of legal measures. For example, a locality’s approach to stormwater management may affect water quality in another locality downstream. A wealthy suburb’s decision not to allow a hazardous waste facility within its borders may lead to environmental justice concerns if the only alternative is to site the facility in an area with low-income or minority populations already overburdened by multiple sources of pollution. State authority has long been recognized as essential in addressing these kinds of problems.

But the examples noted above do not present the same concerns. Local communities who wish to place conditions on the operation of CAFOs are concerned that these large operations pose environmental risks, such as the contamination of surface and groundwater from animal waste. These concerns are not unreasonable given that federal and state laws regulating water quality do not adequately address this kind of pollution. In the context of unconventional oil and gas drilling, communities who wish to limit drilling are concerned about the uncertain environmental risks of relatively new technologies used to extract oil and natural gas. State and federal regulators are currently studying these risks and evaluating different regulatory options. While studies of drinking water contamination and air quality impacts are conducted, local communities without the authority to ban unconventional drilling will be forced to assume the risks. In cases such as these, state preemption of local authority is harder to justify, but

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6 For other examples of state preemption, specifically preemption of local regulation of pesticides, water quality, and hazardous waste, see Paul S. Weiland, Preemption of Local Efforts to Protect the Environment: Implications for Local Government Officials, 18 VA. ENVTL. L.J. 467, 488-96 (1999).
effective nonetheless unless local governments can call upon the federal government. This raises the difficult question of whether the federal government should be able to preempt state laws that limit local authority to address specific environmental problems.

To answer this question, Part I explores different descriptive and normative theories of federalism to understand their implications for local authority and power. While functional theories, which are focused on the values underlying a vertical division or sharing of powers, tend to offer the clearest justification for federal empowerment of local authority, more formal approaches to state-federal power do not necessarily preclude it. Part II connects the traditional federalism literature to the literature on dynamic federalism in environmental legal scholarship. Unlike traditional federalism theories, dynamic models favor concurrent, overlapping authority at different levels of government. Because of this commitment to multijurisdictional authority, dynamic federalism strongly supports federal empowerment of local authority, particularly when federal empowerment will enable local governments to adopt more stringent environmental protections than state or federal law.

Based on the analyses in Parts I and II, Part III proposes a framework for justifying federal empowerment of local authority in the environmental context. Under this framework, federal empowerment is most appropriate when it furthers one or more important federalism values, namely liberty, democratic participation, and economic efficiency, without undermining any one of them. To illustrate application of the framework, this Part contains an analysis of two examples in the environmental context: state preemption of local ordinances governing CAFOs and state preemption of local ordinances prohibiting unconventional oil and gas drilling. In both cases, the application of the federalism framework strongly justifies federal preemption of state law restricting localities’ authority. The analyses illustrate how the framework can resolve the difficult question of when federal empowerment of local authority is permissible.

I. DUALISTIC CONCEPTIONS OF FEDERALISM

Much of the federalism literature and case law begins by recognizing that the Constitution establishes two separate sovereigns in the federal and state governments with largely separate spheres of authority.
Although courts and commentators draw from both formal and functional arguments to justify this dualistic conception of governmental power, grouping them under the rough distinctions of formal and functional serves to highlight common assumptions and their implications for local authority. This Part therefore begins with an overview of formal understandings of federalism and then turns to functional accounts, including justifications within environmental law for drawing clear lines between federal and state authority.

The terms “formalism” and “functionalism” have specific meanings as used throughout this Article. A formal approach is essentially a rule-based approach, which attempts to discern meaning from the text and structure of the Constitution without relying on an analysis of the underlying purpose of rules or how they function in practice. In deciding questions regarding the allocation of governmental authority, a formal approach is largely categorical, assigning some subjects to the federal government and others to the states. In contrast, a functional approach focuses on the reasons a vertical division of power between the states and federal government is desirable in a given context. Although functional accounts acknowledge that the Constitution contemplates some division of power, they do not attempt to derive universal rules or categories that can be applied in all cases, but instead ask whether the benefits of a given arrangement outweigh the costs. Moreover, although functional approaches may note certain values, such as local participation and state-level innovation, as justifications for state sovereignty, truly functional approaches are not necessarily committed to dualism or limits on federal power in the name of state sovereignty. From a functionalist perspective, important governance values may be furthered by different allocations of governmental power (including concurrent authority) in different contexts.

A. Formal Approaches

1. Subject Matter, Process, and State Autonomy

It is axiomatic that the Constitution recognizes the sovereignty of the states and the federal government and contemplates some division of power. Functional approaches may note certain values, such as local participation and state-level innovation, as justifications for state sovereignty. Truly functional approaches are not necessarily committed to dualism or limits on federal power in the name of state sovereignty. From a functionalist perspective, important governance values may be furthered by different allocations of governmental power (including concurrent authority) in different contexts.


11 Id. at 1613-14 (summarizing the understanding of the functional approach in the separation-of-powers literature).
authority between the two. Several provisions of the Constitution appear to support this general proposition. For example, Article I grants Congress a specific list of powers, including the powers to tax and spend for the general welfare and to regulate interstate commerce. The Tenth Amendment also emphasizes that the federal government may act only when authorized by the Constitution and that states retain some subset of powers: “The powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people.” According to a dualistic conception of the division of power, these provisions recognize a federal government of limited, enumerated powers, while reserving all else to the states. In this view, federalism therefore requires the separation of federal-state regulatory power into proper categories or spheres of authority.

But despite formal arguments regarding separate spheres, the categorical separation of regulatory spheres in the modern world is

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12 U.S. CONST. art. I, § 8. The same article also recognizes some limitations on federal and state power. See id. §§ 8–9.
13 U.S. CONST. amend. X.
14 James Madison is sometimes cited for this view. See, e.g., RAOUL BERGER, FEDERALISM: THE FOUNDERS’ DESIGN 60 (1987) (quoting THE FEDERALIST NO. 39 (James Madison)). In Federalist No. 39, Madison states that the federal power “extends to certain enumerated objects only, and leaves to the several States a residuary and inviolable sovereignty over all other objects.” THE FEDERALIST NO. 39 (James Madison), reprinted in THE ESSENTIAL FEDERALIST AND ANTI-FEDERALIST PAPERS 225, 230 (David Wootton ed., 2003). But Madison, like other Framers, was not consistent in describing the vertical division of power, expressing doubt that a clear division of such power was even possible. See EDWARD A. PURCELL, JR., ORIGINALISM, FEDERALISM, AND THE AMERICAN CONSTITUTIONAL ENTERPRISE: A HISTORICAL INQUIRY 30-31 (2007). As scholars have demonstrated, the historical record does not clearly support one, or even a dominant, understanding of the allocation of power between the federal and state governments at the time the Constitution or relevant amendments were drafted. See, e.g., ERWIN CHEMERINSKY, ENHANCING GOVERNMENT: FEDERALISM FOR THE 21ST CENTURY 114-16 (2008) (arguing that recent Supreme Court decisions regarding federalism cannot be justified by the Constitution’s text or historical record); PURCELL, supra, at 17-82 (arguing that characteristics inherent in the structure of the federal system give rise to debates regarding federalism that cannot be resolved by efforts to understand the original meaning of constitutional text). But see BERGER, supra, at 60 (arguing that constitutional history, especially from the perspective of the state ratifiers, supports the view that states retain exclusive authority over local matters).
15 The text of the Tenth Amendment does not actually require a strict division of authority, and some formalists would recognize overlapping spheres of federal and state authority. These approaches share, however, commitments to limited federal power and the demarcation of separate and overlapping spheres of federal and state power through categorical rules. Supreme Court cases support the view that — provided the federal government has the authority to act — it may regulate subject areas traditionally regulated by states. See, e.g., Hodel v. Va. Surface Mining & Reclamation Ass’n, 452 U.S. 264 (1981) (discussing land use regulation).
sometimes quite elusive. What dualistic conceptions share is a desire to resolve conflicts of federal and state power by allocating authority according to rules that reflect the Constitution’s recognition of dual sovereignty. Rather than weighing the costs and benefits of a particular allocation of governmental authority, proponents of dualism fashion rules that place state and federal authority in appropriate categories.

The oldest form of dualism is subject-matter dualism, which seeks to divide state and federal authority by identifying subject areas of “truly national” and “truly local” concern.16 According to this view, federal powers are limited to national subjects, such as foreign affairs, but do not extend to subject areas, such as crime control and domestic relations, traditionally regulated by the states pursuant to their police power. The Supreme Court once endorsed a version of subject-matter dualism, invalidating laws under the Tenth Amendment when they infringed on the “zone of activities” reserved to the states.

Although this notion of dual federalism was repudiated by decisions upholding New Deal legislation,17 it resurfaced briefly in 1976 in National League of Cities v. Usery.18 In that case, the Court reasoned that even the more expansive federal power to regulate interstate commerce is limited when it infringes state sovereignty by displacing state “functions essential to separate and independent existence.”19 Following a separate-spheres approach, the Court struck down amendments to the Fair Labor Standards Act that extended minimum wage and maximum hour provisions to state and local governmental employees. The Court held that these provisions violated the Tenth Amendment because they interfered with states’ freedom to structure employment relationships in “areas of traditional governmental functions,”20 such as “fire prevention, police protection, sanitation, public health, and parks and recreation.”21 Although the Court eventually overruled this approach to questions of state power,22 federalism opinions continue to distinguish at times between subject

17 See, e.g., Wickard v. Filburn, 317 U.S. 111, 120 (1942) (upholding, under the Commerce Clause, a federal law regulating production of wheat even when produced for local consumption); United States v. Darby, 312 U.S. 100, 121 (1941) (upholding, under the Commerce Clause, federal labor laws that extended to intrastate activities).
19 Id. at 845 (internal quotation marks omitted).
20 Id. at 852.
21 Id. at 851.
areas “traditionally” regulated by the states and those properly within the power of the federal government.23

Unlike proponents of subject-matter dualism, proponents of “process” theories of federalism argue that courts have little to no role in determining the balance of federal-state power because the Constitution safeguards state authority by guaranteeing that the states participate in the federal government.24 They argue that constitutional provisions that give states equal representation in the Senate, control over voting and districting for the House, and a substantial role in selecting the President ensure that the national government is responsive to state interests and values.25 In repudiating the “traditional state function” approach of National League of Cities in 1985, a majority of the Supreme Court endorsed the notion that the political process sufficiently limited federal power over the states.26 In Garcia v. San Antonio Metropolitan Transit Authority, the Court concluded that state interests “are more properly protected by procedural safeguards inherent in the structure of the federal system than by judicially created limitations on federal power.”27 Although process theories depart from subject-matter dualism, they continue to be dualistic in nature. Instead of trying to separate traditional state and federal functions, the national political process safeguards state interests whatever they may be.28 Courts need not — and indeed should not — define precisely what these interests are because they reflect the actual values and needs of particular states.29

24 The seminal article linking federalism to political process is Herbert Wechsler, The Political Safeguards of Federalism: The Role of the States in the Composition and Selection of the National Government, 54 Colum. L. Rev. 543 (1954); see Robert Justin Lipkin, Federalism as Balance, 79 Tul. L. Rev. 93, 154-61 (2004) (arguing that because federalism doctrine cannot guide judicial decisions, questions of federalism should be resolved by the political branches); Deborah Jones Merritt, Three Faces of Federalism: Finding a Formula for the Future, 47 Vand. L. Rev. 1563, 1566-70 (1994) [hereinafter Three Faces of Federalism] (discussing and critiquing process models of federalism).
25 See Wechsler, supra note 24, at 547-58; see also Garcia, 469 U.S. at 550-51.
26 Garcia, 469 U.S. at 552.
27 Id. at 552.
28 See id. (discussing how the Constitution does not carve out a separate sphere of state authority, but instead protects state “interests” through the structure of the federal government).
29 See Wechsler, supra note 24, at 547 (“To the extent that federalist values have real significance they must give rise to local sensitivity to central intervention; to the extent that such a local sensitivity exists, it cannot fail to find reflection in the Congress.”).
After Garcia, the Court, under the leadership of Chief Justice William Rehnquist, again endorsed substantive limits on federal power in the name of state sovereignty. In what has been called the “federalism revival,” the Court struck down numerous federal statutes and developed a theory of limited federal power tied to the idea of state autonomy. Generally speaking, under this view, Congress may regulate areas traditionally regulated by states — provided such regulation is consistent with an enumerated power — but states must retain authority to govern in areas left unregulated by the federal government. Thus, in Gregory v. Ashcroft, the Court held that if Congress seeks to intrude on a state governmental function (for example, the power to dictate state officials’ qualifications), Congress must explicitly express that intent in a clear statement.

Furthermore, state autonomy means that Congress may not enlist, or “commandeer,” state legislators or executive officials in enacting or implementing federal policy, even when Congress has the constitutional authority to act on its own. Hence, in New York v. United States, the Court struck down the “take-title” provision of the Low-Level Radioactive Waste Policy Amendments Act of 1985 because it required that states choose between enacting laws that govern the disposal of radioactive waste according to Congress’s directions or taking title to and possession of this waste. Unlike the enforcement of federal statutes in state courts, which the Court noted is required by the Supremacy Clause, the enactment and administration of a federal program by a state would turn the state into a “mere political subdivision” of the federal government contrary to the Constitution. State sovereignty at least means that the federal government must leave states free to govern in areas not preempted by federal law.

31 See id. at 12 (arguing that “it is a hallmark — and perhaps the legacy — of the Rehnquist Court to have brought back to the public-law table the notion that the Constitution is a charter for a government of limited and enumerated powers, one that is constrained both by that charter’s text and by the structure of the government it creates and authorizes”).
34 New York, 505 U.S. at 176.
35 Id. at 187-88.
36 Id. at 188.
Federalism scholars have embraced this model as well. According to autonomy theorist Deborah Jones Merritt, judicial intervention into the political process is necessary when the federal government interferes with “the independent relationship between a state government and its voters.”\textsuperscript{37} This happens when “the federal government dictates the structure of state governments, commandeers the energy of state administrators, or forces state enactment of particular laws — all without offering state governments the option of nonparticipation.”\textsuperscript{38} Federal law may preempt state law, but in areas left to the states, they must be free to govern autonomously; that is, they must be free to respond to their voters.\textsuperscript{39} Although the autonomy model departs substantially from the idea that federal and state power can be divided according to subject matter, it is nevertheless dualistic in the sense that it draws the line at federal interference with certain state governmental functions — namely, those law-making and enforcement functions that guarantee states’ existence as independent sovereigns.\textsuperscript{40}

2. Local Authority Under Formal Dualistic Approaches

What conclusions, if any, may we draw from these dualistic approaches regarding federal authority to empower local governments in the face of state opposition? The Supreme Court has not directly addressed whether the federal government may preempt state law limiting local authority when the federal government is acting pursuant to its constitutional authority under, for example, the Commerce Clause. But the doctrines discussed above arguably support objections that such an exercise of federal power would violate the Constitution’s

\textsuperscript{37} Merritt, \textit{Three Faces of Federalism}, \textit{supra} note 24, at 1571.

\textsuperscript{38} \textit{Id.}

\textsuperscript{39} \textit{Id.} This does not preclude state cooperation with the federal government; as long as states are able to opt out — by, for example, turning down federal funding conditioned on the adoption of federal policy — they are autonomous in the sense that they are accountable to their electorates. \textit{Id.} at 1571-72.

\textsuperscript{40} Vicki Jackson has argued that the Constitution contemplates these state functions. Vicki C. Jackson, \textit{Federalism and the Uses and Limits of Law: Printz and Principle?}, 111 HARV. L. REV. 2180, 2246-47 (1998). Although the Constitution does not specify subject areas left to state authority, it does contemplate the sovereignty of state governments because it recognizes their existence, their structure (in the form of a legislature, executive, and judiciary), and their responsibilities (e.g., to participate in the federal political process). \textit{Id.} at 2246-47. According to Jackson, this constitutional recognition of state sovereignty “suggests a commitment to the viability of those governments, and hence a constitutional basis for special rules concerning federal interferences with the functioning of state governments and their constitutionally contemplated legislative, executive, and judicial branches.” \textit{Id.} at 2246-47.
vertical separation of powers. However we define the sphere of state authority — whether it includes specific subject areas, various state interests, or particular governmental functions — the authority of a state to preempt local governmental authority is likely to fall comfortably within that sphere. Because the Court has abandoned the notion of completely separate spheres of authority and no longer adheres to the idea that states are always protected by the political process, the state autonomy approach to federalism presents the greatest obstacle to federal empowerment of localities.

State preemption of local authority is clearly a governmental function; consequently, Gregory’s clear statement rule would undoubtedly apply. The more difficult question is whether federal interference with a state’s power to preempt local authority leaves states free to govern in an area that the federal government has not preempted. For example, could Congress constitutionally prevent states from preempting local authority to ban or restrict a particular land use like oil and gas drilling?

Assuming the federal government is acting pursuant to a constitutionally delegated power and that local officials genuinely wish to cooperate with the federal government, the potential interference with state autonomy in these cases results from the federal government’s directive not to legislate or regulate in a way that disturbs local lawmaking and enforcement authority. States are not directed to implement or administer a federal program, as in New York v. United States. Nor are state officials required to help the federal government administer a federal program, as in Printz v. United States. Rather, federal law simply prohibits states from preempting local laws in specific contexts where the federal government could constitutionally displace all state law if it chose to do so.

These distinctions do not, of course, settle the matter. But they help illuminate the core issues. First, in limiting state authority to dictate local policy, federal law arguably requires state legislators to participate indirectly in the implementation of a federal program. It clearly limits

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41 As my repeated use of the word “empower” suggests, I am contemplating a situation in which local governments are willing participants in cooperating with the federal government. The federal government may, of course, be able to obtain the consent of state officials (not just local officials) by conditioning the receipt of federal funds on the state’s acceptance of federal-local collaboration or by giving states the choice to either accept federal-local collaboration or face direct regulation by the federal government (namely, preemption). The harder question is whether local governments have authority to consent (e.g., accept federal funds to implement federal policy) even when state officials withhold consent or otherwise object.


states’ authority to govern, assuming that the area is not otherwise preempted by federal law. Although New York and Printz involved affirmative steps on the part of state officials, federal limitations on state lawmaking authority raise similar federalism concerns. States would not be free to pass state-wide siting standards for natural gas drilling, for example, if they conflict with zoning ordinances adopted by local governments empowered by federal law. Such limitations arguably infringe on state autonomy by preventing states from responding to their electorates and frustrating voters’ efforts to hold state and federal governments accountable.

Federal preemption in this context is similar to what one scholar has called the “market-alternative model” of conditional preemption, under which Congress allows the states to choose whether to regulate a field consistent with federal standards or leave the field unregulated. In Federal Energy Regulatory Commission (FERC) v. Mississippi, the Court

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44 Ostrow, supra note 5, at 1433-35. The Telecommunications Act of 1996 is an example of this model as applied directly to local governments. The Act expressly preserves local authority over the siting of cell phone towers, but requires that local decisions conform to a set of substantive and procedural standards. 47 U.S.C. § 332(c)(7)(A) (1996). Like the choice in FERC, the choice here — to regulate in accordance with federal standards or leave the siting of cell phone towers to the market — is not much of a choice. FERC v. Mississippi, 456 U.S. 742, 782 (1982) (O’Connor, J., dissenting in part). As one federal appellate judge has noted, if a local government chose not to exercise its zoning authority, towers and other structures “could be erected in the midst of residential neighborhoods, next to schools, or in bucolic natural settings such as in woods or on top of mountains.” Petersburg Cellular P’ship v. Bd. of Supervisors of Nottoway Cnty., 205 F.3d 688, 703 (4th Cir. 2000) (Niemeyer, J., dissenting). To date, however, courts have upheld the Act’s siting provision against Tenth Amendment challenges. See, e.g., Petersburg Cellular P’ship, 205 F.3d 688 (producing no majority opinion on the question of constitutionality — with one judge rejecting the Tenth Amendment challenge, one judge invalidating the TCA’s siting provision on Tenth Amendment grounds, and one judge declining to reach the constitutional question); Cellular Phone Taskforce v. F.C.C., 205 F.3d 82, 96 (2d Cir. 2000) (rejecting Tenth Amendment argument); New Cingular Wireless PCS v. Cambridge, 834 F. Supp. 2d 46, 52 (D. Mass. 2011) (rejecting Tenth Amendment argument). But see Clive B. Jacques & Jack M. Beermann, Section 1983’s “and Laws” Clause Run Amok: Civil Rights Attorney’s Fees in Cellular Facilities Siting Disputes, 81 B.U. L. REV. 735, 772-86 (2001) (arguing that some provisions of the TCA’s siting section violate the Tenth Amendment because they commandeer local governments in the application and enforcement of federal law). As Jacques and Beermann note, the line between choice and commandeering is doctrinally murky. See id. at 785. The Court struck down a federal requirement that state law enforcement officers perform background checks for gun purchasers in Printz. See Printz, 521 U.S. at 933-35. Under the logic of FERC, states arguably had a choice: implement the federal requirement or get out of the law-enforcement business. FERC, 456 U.S. at 782; Jacques & Beermann, supra at 782 (“[I]t is no more realistic to expect state and local governments to abandon zoning than it is to expect them to abandon law enforcement.”).
upheld such an approach. The statute at issue in *FERC* required state authorities to consider adopting specific federal standards in their regulation of utilities and to follow certain procedural requirements in considering these standards. The Court reasoned that this requirement did not present a Tenth Amendment problem because states still had a choice: they could choose not to regulate utilities. The Court acknowledged that this choice is particularly difficult because Congress did not provide for federal regulation in the absence of state regulation.

In other words, the choice presented in *FERC* differs from the typical approach to conditional preemption where Congress provides for federal regulation of a given area in the event a state opts out.

As commentators have noted, *FERC*'s Tenth Amendment holding may have less force today. Justice O'Connor dissented from this portion of the opinion, characterizing the states’ supposed choice as an “absurdity.” In her view, federal law forced states “either to function as bureaucratic puppets of the Federal Government or to abandon regulation of an entire field traditionally reserved to state authority.”

In describing this arrangement as the “federal conscription of state legislative power,” her dissent in *FERC* foreshadowed her majority opinion in *New York* a decade later. Justice O'Connor reasoned that, even though states may avoid implementing federal standards by not regulating utilities, they cannot realistically choose this option because leaving the field unregulated is too risky a proposition for states.

Recently, in striking down the provisions of the Affordable Care Act that conditioned existing Medicaid funding on states’ acceptance of Medicaid expansion, the Court demonstrated a renewed willingness to invalidate federal laws that do not present a “genuine choice.”

Fortunately, federal empowerment of local authority does not present states with the difficult choices noted by the Court in *FERC* or subsequent cases. If Congress were to empower local governments in a preemptible field, states would have to choose between regulating

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45 *FERC*, 456 U.S. at 746.
46 *Id.* at 765-66.
47 *Id.* at 766.
48 *Id.* at 781 (O’Connor, J., dissenting in part).
49 *Id.* at 783.
50 *Id.* at 784.
52 *FERC*, 456 U.S. at 781-83.
53 Nat’l Fed. of Indep. Bus. v. Sebelius, 132 S. Ct. 2566, 2608 (2012). Seven Justices agreed that the federal condition was unconstitutionally coercive. In his plurality opinion, Justice Roberts described the conditioning of existing funds on acceptance of new program requirements as “compulsion” and a “gun to the head.” *Id.* at 2602, 2604.
without preempting local authority or not regulating at all. The first option does not turn state authorities into “bureaucratic puppets” of the federal government because states are not charged with legislating consistent with federal standards; any local regulations or standards would be adopted and implemented voluntarily by local governments. Moreover, the second option does not necessarily require that states abandon a field traditionally reserved to state governments. For example, if the federal government were to preempt state authority to limit local land use decisions, a state’s decision not to regulate is likely a reflection of the status quo, as land use regulation is traditionally the province of local, rather than state, authorities.54 In any event, states are not really faced with the choice of regulating or abandoning the field altogether; rather, they may choose to regulate alongside local governments or to leave all regulation to local governments. In neither case are states forced to leave the field unregulated. Federal preemption of state laws limiting local authority is therefore far less coercive than the federal law upheld in FERC v. Mississippi.

The other potential argument regarding interference with state autonomy begins with the observation that local governments are creatures of state law. If a municipality is understood to be a creature or agent of the state, the municipality’s cooperation with the federal government arguably requires the consent of relevant state officials. Without state authorization, federal-local collaboration arguably forces a state to implement and administer a federal program through its political subdivisions.

This concern follows from the view that states essentially have plenary authority over local governments.55 As a state-created entity, a local government is like a state agency, exercising only those powers delegated by the state, which remains free to alter or rescind those powers just as it is free to modify, expand, or extinguish its very existence.56 This view of local power is strengthened by Dillon’s rule, a nineteenth-century rule requiring the strict construction of state legislation conferring powers on local governments.57 According to the

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56 See id. at 7-8. As scholars have documented, the conception of localities as creatures of the states is factually inaccurate as a historical matter. Local governments existed before the states, and many exercised significant powers. See Morris, supra note 5, at 30 & n.175.
57 Sandra M. Stevenson, Antieau on Local Government Law § 24.03 (2d ed. 2010).
rule’s namesake, Judge Dillon of the Iowa Supreme Court, a municipal corporation may exercise only “those [powers] granted in express words,” “those necessarily or fairly implied,” and “those essential to the declared objects and purposes of the corporation.” Any “reasonable doubt” must be resolved against the corporation. Although most state courts formally abandoned Dillon’s rule in the mid-twentieth century, they often persist in narrowly construing statutory and constitutional delegations of state power to localities.

Most important for a theory of federal-local relations is that this historical view of local power made its way into Supreme Court opinions. In the 1907 decision Hunter v. City of Pittsburgh, the Court summarized its view of local power:

Municipal corporations are political subdivisions of the state, created as convenient agencies for exercising such of the governmental powers of the state as may be intrusted to them. . . . The number, nature, and duration of the powers conferred upon these corporations and the territory over which they shall be exercised rests in the absolute discretion of the state. . . . In all these respects the state is supreme, and its legislative body, conforming its action to the state Constitution, may do as it will, unrestrained by any provision of the Constitution of the United States. . . . The power is in the state, and those who legislate for the state are alone responsible for any unjust or oppressive exercise of it.

Subsequent court opinions quote this language from Hunter to support statutory interpretations that limit federal law’s impact on state-
local relations. For example, in Nixon v. Missouri Municipal League, the Court began with the idea that localities are “convenient [state] agencies” with powers delegated by the state in its “absolute discretion” to arrive at the conclusion that a federal law empowering a locality with authority contrary to or in the absence of state law infringes upon state sovereignty by interfering with the state’s chosen delegation of power.

But at the very moment the Supreme Court was expressing a limited view of local power in Hunter, the home-rule movement was changing the local legal landscape. Beginning with Missouri in 1875, states began granting local governments broader authority to govern local affairs under home rule amendments to state constitutions and statutory delegations of power. These changes were designed to mitigate the effect of Dillon’s rule and to give localities greater independence. Today, most states have home rule provisions — either in their constitutions or statutory law. In other words, in most states, localities do not look like “convenient agencies” with limited powers under state law, and particularly in states with constitutional home-rule provisions, state discretion to limit delegated local power is constrained by state constitutional law. Furthermore, although it is technically true that states have the power to create and destroy local governments, this does not mean the federal government may not interfere with the state’s delegation of power to existing entities.

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62 See Nixon v. Mo. Mun. League, 541 U.S. 125, 140 (2004); Wis. Pub. Intervenor v. Mortier, 501 U.S. 597, 607-08 (1991). For a detailed account of the Supreme Court’s treatment of local governments and its variable use of Hunter, see Morris, supra note 5, at 12-18. Morris argues that the Supreme Court overruled Hunter’s view of local governments as mere state agencies (assuming it is more than dicta) in Erie v. Tompkins and that cities should play a role in enforcing the federal constitution. Id.

63 See Nixon, 541 U.S. at 140.

64 STEVENSON, supra note 57, § 21.01.

65 Id.; Briffault, Our Localism, supra note 55, at 10.

66 STEVENSON, supra note 57, § 21.01. Home rule delegations usually take one of two forms. Either they give localities authority over “local affairs,” or they delegate complete power to localities subject to restriction by the state legislature. Id.

67 See David J. Barron, Why (and When) Cities Have a Stake in Enforcing the Constitution, 113 YALE L.J. 2218, 2243 n.92 (2006) (noting that state constitutions often protect local authority from legislative restrictions); see also Morris, supra note 5, at 33 (arguing that localities sometimes act as agents of their states and sometimes as agents of their constituencies).

68 See Davidson, supra note 4, at 1002 (arguing that these two powers are “conceptually distinct” and that “it is implausible to assume that a state government would punish a local government’s desire to access federal resources or authority by abolishing it”).
These changes in the legal constitution of local power call into question the Court’s formal adherence to Hunter’s notion of local power. Local governments are not mentioned in the Constitution. Nor are they treated the same within and among the various states. For a formalist interested in deriving categorical rules from legal texts and committed to the idea that law is determinate, this is a frustrating state of affairs. Where should a judge look to arrive at rules that govern the federal-local relationship?

One answer might be precedent. But as other scholars have noted, Supreme Court precedent does not clearly support the view that local governments may cooperate with the federal government only if state law authorizes such cooperation. To begin, Gregory’s clear statement rule is simply a rule of construction; although Congress must explicitly state its intention to interfere with a state governmental function, nothing in the Court’s opinion indicates that it lacks the power to do so. Moreover, although the Court has at times equated local government with state government, in some contexts, it has treated local governments as distinct entities.

The most salient cases for purposes of federal jurisprudence involve state immunity from suit under the Eleventh Amendment. Under this line of precedent, a local government does not enjoy state immunity from suit in federal court unless it functions as “an arm of the state.” As early as 1890, the Court rejected the idea that incorporated localities are mere agents of the state, emphasizing that — although they are “territorially a part of the state” — they are also corporations empowered by the state. Modern cases assess whether a political subdivision is an “arm of the state” by examining its degree of autonomy under state law — for example, whether it can sue and be sued, whether it can raise its own funds, and whether it can hold property.

69 Id. at 990-1000; Hills, Dissecting the State, supra note 4, at 1207-16. The case often cited as an example of federal authority to preempt state law governing the local-federal relationship is Lawrence County v. Lead-Deadwood School District No. 40-1, in which the Court held that federal law authorizing payments to localities preempted state law prescribing how localities must distribute those payments. See Lawrence Cnty. v. Lead-Deadwood Sch. Dist. No. 40-1, 469 U.S. 256, 270 (1985).

70 See Davidson, supra note 4, at 990-1000; Hills, Dissecting the State, supra note 4, at 1209-16.


72 Lincoln Cnty. v. Luning, 133 U.S. 529, 530 (1890).

73 See, e.g., Doyle, 429 U.S. at 280-81 (holding local school board that had the power to issue bonds and levy taxes was not an arm of the state even though it received state
most municipalities and many other local entities, such as school boards, are sufficiently independent to render them subject to suit.

If localities are sufficiently independent from states to be sued in federal courts for violations of federal law, why is this independence insufficient when localities regulate pursuant to federal law? As Justice Stevens noted in his dissent in Printz, the Tenth Amendment does not clearly support this distinction. State sovereignty does not appear to be compromised more in the case of regulation than it is in the context of a federal lawsuit. Although federal empowerment of a locality permits it to regulate in ways that affect the state, a federal court judgment may actually require the locality to act in ways that affect the state. Moreover, if local governments are treated more like independent corporations — empowered to sue and be sued, hold property, and so on — in one context, treating them as mere agents of the state in another context requires clear justification.

In addition to holding this status for purposes of Eleventh Amendment immunity, local governments are treated as such for purposes of civil rights liability under § 1983. In deciding the question, the Court noted that, "by 1871, it was well understood that corporations [including municipal corporations] should be treated as natural persons for virtually all purposes of constitutional and statutory analysis." If local governments are, in fact, corporations as this precedent suggests, then according to one constitutional and local government scholar, "the federal government should be able to delegate federal responsibilities to [local governments] just as it delegates federal duties to private nonprofit corporations (for example, Howard

funding and guidance from the state board of education); Vogt v. Bd. of Comm'rs, 294 F.3d 684, 689 (5th Cir. 2002) (considering: "(1) whether state statutes and case law characterize the agency as an arm of the state; (2) the source of funds for the entity; (3) the degree of local autonomy the entity enjoys; (4) whether the entity is concerned primarily with local, as opposed to statewide, problems; (5) whether the entity has authority to sue and be sued in its own name; and (6) whether the entity has the right to hold and use property"). The Court also employs an arm-of-the-state analysis to determine whether political subdivisions are "citizens" for purposes of diversity jurisdiction (and they generally are). See Moor v. Cnty. of Alameda, 411 U.S. 693, 717-20 (1973).

74 Printz v. United States, 521 U.S. 898, 955 n.16 (1997) (Stevens, J., dissenting) ("Even if the protections that the majority describes as rooted in the Tenth Amendment ought to benefit state officials, it is difficult to reconcile the decision to extend these principles to local officials with our refusal to do so in the Eleventh Amendment context. If the federal judicial power may be exercised over local government officials, it is hard to see why they are not subject to the legislative power as well.").


76 Id. at 687.
University, the Red Cross, etc.), preempting in the process all state legislation that might interfere with the federal license of the federal agent.\textsuperscript{77} Of course, the point is not that this line of precedent settles the matter; the point is that Supreme Court doctrine does not. Local governments are treated as independent corporations in some contexts and state agents in others.

Structural constitutional arguments also yield conflicting results. To support rules limiting interference in state-local relations, proponents of state autonomy point to constitutional provisions that recognize aspects of state governance — including the federal responsibility to ensure a republican form of state government in the Guarantee Clause.\textsuperscript{78} But these accounts are weakened by arguments based on the Supremacy Clause.\textsuperscript{79} As long as federal law is consistent with a constitutionally delegated power, such as the power to regulate interstate commerce, it is superior to conflicting state law.

The view that federal law may interfere with a state’s delegation of power to localities is also bolstered by federal practice. In City of Columbus v. Ours Garage and Wrecker Service, Inc., the Court interpreted a federal statute so as to avoid federal interference with state delegations of authority to local governments.\textsuperscript{80} Dissenting from the Court’s decision, Justice Scalia dismissed the Court’s federalism concerns, arguing that the states’ power to delegate their authority to their political subdivisions “has [not] hitherto been regarded as sacrosanct.”\textsuperscript{81} In addition to federal statutes that prevent the delegation of power to localities, he noted the federal practice of granting substantial funds directly to municipalities.\textsuperscript{82}

This practice has grown under the Obama Administration. For example, the Administration’s “Race to the Top” program, a competitive grant program to improve public education, allows local school districts to apply for grants even if their states refuse to do so.\textsuperscript{83} Pursuant to its

\textsuperscript{77} Hills, Dissecting the State, supra note 4, at 1210.
\textsuperscript{79} See Davidson, supra note 4, at 1001-02 (noting competing structural arguments based on the Supremacy Clause and Guarantee Clause). We might add the state officers’ oath requirement, U.S. CONST. art. VI, cl. 3, to bolster the structural argument in favor of federal supremacy. See Printz, 521 U.S. at 971-72 (Souter, J., dissenting) (quoting THE FEDERALIST NO. 27 (Alexander Hamilton)).
\textsuperscript{80} City of Columbus v. Ours Garage & Wrecker Serv., Inc., 536 U.S. 424, 432-42 (2002).
\textsuperscript{81} Id. at 448 (Scalia, J., dissenting).
\textsuperscript{82} Id.
\textsuperscript{83} See Race to the Top District (RTT-D), U.S. DEP’T OF EDUC. (Dec. 17, 2013), http://www2.ed.gov/programs/racetothetop-district/index.html. For a comprehensive
constitutional spending power, Congress can, of course, condition federal funds on the implementation of federal policies, provided states freely consent to the arrangement. If grants to localities are prohibited or limited by state law, the state has arguably failed to consent to the arrangement. In order for federal law to trump state law in this context, the federal government would need to be acting pursuant to an enumerated power to govern directly — for example, its commerce power. This practice is therefore controversial under the Spending Clause. Indeed, what is interesting about these practices is that they are so controversial under Spending Clause jurisprudence. Just as first-generation environmental statutes helped develop the doctrine of cooperative federalism discussed below in Part II, these practices may in time call for revisions in Spending Clause jurisprudence — revisions that more closely track the realities of federal, state, and local governance today.

Analyzing the reality of congressional practice today, Annie Decker has recently argued that Congress sometimes differentiates between states and local governments for purposes of preemption.84 The most compelling statutory examples for purposes of local empowerment are what she terms “‘local-twist’ provisions.”85 She notes two interesting examples from the Hazardous Materials Transportation Act that require states to take certain actions in relation to their local governments (for example, requiring states to ensure that localities follow federal standards or requiring states to consult with localities when making decisions).86 As Decker observes, because these provisions condition state compliance with federal law on particular state-local actions, they undermine the conventional notion of local governments as mere agents of the state: “State-level law escapes federal preemption by riding on the back of the local, reversing the standard story of states empowering local governments.”87

Lastly, even if precedent, text, and practice unequivocally supported the view that local governments are mere agents of the states, it does not necessarily follow that federal empowerment of localities interferes with state autonomy, or sovereignty, when the federal government is

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84 Decker, supra note 5, at 338-44.
85 See id. at 342-34.
86 Id.
87 Id. at 344.
acting pursuant to an enumerated regulatory power. Federal-local collaboration does not require states to pass legislation or enforce a federal program. It does not “control or influence the manner in which States regulate private parties,” a practice the Court has suggested is unconstitutional. Even if federal-local collaboration limits what states can do, it arguably does not “influence” the manner of state regulation. It does not tell states how to regulate or command them to do so — at least no more so than when federal law generally preempts state law in a given area.

With that being said, federal empowerment of local authority contrary to state law may interfere with a state’s chosen allocation of its resources. As one scholar has noted, when the federal government authorizes a local government to implement federal policy, local government officials may have to use state resources toward that end, a situation analogous to a regulatory taking. If, for example, federal law authorized local law enforcement to conduct background checks prior to gun purchases, then local officers would necessarily spend county or state funds in performing these checks. But this is not an issue if local agencies receive federal funding and do not use state funds. In addition, many cases of federal authorization of local power would require little or no additional state resources. For example, if federal law empowered local zoning authorities to exclude some or all oil and gas drilling activities within their jurisdictions, local authorities would not likely spend more resources processing zoning applications. In the event authorities chose to ban such activities, they would arguably use fewer state resources to review applications and enforce the conditions of specific permits.

B. Justifying Dualism: Values Furthered by Federalism

Because constitutional history, structure, and text do not definitively answer how governmental authority should be allocated, both scholars and courts draw heavily on the functions supposedly furthered by


89 See Hills, Dissecting the State, supra note 4, at 1211-12 (noting that federal preemption of state law limiting local power does not require state actors to implement federal law — Congress may not, under Printz, force local law enforcement officials to perform background checks prior to gun purchases, but this does not mean that Congress is prohibited from empowering these local officials if they wish to perform background checks contrary to state law).

90 Id. at 1213.

91 Id.
federalism to justify rules and arguments regarding the division of state and federal authority.92 Supreme Court opinions resolving questions of federalism contain impressive lists of the ways in which our federal system of governance furthers and protects personal liberty and strengthens the democratic process by ensuring responsive representation and citizen participation.93 Federalism is also lauded as a means of furthering innovation in social and economic governance and, more generally, as a means of allocating authority efficiently and effectively.94

Although the Court often lists these values and functions without analyzing whether each are furthered in a given case, academic debates routinely offer normative approaches that allocate governmental authority on functional grounds.95 In some cases, of course, federalism will further some values, but not others.96 What is most important for purposes of federal empowerment of local authority is that, in most cases, these values are not unique to federalism, but are instead values furthered by decentralization.97 In other words, the values underlying


93 Justice O’Connor’s summary of the benefits of federalism in Gregory is often cited:

This federalist structure of joint sovereigns preserves to the people numerous advantages. It assures a decentralized government that will be more sensitive to the diverse needs of a heterogeneous society; it increases opportunity for citizen involvement in democratic processes; it allows for more innovation and experimentation in government; and it makes government more responsive by putting the States in competition for a mobile citizenry.


94 See id.; see also discussion infra Part I.B.3.

95 See, e.g., CHEMERINSKY, supra note 14 (arguing that courts should adopt a functional, rather than formal, approach that furthers the values of liberty and effective governance by empowering state and federal governments, rather than constraining them).

96 To mediate this conflict, Erin Ryan has proposed an approach called “balanced federalism” that would resolve questions of state versus federal authority in “gray” areas, leaving room for traditional dualism in “uncontroversial” areas. Erin Ryan, Federalism and the Tug of War Within: Seeking Checks and Balance in the Interjurisdictional Gray Area, 66 MD. L. REV. 503, 644 (2007); see also ERIN RYAN, FEDERALISM AND THE TUG OF WAR WITHIN 182 (2011).

federalism are often furthered as much or more by federal empowerment of local authority as they are by a system of dual sovereignty. This may be particularly true when local governments seek to implement citizens’ preferences in the face of state opposition. This section discusses the values associated with federalism, grouping them according to the themes of liberty, democratic process, and economic efficiency and innovation. The focus is on how local authority can further these values, particularly in the environmental context. From a functionalist perspective, if local authority in a given context serves federalism’s values, the federal government should be able to preempt any state law limiting that authority.

1. Liberty

Perhaps the most sacred value supposedly furthered by our system of dual sovereignty is liberty. Although liberty is itself a highly contested concept, constitutional history and Supreme Court precedent make clear that the liberty furthered by federalism is freedom from government tyranny and abuse of power. Because sovereignty is divided, the people can call upon one sovereign to remedy the overreaching of the other. The vertical diffusion of governmental power thereby preserves personal liberty. Or, in Justice O’Connor’s words, “[i]n the tension between federal and state power lies the promise of liberty.”

Whether federalism actually furthers liberty is a more difficult question. The tragic history of slavery and Jim Crow cautions against devolving too much power to states, while state and local victories in the recent movement for marriage equality suggest that states and localities can be instrumental in expanding personal liberties. Moreover, power is not actually evenly divided; the federal government may preempt state authority as long as it is acting pursuant to a constitutionally enumerated power. Consequently, states cannot influence or control the federal government by opting out of federal regulation or otherwise rejecting its authority.

98 See Davidson, supra note 4, at 1005-23 (arguing that instrumental benefits associated with federalism are often better achieved at the local than the state level).
99 See Gregory, 501 U.S. at 458 (“Perhaps the principal benefit of the federalist system is a check on abuses of government power.”).
100 Id.
101 Id. at 459.
This limitation on state authority serves to undermine the very idea of sovereignty. As Heather Gerken has argued, “the conventional image of federal-state relations pivots off of exit, not voice.” Sovereignty-based accounts protect liberty by giving minorities “an exit option — the chance to make policy in accord with their own preferences, separate and apart from the center.” According to Gerken, these accounts fail to capture the power of localities and special purpose institutions, such as juries, school boards, and state agencies. These institutions do not wield power by threatening to exit, but by exercising their voice in ways that profoundly influence the policymaking agenda. She gives the example of decisions to support same-sex marriage in Massachusetts and San Francisco. She notes that Massachusetts’s decision, while protected by state sovereignty, dropped out of the national debate rather quickly, whereas San Francisco’s decision forced ongoing dialogue at the state and national levels precisely because it lacked sovereignty and its decision could be reversed.

Recognizing the power of the servant does not diminish the importance of state power or sovereignty. As Gerken argues, it simply acknowledges that sovereignty is not a complete or even a completely accurate account of our system of governance. Moreover, it illuminates the power and potential of localities to influence policymaking agendas and force change from within state and federal systems of governance. This serves as a considerable check on the abuse of governmental power.

This phenomenon — of state and local policymaking — is actually quite apparent in the environmental field, as states and local governments often emerge as regulatory leaders in areas the federal

102 See Gerken, supra note 92, at 7.
103 Id. In other words, sovereignty protects negative autonomy rather than the positive autonomy possible in a centralized system that devolves power to various political subdivisions. See Yishai Blank, Federalism, Subsidiarity, and the Role of Local Governance in an Age of Global Multilevel Governance, 37 FORDHAM URB. L.J. 509, 511 (2010) (“While federalism is mainly focused on the protection of the constituent units from federal intervention (negative autonomy), subsidiarity promotes duties of assistance of the various levels of government towards each other (positive autonomy).”).
104 Gerken, supra note 92, at 7.
105 Id. at 8.
106 Id. at 10.
107 Id. at 69-70.
108 Id.
109 Id. at 10.
government could regulate, but has not because of industry influence and other pathologies that lead to regulatory failure.\textsuperscript{110} Because the benefits of environmental regulation are diffuse (that is, spread evenly and thinly across the population), but the costs are concentrated in a given industry or group of industries, the political and administrative processes are often dominated by industry interests. This imbalance of power can lead to environmental regulations that are insufficiently protective of human health and the environment.\textsuperscript{111}

Under these circumstances, states and local governments have filled these regulatory gaps with laws of their own. State and local climate initiatives are an excellent example.\textsuperscript{112} Before the EPA began its recent effort to regulate greenhouse gases under the Clean Air Act, California began regulating carbon dioxide emissions,\textsuperscript{113} and states have established regional cap-and-trade programs as well.\textsuperscript{114} Cities have also


\textsuperscript{111} A robust public choice literature addresses whether industry’s rent-seeking behavior is greater and more successful at the state or federal level of government. Richard L. Revesz, \textit{Federalism and Environmental Regulation: A Public Choice Analysis}, 115 HARV. L. REV. 553, 559-78 (2001) (discussing public choice theories of regulation at the state and federal levels). Scholars agree, however, that industry’s interests are more powerful than environmental interests due to industry’s “greater financial resources, the focus and cohesiveness of its goals, and its hierarchical structure.” David E. Adelman & Kirsten H. Engel, \textit{Adaptive Federalism: The Case Against Reallocating Environmental Regulatory Authority}, 92 MINN. L. REV. 1796, 1836 (2008).

\textsuperscript{112} See Adelman & Engel, supra note 111, at 1847 (noting that “state and local governments, not the federal government” are “tak[ing] the lead on climate change initiatives”); see also U.S. States & Regions: \textit{Climate Action}, CTR. FOR CLIMATE & ENERGY SOLUTIONS, http://www.c2es.org/us-states-regions (last visited Oct. 9, 2014) (describing and tracking state and local climate change actions).

\textsuperscript{113} In addition to reporting requirements, California is implementing a cap-and-trade program for greenhouse emissions. See CAL. CODE REGS. tit. 17, §§ 95,800–96,023 (2014). For more information on climate change measures in California, see \textit{Climate Change Portal}, STATE OF CAL., http://www.climatechange.ca.gov (last visited Oct. 9, 2014).

\textsuperscript{114} The first such program is the Regional Greenhouse Gas Initiative, created by northeastern states to reduce emissions from electric utilities. See Welcome, REG’L GREENHOUSE GAS INITIATIVE, http://www.rrgi.org/home (last visited Oct. 10, 2014). Western states and Canadian provinces are implementing another market-based program. See Western Climate Initiative, \textit{W. CLIMATE INITIATIVE, INC.}, http://www.wci-inc.org (last visited Oct. 25, 2014). States agreed (in the Midwestern Greenhouse Gas Reduction Accord) to create a regional program in the Midwest, but they have yet to act on their initial
led the way, taking steps to reduce vehicle miles travelled and enacting green building codes. In addition, as much-needed reform of federal toxics legislation fails to move forward, states and localities have also been active in passing laws regulating the use of toxic chemicals. These local initiatives have the power to force national change. The mounting number of toxics laws at the local level, for example, may be what ultimately convinces the chemicals industry to support federal legislation. In all these examples, local laws help cure power imbalances that undermine the political system by voicing dissent from inside the system and shaping the policy-setting agenda.


116 According to SaferStates, a web site that tracks state toxics laws, thirty-three states plan to consider toxics-reform policies in 2014. At Least 33 States to Consider Toxics Policies in 2014, SAFERSTATES (Jan. 28, 2014), http://www.saferstates.com/news/at-least-33-states-to-consider-toxics-policies-in-2014. Some states plan to consider proposals that would require labeling and other forms of information disclosure, while other states may consider measures that would restrict or ban specific chemicals of concern, such as bisphenol A or toxic flame retardants. Id. Cities have also passed laws regulating toxic chemicals. See, e.g., Michael Hawthorne, Alderman Wants Chicago to Ban Pavement Sealants Made with Coal Tar, CHI. TRIB. (Apr. 11, 2013), http://articles.chicagotribune.com/2013-04-11/news/ct-met-coal-tar-chicago-ban-20130411_1_asphalt-based-sealants-coal-tar-pavement-coatings-technology-council (noting that coal tar sealants have been banned in Austin, Texas, as well as “suburban South Barrington, the state of Washington, counties in Maryland, New York and Wisconsin, and more than two dozen Minnesota cities”).

117 The Chemical Safety Improvement Act of 2013 is the latest effort to reform the ineffective Toxic Substances Control Act. See S.1009 — Chemical Safety Improvement Act, CONGRESS.GOV, http://www.congress.gov/bill/113th-congress/senate-bill/1009. The legislation was introduced in the Senate with bipartisan support in May 2013. See Cosponsors: S.1009, CONGRESS.GOV, http://www.congress.gov/bill/113th-congress/senate-bill/1009/cosponsors. Although public interest groups are critical of the bill, see Earthjustice Speaks out About Chemical Safety Improvement Act, EARTHJUSTICE (June 11, 2013), http://earthjustice.org/news/press/2013/earthjustice-speaks-out-about-chemical-safety-improvement-act, the fact that it has bipartisan support is a new development reflecting the chemical industry’s support of federal legislation. Scholars have also noted that climate change regulation at the local and state levels is most valuable not in its overall capacity to reduce emissions, but in its ability to force regulation at the national and international levels. See, e.g., Kirsten Engel, State and Local Climate Change Initiatives: What Is Motivating State and Local Governments to Address a Global Problem and What Does This Say About Federalism and Environmental Law?, 38 URB. LAW. 1015, 1026-27 (2006) (“Already, some in the utility industry are beginning to line up behind federal regulation because such regulation promises greater certainty and uniformity across the industry than a patchwork of state and local laws.”). Engel notes that state regulation has also prompted federal regulation in other areas, such as “acid rain legislation, toxic air regulation, and control of mercury emissions.” Id. at 1026.

118 Federal preemption of state laws limiting local authority also serves to clarify
2. Democratic Process

The arguments that federalism enhances the democratic process are familiar and straightforward: state-level governance will result in more responsive, accountable representation and encourage meaningful citizen participation in political processes. What is not always emphasized, however, is that these values are furthered by devolution of decision-making authority from a central government to political subdivisions; that is, they are furthered by decentralization, not state sovereignty per se.\textsuperscript{119} In addition, in many cases, local governance arguably furthers these values more effectively than state governance.

The argument regarding responsive representation is essentially one of preference satisfaction, and it largely assumes that states form more homogenous political communities than the nation (that is, that preferences are more likely to be aligned at local levels).\textsuperscript{120} This assumption is tenuous at best in today’s more mobile, pluralistic society.\textsuperscript{121} But state representatives may nevertheless do a better job of responding to their electorates in the sense of listening to and considering their constituents’ views simply because they answer to fewer constituents than federal legislators. Moreover, because elected officials at the level of local government have even fewer constituents, they should be even more responsive. Unlike state officials, local officials work, live, and play in the very communities they represent. These connections likely facilitate greater political accountability and transparency, as well as responsiveness to individual constituents.

Similar to the argument that federalism furthers responsive representation, the argument that federalism furthers citizen participation has even more force at the local level where citizens have state-local authority and reduce interest group litigation. See Paul Diller, \textit{Intrastate Preemption}, 87 B.U. L. REV. 1113, 1133-34 (2007) (noting that business groups often seek to invalidate local laws on the grounds of implied preemption by state law).

\textsuperscript{119} \textit{Feeley} & \textit{Rubin}, supra note 97, at 21-22; \textit{Frug} & \textit{Barron}, supra note 97, at 49. Scholars have debated whether federalism furthers local autonomy, or self-government, more effectively than unitary regimes. See, e.g., Frank B. Cross, \textit{The Folly of Federalism}, 24 CARDOZO L. REV. 1 (2002) (arguing that unitary regimes further decentralization and therefore local power better than federal regimes); Roderick M. Hills, Jr., \textit{Is Federalism Good for Localism? The Localist Case for Federal Regimes}, 21 J.L. & POL. 187, 187 (2005) (arguing that federal regimes are more likely than unitary regimes to support local power).


\textsuperscript{121} See \textit{Feeley} & \textit{Rubin}, supra note 97, at 117 (arguing that the United States has a national political culture with advocates and opponents of key political issues, such as abortion, distributed nationally rather than regionally).
opportunities to participate in a range of institutions (such as school boards and zoning commissions) that govern their everyday lives. Furthermore, if democracy requires robust public debate and citizen engagement, as proponents of deliberative democracy suggest, participation at the local levels of governance is essential. It is at the local level (where government is closest to the people) that “ideal” conditions for deliberative democracy exist; at the community level, each person is more likely to be able to participate on equal terms with other citizens in dialogue regarding political decisions. This kind of engagement encourages people to appeal to their shared political values in an effort to reach consensus regarding political decisions. In so doing, citizen participation may actually result in decisions that are, in fact, more responsive to actual preferences. In addition, public dialogue at the local levels may do more than facilitate political consensus; it may actually shape citizens’ attitudes and preferences, instilling in them a sense of civic virtue that inspires a desire to pursue the common good.

The literature on social norms in environmental law bolsters this point regarding local participation and individual attitudes. Ann Carlson has studied recycling norms. She notes that empirical research suggests that face-to-face contact (with recycling neighbors, for example) and feedback mechanisms that allow individuals to assess their performance relative to others can change people’s behavior: “When confronted by a neighbor or by evidence that one’s recycling performance is subpar, many households respond positively.” This

123 This is akin to Jürgen Habermas’s discourse theory of democracy, in which “ideal speech conditions” exist for citizens to communicate with each other and decision makers. See Jürgen Habermas, Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy 111-19, 322-23 (William Rehg, trans., MIT Press 1996).
124 This reflects John Rawls’s view of public reason, a mode of political discourse essential to liberal democracy, in which citizens justify their positions to one another in terms of shared political values, rather than their own particular comprehensive doctrines. See John Rawls, The Idea of Public Reason Revisited, in The Law of Peoples 129, 136-37 (1999).
125 See, e.g., Joshua Cohen, Deliberation and Democratic Legitimacy, in Deliberative Democracy, supra note 122, at 67, 69 (arguing that democratic politics should “shape[] the identity and interests of citizens in ways that contribute to the formation of a public conception of common good”).
127 Id. at 1290.
occurs because we generally care about our neighbors’ impressions of us.\textsuperscript{128} Changing social norms in this way is obviously most effective at the local level where governments and individuals can most easily provide face-to-face contact and feedback.\textsuperscript{129} Katrina Fischer Kuh notes an example of a neighbor-led energy conservation initiative in New Jersey premised on the idea that “‘the key to long-term sustainability may be how we relate to each other in our own neighborhoods, the ways we connect in daily life.’”\textsuperscript{130} Local governments are therefore ideally positioned to shape citizens’ attitudes and behaviors toward environmental goals that typically suffer from collective action problems.\textsuperscript{131}

Although this literature is mostly instrumental in nature — it explores whether and how local governments can further environmental ends by changing individual behaviors — local participation may instill a sense of environmental stewardship (that in turn motivates action) in the absence of such top-down strategies. In interviewing participants in local climate action groups in Boulder, Colorado, Sarah Krakoff discovered that participants were “attempting to forge an ethic and identity that includes obligations to the planet, to other species, and to future generations.”\textsuperscript{132} Interviewees had reduced their carbon footprints through modest efforts to conserve energy, as well as more major actions (some stopped driving or flying), out of a “sense of personal and group obligation.”\textsuperscript{133} As described by one participant, what begins as a matter of personal responsibility grows over time into a desire to see legal changes occur at a global level.\textsuperscript{134} This suggests that participation in local environmental politics can indeed shape citizens’ identities and attitudes in ways that motivate them to pursue a truly \textit{common} good: a sustainable planet.

\textsuperscript{128} \textit{Id.}
\textsuperscript{129} As Katrina Fischer Kuh has noted, localities are well positioned to apply these strategies: “Community-level implementation can make it easier to employ . . . face-to-face contact and feedback. Local governments already have personal contact with citizens at a variety of junctures (such as the local police force or garbage pick-up) and may be better positioned to collect and disseminate relevant feedback information.” Kuh, \textit{supra} note 3, at 191.
\textsuperscript{130} \textit{Id.} at 191.
\textsuperscript{131} See Carlson, \textit{Recycling Norms}, \textit{supra} note 126, at 1290.
\textsuperscript{132} Krakoff, \textit{supra} note 3, at 132.
\textsuperscript{133} See \textit{id.} at 131.
\textsuperscript{134} \textit{Id.}
3. Economic Efficiency and Innovation

Similar to arguments regarding democratic values, economic arguments cited in support of federalism do not actually depend on a federal system of dual sovereignty. In fact, arguments that federalism promotes economic efficiency and growth are largely outgrowths of Charles Tiebout’s work regarding markets for municipal goods and services.\textsuperscript{135} Tiebout theorized that local governments create a market for public goods, such as education and law enforcement, by competing with one another for a mobile citizenry.\textsuperscript{136} Citizen taxpayers unsatisfied with a given locality’s services could simply “vote” with their feet—that is, move to a locality with the preferred services.\textsuperscript{137} This arrangement theoretically results in an efficient allocation of public goods, and according to some accounts, it promotes economic growth.\textsuperscript{138} Tiebout’s theory relies on some problematic assumptions, namely that people are able to move freely (i.e., they are not constrained by economic circumstances), that people know the relevant differences between localities’ services, and that one locality’s services do not affect other localities in positive or negative ways.\textsuperscript{139} Nevertheless, the basic idea that local governance promotes economic efficiency through

\textsuperscript{135} See Gerald E. Frug, City Services, 73 N.Y.U. L. REV. 23, 26 (1998) [hereinafter City Services].

\textsuperscript{136} See generally Charles M. Tiebout, A Pure Theory of Local Expenditures, 64 J. POL. ECON. 416, 418 (1956) (asserting a then novel theory that localities are incentivized to improve their services by competing for citizens).

\textsuperscript{137} Id. at 418.

\textsuperscript{138} See, e.g., McConnell, supra note 120, at 1499 (arguing the competition among localities for taxpayers provides “powerful incentive for decentralized governments to make things better for most people”). But see Richard C. Schragger, Decentralization and Development, 96 VA. L. REV. 1837, 1887 (2010) (arguing that decentralization does not promote economic growth). Innovation in policy and governance may result from factors other than competition. See McConnell, supra note 120, at 1498 (arguing that innovation is also furthered by the larger number of local governments and likelihood that some contain populations with preferences different from that of the national majority). Indeed, Justice Brandeis’s famous language regarding states as laboratories seems to rest more on the fact of plural jurisdictions than economic incentives. See New State Ice Co. v. Liebmann, 285 U.S. 262, 386-87 (1932) (Brandeis, J., dissenting) (“It is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”); see also Matthew J. Parlow, Progressive Policy-Making on the Local Level: Rethinking Traditional Notions of Federalism, 17 TEMP. POL. & CIV. RTS. L. REV. 371, 375 (2008).

\textsuperscript{139} Frug, City Services, supra note 135, at 26.
competition is still routinely cited in court opinions and the federalism literature.\textsuperscript{140} Although some municipal services are environmental in nature (e.g., sanitation, waste disposal, public parks), environmental law also regulates private activities, such as industrial pollution, that fall outside the classic Tieboutian paradigm. Economic arguments in the environmental field therefore tend to be forms of the subsidiarity principle, the idea that social problems should be managed at the lowest possible level.\textsuperscript{141} In economic terms, this means “matching” the problem with the jurisdiction that can best internalize the costs and the benefits of regulation.\textsuperscript{142} The objective of regulation is “to force polluters to bear the full costs of their activities.”\textsuperscript{143} When a “mismatch” occurs, the regulatory authority is likely to provide a suboptimal amount of protection (that is, either too little or too much).\textsuperscript{144} Optimal regulation will maximize social welfare by ensuring the benefits of regulation outweigh the costs.\textsuperscript{145} For example, if states and localities are charged with regulating greenhouse gas emissions, regulations are likely to be too lax given that states and localities can externalize some of the consequences, creating a tragedy of the commons.\textsuperscript{146}

The matching principle in environmental law produces a kind of separate-spheres ideology like dual-sovereignty federalism, but allocates authority according to economic efficiency, rather than subject matter. It essentially inquires into the scope of a given problem and looks for the level of government with “institutions of equivalent scope.”\textsuperscript{147} Jonathan Adler has argued that the principle supports a

\textsuperscript{140} See, e.g., Gregory v. Ashcroft, 501 U.S. 492, 458 (arguing that federalism “makes government more responsive by putting the States in competition for a mobile citizenry”); see also Blank, supra note 103, at 534 n.75 (citing academic elaborations of Tiebout’s theory that support federalism and decentralization).

\textsuperscript{141} Adler, Jurisdictional Mismatch, supra note 110, at 134-35.


\textsuperscript{143} Id. at 29.

\textsuperscript{144} Adler, Jurisdictional Mismatch, supra note 110, at 133; see also Daniel C. Esty, Revitalizing Environmental Federalism, 95 Mich. L. Rev. 570, 587 (1996) (“Whenever the scope of an environmental harm does not match the regulator’s jurisdiction, the cost-benefit calculus will be skewed and either too little or too much environmental protection will be provided.”).

\textsuperscript{145} Butler & Macey, supra note 142, at 29.

\textsuperscript{146} See Adler, Jurisdictional Mismatch, supra note 110, at 142, 175-76 (arguing that regulation of climate change should occur at the national and international, rather than state and local, levels).

\textsuperscript{147} Id. at 133.
presumption in favor of state and local responsibility for environmental problems.\textsuperscript{148} In addition to noting that decentralization generally furthers preference satisfaction and policy innovation, he argues that local authority in the environmental field allows for “ecologies of scale” — “a closer fit between local ecological conditions and environmental policies.”\textsuperscript{149} Regulation consistent with the geographic scope of a problem is preferable to a federal “one size fits all” approach because such an approach fails to capture local ecological variations and draw on local knowledge and expertise.\textsuperscript{150} Apple orchards in states with different climates and conditions will, for example, require different pest control approaches, and while some cities may need secondary water treatment, others may not.\textsuperscript{151}

This is not to say that local governments are the optimal sites of regulation in every case. Central to economic theories is the recognition that local governance can sometimes result in externalities.\textsuperscript{152} Air pollution, for example, does not respect political boundaries. If emissions of a given pollutant tend to travel from one state to another, the emitting state will have little incentive to pass regulations sufficiently protective of health and the environment.\textsuperscript{153} Similarly, state regulation of climate change is likely to be inefficient because although a state internalizes the cost of regulation, the benefits are spread globally. Such a situation creates incentives for states to “free ride,” leaving emissions reductions to other states, and may result in “leakage,” whereby industry moves to unregulated states and emissions remain the same.\textsuperscript{154}

Local communities may also wish to exclude locally undesirable land uses, such as hazardous waste facilities and landfills (the familiar “NIMBY” problem).\textsuperscript{155} When this happens, these facilities often end up in low-income and minority communities, presenting environmental justice concerns. More centralized governance at the state and federal

\textsuperscript{148} Id. at 135.
\textsuperscript{149} Id. at 133, 137.
\textsuperscript{150} Id. at 136-37 (internal quotation marks omitted).
\textsuperscript{151} Id. at 136.
\textsuperscript{152} Id. at 140-42.
\textsuperscript{153} See id. at 140.
\textsuperscript{155} See e.g., Michael Wheeler, Negotiating NIMBYs: Learning from the Failure of the Massachusetts Siting Law, 11 YALE J. ON REG. 241, 244 (1994) (discussing “NIMBYism,” its causes, and strategies to address it). NIMBY stands for “Not In My Back Yard.” Id. at 242.
levels is therefore necessary to prevent localities from imposing all the costs of these social services on neighboring communities.\textsuperscript{156}

Federal empowerment of local environmental regulation can further the matching principle, and economic efficiency, in important ways. For example, when a state preempts local governments’ authority to pass land use regulations that impact air and water quality, local environmental problems may go unregulated, forcing localities to bear costs that come with little or no attendant benefits and resulting in inefficient governance. In the absence of externalities and NIMBY problems, federal empowerment of local authority can further the objectives of key federal statutes, such as the Clean Air Act and the Clean Water Act, which envision federal standards as regulatory “floors,” rather than ceilings. When states choose not to enact more stringent standards, that choice may or may not be efficient, but states clearly undermine economic efficiency, as well as local preferences and democratic values, when they force local governments to internalize the costs of truly local environmental problems.

II. ENVIRONMENTAL FEDERALISM: PRACTICE AND THEORY

Whether dualism is justified by formal rules or functional arguments, it is less the reality today than either mode of reasoning suggests. Instead, states and the federal government have concurrent power to regulate in most areas. Supreme Court precedent has extended the reach of Congress’s commerce power as far as intrastate activity, provided it

\textsuperscript{156} In addition to controlling externalities, federal regulation may be justified if it helps achieve economies of scale. See Adler, Jurisdictional Mismatch, supra note 110, at 145-50 (arguing that federal involvement in scientific research and products regulation may provide economies of scale); see also Robert L. Glicksman, Climate Change Adaptation: A Collective Action Perspective on Federalism Considerations, 40 ENVTL. L. 1159, 1177-78 (2010) (arguing that federal authority may result in economies of scale in two areas: collection and dissemination of information and regulatory enforcement).

In addition, the environmental scholarship has long assumed that states will engage in a “race to the bottom” in the absence of federal regulation of industrial pollution. The theory is that states will adopt lax environmental regulations in an attempt to attract industry and its attendant economic benefits. Scholars have debated both the theoretical and empirical bases for this assumption. Compare Jonathan H. Adler, Interstate Competition and the Race to the Top, HARV. J.L. & PUB. POL’Y 89, 97 (2012) (arguing that the “race to the bottom” theory lacks much theoretical or empirical support”), with Scott R. Saleska & Kirsten H. Engel, “Facts are Stubborn Things”: An Empirical Reality Check in the Theoretical Debate over the Race-to-the-Bottom in State Environmental Standard-Setting, CORNELL J.L. & PUB. POL’Y 55, 60 (1998) (arguing that “in relaxing their environmental standards to attract mobile industry, a substantial minority of states engage in welfare-reducing race-to-the-bottom behavior”).
has a “substantial economic effect on interstate commerce.” What emerges is a system in which the states have concurrent powers to regulate (with few exceptions, such as the dormant Commerce Clause) until Congress chooses to preempt states’ authority pursuant to its extensive power under the Commerce Clause. Decisions, such as New York and Printz, discussed in Part I.A, impose some Tenth Amendment limits on federal authority, but only when the federal government seeks to “conscript” state and local entities into the federal bureaucracy. Consequently, federal law frequently regulates areas (such as land use, drinking water, and waste management) that are essentially local in nature, while state and local laws often regulate issues of a national (and even international) nature, such as climate change. In short, federal authority and state authority overlap to a large extent.

In the environmental context, the major federal pollution-control statutes, such as the Clean Air Act and the Clean Water Act, preserve a role for state governments in an arrangement often termed “cooperative federalism.” Under cooperative federalism, Congress charges a federal agency, often the EPA, with the task of setting national standards, but authorizes the agency to delegate implementation and enforcement authority to state agencies, subject to federal oversight. For example, the Clean Water Act requires that the EPA set standards governing discharges of pollutants into surface waters, but permits the delegation of permitting authority to state agencies. Standards are generally regulatory floors, rather than ceilings. That is, they establish a minimum level of environmental protection designed to prevent states from competing for industry by lowering their environmental standards. In theory, regulatory floors ensure a minimum level of protection, while allowing states room to decide how to implement a given program and whether local conditions warrant greater protections. The arrangement is constitutionally sound because states who do not wish to implement the federal program may opt out, leaving implementation to federal authorities. In other words, states have a choice: they may regulate according to federal law or not regulate, in which case federal law will preempt inconsistent state law. In many cases, the federal government offers states the extra incentive of federal funds if they choose to implement the federal program.

157 Wickard v. Filburn, 317 U.S. 111, 125 (extending the Commerce Clause to regulation of wheat production intended solely for on-farm consumption).
159 See id. at 1174-75.
As scholars have recognized, cooperative federalism is a descriptive, rather than a normative, theory.\textsuperscript{160} Even as a descriptive theory, it does not capture the tension that sometimes exists in the federal-state relationship; nor does it reflect the pressure, or coercion, that may motivate state “cooperation.”\textsuperscript{161} Moreover, because it is a descriptive, rather than a normative, theory, it does not justify the particular federal-state relationship it describes, and it lacks ready justification in existing accounts of federalism. Cooperative federalism does not seem to fit either formal conceptions of dual sovereignty or functional accounts of federalism. Both kinds of arguments are traditionally used to justify the allocation of power to one level or another and are ill-equipped to justify the jurisdictional overlap of cooperative federalism. Scholars in the field of environmental federalism have therefore reacted by proposing alternative models of federalism that they claim further values associated with good governance, economic efficiency, and environmental protection.\textsuperscript{162}

Proponents of the matching principle, described above, argue that economic efficiency requires the allocation of authority according to the geographic scope of the problem.\textsuperscript{163} In this view, cooperative federalism is inefficient not only because it allows the federal government to regulate local environmental problems, but also because it discourages states from regulating problems within their geographic scope.\textsuperscript{164} If the costs and benefits of regulating a particular environmental problem are contained at the local level, then efficient regulation will occur at the local level. As noted above, the matching principle fits comfortably within the traditional federalism literature because it claims to further the federalism values of economic efficiency and growth. In addition, like dualistic theories of federalism, it furthers a kind of separate-spheres ideology of the allocation of governmental authority by labeling some environmental problems as “truly local” and some “truly national”


\textsuperscript{161} See Schapiro, supra note 160, at 284-85.

\textsuperscript{162} See Adelman & Engel, supra note 111, at 1802-13 (describing the modern debate between “classical” (economic) theories and “dynamic” theories of environmental federalism and their relationship to cooperative federalism).

\textsuperscript{163} See discussion supra Part I.B.3.

\textsuperscript{164} See Adler, Jurisdictional Mismatch, supra note 110, at 169; see also Jonathan H. Adler, When Is Two a Crowd? The Impact of Federal Action on State Environmental Regulation, 31 HARV. ENVTL. L. REV. 67, 94-106 (2007).
in scope. Furthermore, although it provides a normative theory of governmental authority, like dualism, it does not capture the actual practice of overlapping governmental authority and concurrent jurisdiction.

Much of the contemporary literature in environmental federalism has therefore shifted to developing the nuances and implications of “dynamic” theories of federalism. Dynamic federalism not only recognizes overlapping and concurrent authority — it also celebrates it. Furthermore, although most scholars understand it to be consistent with traditional federalism values, dynamic federalism may further those values in different and perhaps more effective ways. Unlike cooperative federalism, the scholarship on dynamic federalism also contains a normative account of how different levels of government should interact and how conflicts should be resolved.

A. The Attributes and Values of Dynamic Federalism

Although scholars use a range of adjectives (for example, interactive, polyphonic, iterative, diagonal, adaptive) to describe dynamic federalism, they generally agree that descriptive and normative accounts of contemporary environmental federalism should share certain attributes. In his “polyphonic” conception of federalism, Robert Schapiro identifies three key attributes — plurality, dialogue, and redundancy — that serve as a useful way of organizing discussions.
regarding dynamic federalism. These characteristics further important values of both environmental protection and good governance, many of which overlap with the values associated with dualistic federalism. Because dynamic federalism sanctions fully concurrent state and federal authority, it values plurality and overlap in governmental regulation. Both levels of government may try different approaches to a particular issue; regulatory experimentation at different levels furthers the value of innovation and adaptation. This idea reflects Justice Brandeis’s classic notion of states as laboratories. Moreover, as Kirsten Engel has observed, multijurisdictional regulatory authority can be particularly useful in furthering innovation in environmental law “where the actual object of regulation — the environment — is continually changing, in response to myriad factors, including regulation itself.” In addition to changing conditions in the natural environment, the technological “tools” used to protect it are constantly changing such that “the best institutional structure is one that adapts and continually incorporates new approaches.” To illustrate this point, Adelman and Engel have likened jurisdic- tional plurality to “ecological niches in a forest . . . . Just as selection pressures . . . allow diversity to survive, the myriad horizontal and vertical interconnections between jurisdictions allow innovations to spread.”

The second attribute, dialogue, refers to the interaction between state and federal governments. Concurrent authority allows governments

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173 Schapiro, supra note 160, at 288-89.


175 See id.

176 Id. at 182.

177 Id.

178 Adelman & Engel, supra note 111, at 1820-21.

179 Schapiro, supra note 160, at 288.
to learn from each other. One government may, for example, “learn” from another government’s interpretation of a fundamental right. Schapiro notes that the Supreme Court has looked to state interpretations of the right to privacy, as well as states’ actions regarding the execution of juvenile offenders. Dialogue may also further economic efficiency via the matching principle more effectively than dualistic conceptions that allocate authority into separate spheres. A well-known example of this in the environmental context is federal regulation of vehicle emissions, which was prompted, at least in part, by state-level regulation. National standards for vehicle emissions are obviously more cost-efficient for industry than fifty state standards. Faced with disparate state regulation, industry is more likely to support federal regulation. This kind of dialogue appears to be happening again today in the context of chemicals regulation, as discussed above in Part I.B.1. For problems that are especially complex and unpredictable, dynamic federalism rejects the matching principle all together in favor of ongoing dialogue and concurrent jurisdiction. Mercury emissions, for example, create local impacts as they settle into water and are absorbed by fish and global impacts as they contribute to rising mercury levels in ocean mammals.

The final attribute, redundancy, may actually further traditional federalism values in key ways. First, overlapping authority and regulation will address more social and environmental problems than strict separation of authority. When one government fails to address a problem, the other can step in and provide a remedy. This may be particularly valuable in curbing abuses of governmental power in the

180 See id.
181 See id. at 288-89.
182 See Engel, Harnessing the Benefits, supra note 174, at 177 (arguing that regulation at one level “may be a stepping stone to regulation at the governing level that dual federalism proponents label ‘optimal’”).
183 See id. (noting the scholarship that explains federal action as a consequence of “the automobile industry’s realization that it would be cheaper to manufacture vehicles to comply with a single federal emission standard than fifty state standards”).
184 See id.
185 For the argument that states can serve as “agenda setters” for Congress, see Roderick M. Hills, Jr., Against Preemption: How Federalism Can Improve the National Legislative Process, 82 N.Y.U. L. Rev. 1, 19-27 (2007).
186 See Adelman & Engel, supra note 114, at 1814-15.
188 See Engel, Harnessing the Benefits, supra note 174, at 178-79.
189 See id.; Schapiro, supra note 160, at 289-90.
context of interest-group capture.\textsuperscript{190} As discussed above, when particular interests dominate the electoral process at one level of government, the result can be little or no regulation.\textsuperscript{191} Overlapping state-federal authority provides multiple forums for opposing interests to voice their views and restore political balance.\textsuperscript{192} By multiplying the opportunities for political engagement, redundancy also furthers the democratic values of citizen participation and representation.\textsuperscript{193}

Though the attributes of dynamic federalism theoretically further both traditional and dynamic federalism values, they also come with some costs. As Schapiro acknowledges, dynamic federalism arguably sacrifices uniformity, finality, and accountability.\textsuperscript{194} Plural regulations sacrifice uniformity and finality by leading to the litigation of preemption questions,\textsuperscript{195} although dynamic federalism scholars largely address this with the presumption against preemption discussed below. According to Schapiro, the most significant objection for purposes of federalism analysis is political accountability, that is, the ability of the citizenry to identify which level is responsible for policymaking in a given area.\textsuperscript{196}

Schapiro rightly notes that the Supreme Court has expressed this very concern, but disputes its empirical validity and practical salience.\textsuperscript{197} Scholars debate whether people actually have difficulty identifying the responsible authorities.\textsuperscript{198} And even if jurisdictional overlap did confuse people, Schapiro argues that dualistic attempts to separate state and federal authority do not cure the problem because “the overlap of actual and potential state and federal authority is too extensive.”\textsuperscript{199} Although there may have been a time when dualistic line drawing reflected regulatory reality, it fails to describe the contemporary regulatory landscape.\textsuperscript{200} Today, federal regulation increasingly extends into areas

\begin{footnotes}
\item[190] See Engel, \textit{Harnessing the Benefits}, supra note 174, at 178-79.
\item[191] See discussion supra Part I.B.1.
\item[192] See Engel, \textit{Harnessing the Benefits}, supra note 174, at 179 (arguing that jurisdictional overlap may be particularly important given the Supreme Court's interpretation of campaign finance laws under the First Amendment).
\item[193] See discussion supra Part I.B.2.
\item[194] See Schapiro, \textit{supra} note 160, at 290-94.
\item[195] See \textit{id.} at 290-91.
\item[196] \textit{id.} at 291.
\item[197] \textit{id.} at 291-92.
\item[198] \textit{id.} at 292.
\item[199] \textit{id.}
\item[200] See Percival, \textit{supra} note 158, at 1148-52 (noting that environmental regulation in the nineteenth and early twentieth centuries fell largely to local and state governments under the states' police powers).
\end{footnotes}
of historical state regulation, such as education, family law, and land use.\footnote{See Schapiro, supra note 160, at 292 (positing that the “creeping federalization of family law, education, and crime has sufficiently blurred the boundaries of traditional areas of state authority to render them of little conceptual use”); see also Patricia E. Salkin, The Quiet Revolution and Federalism: Into the Future, 45 J. MARSHALL L. REV. 253, 263-304 (2012) (providing an account of the growing federal influence on land use regulation).} Scholars of dynamic federalism argue that adherence to dualistic conceptions of federalism not only fails to capture actual practice, but also fails to further effective environmental regulation.\footnote{See, e.g., Engel, Harnessing the Benefits, supra note 174, at 183-84 (arguing that dualism’s “line drawing forces the Court into making superficial distinctions of little relevance to the issue of whether federal regulation is truly appropriate”).}

B. Dynamic Federalism and Local Authority

Although the dynamic federalism literature does not directly address federal empowerment of localities, scholars have begun recognizing the importance of local governments and entities in furthering the values of dynamic federalism.\footnote{See, e.g., J.B. RUHL ET AL., THE LAW AND POLICY OF ECOSYSTEM SERVICES 284-88 (2007) (suggesting that a tiered structure of local, regional, and state authorities is well-suited to the “nested hierarchies of watershed scales” and similarly applicable to other environmental contexts); Bradley C. Karkkainen, Collaborative Ecosystem Governance: Scale, Complexity, and Dynamism, 21 VA. ENVTL. L.J. 189, 206 (2002) (“[T]here is growing recognition that ecologically sound management must be local and/or regional in character, tailored to the ecosystem context.”); Osofsky, supra note 170 (arguing that climate change mitigation and adaptation require a range of private and public actions across all levels of government).} In doing so, scholars implicitly treat localities as separate sites of policymaking authority, rather than mere agents or subdivisions of the state. As such, local governments can contribute to the plurality, dialogue, and redundancy central to dynamic federalism. As noted above, however, these characteristics can sometimes lead to conflict or coordination problems among jurisdictions. When laws and policies collide, dynamic federalism suggests some basic principles of conflict resolution.

First, scholars of dynamic federalism have argued that courts should give force to the oft-cited, yet rarely determinative, presumption against preemption of state authority.\footnote{See, e.g., Adelman & Engel, supra note 111, at 1834 (“[T]his ‘clear-statement’ rule would permit state laws to survive a preemption challenge unless the statute contained an express preemption provision or provisions in the federal and state law conflict directly.”); Buzbee, Asymmetrical Regulation, supra note 110, at 1576 (“[A] critical but largely overlooked implication of broad federal preemption . . . is the way it displaces multilayered institutional arrangements offering different actors, venues, and modalities for addressing a social problem.”).} Even as the Rehnquist Court was
reviving notions of dualism to limit federal authority in some areas, its preemption cases largely favored federal authority. Though this result seems contradictory, broad preemption may actually follow from the imposition of a separate-spheres dual federalism. Because federal power is, in fact, so extensive, it is likely to displace state power under a dualistic ideology that requires a choice of one or the other. In contrast, dynamic federalism is premised on concurrent authority, but recognizes federal supremacy.205 The states and federal government have overlapping jurisdiction in all areas until the federal government clearly preempts state authority.206 Consequently, unless Congress expressly preempts state authority or a direct conflict exists, the dynamic model does not preempt state law.207 Scholars have therefore urged that federal law abandon the doctrine of implied preemption and limit the preemptive authority of federal agencies.208

This presumption against preemption of state law enjoys particular force in the context of federal ceiling preemption. As scholars have argued, when the federal government preempts state authority to enact more stringent standards than federal law, it stifles regulatory innovation and experimentation at the state levels. Ceiling preemption can also reflect interest group capture of the regulatory process.209 Industry is likely to favor federal ceilings on environmental standards and to use its concentrated, extensive financial resources to influence the political process.210 Because environmental interests are more diffuse and financially limited, industry may succeed in lobbying Congress for uniformly lax environmental standards.

The same power imbalances are much less likely, however, to affect the enactment of federal floors — the minimum standards characteristic of cooperative federalism. Although environmental groups are often the proponents of federal minimum standards, their influence is more than offset by opposition from industry.211 For this reason, federal minimums are more likely to reflect political compromise and fewer public choice pathologies.212 In addition, federal floors preserve state

205 See Schapiro, supra note 160, at 286-87.
206 See id.
207 See Adelman & Engel, supra note 111, at 1834.
208 See id. (arguing that abolition of implied preemption “would require interest groups seeking federal preemption to succeed unequivocally in the legislative process and thereby raise the bar for invoking preemption”).
209 Id. at 1837.
210 See id.
211 See id. at 1837-38.
212 Even if some industrial interests support federal floors, other industrial interests
and local authority both to enact more protective laws and to implement federal standards. As such, they do not completely supplant local democratic processes and participation, and they further state experimentation and innovation.213 Furthermore, because federal floors create uniform minimum standards, they arguably guard against industry influence at the state level.

This is not to say that federal preemption is never necessary. Federal uniformity will sometimes ensure economies of scale.214 For example, federal labeling requirements that preempt contrary state standards ensure that industry does not have to inefficiently produce different labels to meet various state standards. The point, however, is that in most cases, federal minimums further key federalism values. Dynamic federalism scholars therefore favor federal floors that preempt less stringent standards.215

The very same reasoning that supports federal floor preemption generally supports federal preemption of state law limiting local environmental regulations. Indeed, when a state prevents a local government from enacting more stringent regulations than state or federal law, it is engaging in a form of ceiling preemption, which dynamic federalism generally disfavors. By preempting state law limiting local power, Congress can further the same values scholars argue are furthered by floor preemption. Federal preemption can mitigate some of the effects of industry capture of the political process at the state level by ensuring local governments remain empowered to regulate. Preemption of state authority in this context also preserves local democratic processes and encourages citizen participation and voice, in addition to permitting localities to experiment with different policies and learn from each other. In some cases, of course, states have good reasons to limit local authority. As discussed above, state-level regulation can promote efficiency, for example, by limiting externalities. But in such cases, Congress should not preempt state authority, and because preemption would serve no obvious industry or federal interest, Congress is not likely to do so.

will likely oppose them, resulting in a “reasonably ‘fair fight.’” See id. at 1839.

213 See Buzbee, Asymmetrical Regulation, supra note 110, at 1587-89.

214 See Adelman & Engel, supra note 111, at 1839-40 (noting that the benefits of uniformity may sometimes justify preemption, but arguing that efficiency often do justifies an approach short of “total preemption” — namely “tempered uniformity” whereby the federal government allows one or more states to depart from uniform federal standards in order to further innovation).

215 See id. at 1837; Buzbee, Asymmetrical Regulation, supra note 110, at 1589.
III. FEDERAL EMPOWERMENT OF LOCAL AUTHORITY

As Parts I and II demonstrate, federal preemption of state laws limiting local authority can be consistent with federalism doctrine and theory. From a doctrinal perspective, dual federalism has the most force in protecting state autonomy. Part I.A concludes that federal preemption of state law limiting local authority does not necessarily interfere with state autonomy as that concept is elucidated in Supreme Court precedent; that is, it does not “commandeer” state legislative or executive authorities or conscript state officials into the federal bureaucracy. As Part I.B demonstrates, federal empowerment of local governments can also further traditional federalism values by furthering liberty, strengthening the democratic process, and encouraging efficient and effective regulation of environmental problems. Moreover, by safeguarding and promoting local regulatory authority, federal empowerment of local authority contributes to the jurisdictional overlap characteristic of dynamic federalism. In so doing, it furthers traditional federalism values in new ways.

But federal empowerment of local authority is not appropriate in all situations. As discussed above, local regulation is particularly inefficient and inappropriate when it results in externalities. Local decisions can also result in serious distributional inequities. For example, a rich environmental justice literature documents local governments' historical tendency to site locally undesirable land uses, such as hazardous waste sites, in neighborhoods with low-income and minority populations.216 Historically, local communities have also used their zoning authority to exclude multifamily and lower-income housing that would stress the tax base, and wealthier communities have vigorously defended their “right” to fund schools through local property taxes, thereby linking the quality of education to a community's wealth.217 When local control would result in social injustice, our federal system should serve to check this imbalance, rather than further it — much as

216 See generally ROBERT D. BULLARD, DUMPING IN DIXIE: RACE, CLASS AND ENVIRONMENTAL QUALITY (3d ed. 2000) (discussing the disproportionate environmental impacts on low-income and working-class communities, as well as communities of color); COMM’N FOR RACIAL JUSTICE, UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE IN THE UNITED STATES: A NATIONAL REPORT ON RACIAL AND SOCIO-ECONOMIC CHARACTERISTICS OF COMMUNITIES WITH HAZARDOUS WASTE SITES (1987) (finding that hazardous wastes were being dumped in communities of color); U.S. GEN. ACCOUNTING OFFICE, SITING OF HAZARDOUS WASTE LANDFILLS AND THEIR CORRELATION WITH RACIAL AND ECONOMIC STATUS OF SURROUNDING COMMUNITIES 83-168 (1983) (reporting that hazardous waste sites are situated closer to neighborhoods with low-income and minority populations).

217 See Briffault, supra note 55, at 18-24.
the Constitution’s Bill of Rights provides a check on majoritarian lawmaking that violates individual rights. State-level regulation is clearly necessary when inefficiencies and distributional inequities would result from purely local control. In these situations, federal preemption is not appropriate.

But when federal empowerment of local authority will not frustrate state efforts to control these inefficiencies or inequalities and when it will further at least one of federalism’s values, preemption of state law is consistent with our federal structure. When local power can further more than one of federalism’s values, the case is even stronger. The following two examples, involving local efforts to regulate concentrated animal feeding operations (“CAFOs”) and hydraulic fracturing, illustrate how federal preemption of state law limiting local authority can further federalism’s values and contribute to a dynamic system of environmental policy making.

Although the two examples are environmental in nature, they illustrate how a theory of federal-local empowerment would function in any context. Each case relies on the assumption that Congress could, if so desired, regulate directly pursuant to its Commerce Power. Indeed, the two cases highlight regulatory conditions that strongly justify federal empowerment of the local: under-regulation of environmental hazards and lack of regulation governing uncertain environmental risks. If — for whatever reason — federal environmental laws fail to regulate hazards and risks that fall under their purview, the federal government has a strong interest in furthering regulation at lower levels of government.

Each case also assumes that local governments possess the relevant regulatory authority (for example, a constitutional home rule delegation over “local affairs” or a statutory delegation of zoning authority). Federal empowerment is focused and narrow, preempting any state law that limits a local government’s authority to regulate a particular problem — here, pollution from animal feeding operations and the uncertain risks of hydraulic fracturing operations. Although a state

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218 This means that local governments must otherwise comply with state law defining this general authority. For example, courts have invalidated local zoning ordinances governing CAFOs when those governments did not first adopt comprehensive plans. See Enter. Partners v. Cnty. of Perkins, 619 N.W.2d 464, 659 (Neb. 2000); Heine Farms v. Yankton Cnty., 649 N.W.2d 597, 602 (S.D. 2002). Federal preemption of state law limiting local authority to regulate CAFOs would not cure this defect. Local governments would still need to comply with state laws specifying the general terms of their regulatory powers.

219 Empowering localities that lack broad delegations of authority from a state would raise a number of pragmatic concerns, in addition to stronger objections based on a
could theoretically abolish a local government's general regulatory authority, it is unlikely to do so because it would have to assume control over large areas of decision making traditionally left to local authority (for example, zoning).220 Lastly, although the following examples are environmental in nature, the same analysis could be used to determine whether federal empowerment of local authority is appropriate in other substantive areas.

A. Under-Regulation of Environmental Hazards: Concentrated Animal Feeding Operations

1. Local Impacts and State Preemption

A concentrated animal feeding operation confines a large number of animals in a small area. Food is brought to the animals; they do not graze or otherwise seek food on open lands. As the EPA notes, an animal feeding operation confines more than live animals; it “congregate[s] animals, feed, manure and urine, dead animals, and production operations on a small land area.”221 According to the Government Accountability Office, a large CAFO “can produce more than 1.6 million tons of manure a year — more than one and a half times the sanitary waste produced by the about 1.5 million residents of Philadelphia, Pennsylvania in 1 year.”222 Generation and disposal of such large amounts of animal waste can result in air and water pollution endangering human health and welfare, as well as the environment. Manure is often spread too liberally on land or improperly contained, causing pollutants to leach into groundwater and run off into surface water. CAFOs also emit air pollutants, such as dust, that contribute to respiratory problems.

state’s sovereign authority to create and order intrastate governmental authority.

220 This approach therefore finds the reasoning of the Court in Nixon v. Missouri Municipal League, 541 U.S. 125 (2004), unpersuasive. In that case, a majority of the Court feared a federal statute preempting specific state limitations on local authority would create irrational results because it would only empower local governments to which the state had previously delegated general regulatory authority. Id. at 136. But the number of governments with such authority is considerable today. See discussion supra Part I.A. For an excellent analysis and critique of the Court’s reasoning, see Reynolds, supra note 5, at 983-88.

221 Region 7 Concentrated Animal Feeding Operations (CAFOs), U.S. ENVTL. PROT. AGENCY (Feb. 18, 2014), http://www.epa.gov/region7/water/cafo.

Significantly, many, if not most, of these negative environmental impacts are local in nature. A number of pollutants in animal waste, including nutrients, organic matter, and pathogens, seriously degrade surface water quality and endanger aquatic ecosystems.\textsuperscript{223} According to the EPA, “between 1981 and 1999, 19 States reported 4 million fish killed from both runoff and spills at CAFOs.”\textsuperscript{224} While pollution of surface water can have interlocal and interstate effects, local communities near CAFOs suffer the most serious impacts to local water uses, such as fishing and recreation.\textsuperscript{225} For example, people can be exposed to pathogens in animal waste by swimming in polluted waters or eating contaminated shellfish.\textsuperscript{226} Moreover, pollution from animal waste can have detrimental impacts on local drinking water.\textsuperscript{227} Nitrogen, which transforms into nitrate in drinking water, poses a number of health risks, including “methemoglobinemia [a blood disorder] in infants, spontaneous abortions, and increased incidence of stomach and esophageal cancers.”\textsuperscript{228} In cases of nitrate pollution, local communities can face expensive water treatment costs because conventional water treatment does not remove nitrate.\textsuperscript{229} In addition, nutrients in surface water contribute to algae blooms that clog intakes at treatment facilities, resulting in foul tastes and odors.\textsuperscript{230}

In light of these local environmental hazards, it is hardly surprising that some local governments have passed ordinances seeking to regulate the siting and operation of CAFOs. These ordinances take various forms. Some zoning ordinances have completely restricted the siting of CAFOs\textsuperscript{231} or required that CAFO owners obtain conditional use permits, which contain protective measures. For example, the Town of Magnolia in Wisconsin granted a CAFO owner a conditional use permit that required particular nutrient-management practices, information


\textsuperscript{224} Id.

\textsuperscript{225} Id.

\textsuperscript{226} Id.

\textsuperscript{227} Id.

\textsuperscript{228} Id.

\textsuperscript{229} Id.

\textsuperscript{230} Id. Algae blooms from poultry farming, for example, resulted in taste and odor issues that cost Tulsa, Oklahoma, $100,000 annually. Id.

\textsuperscript{231} See Thompson v. Hancock Cnty., 539 N.W.2d 181, 183-84 (Iowa 1995) (holding that state statutory exemption applied to a CAFO otherwise prohibited by county zoning ordinances).
sharing, and water quality monitoring.\textsuperscript{232} In one case, a county passed a set of detailed ordinances clearly designed to protect the local community from water and air pollution.\textsuperscript{233} In addition to conditioning a construction permit on the provision of relevant information regarding waste management and runoff control, the county adopted ordinances requiring financial security (for cleanup of environmental contamination), groundwater protections from land application of waste, and confinement of toxic emissions.\textsuperscript{234} Other localities have sought to impose density and setback requirements, as well as other conditions to control odor and protect adjacent property.\textsuperscript{235}

In many of these cases, courts have held that state law preempts — either explicitly or implicitly — local ordinances regulating CAFOs. Some courts have applied statutory exemptions for agricultural uses to preempt local zoning ordinances.\textsuperscript{236} Others have held that local ordinances are preempted because they conflict with state siting laws or pollution control statutes.\textsuperscript{237} In most cases, preemption presents a difficult question, one that is open to interpretation. Indeed, decisions resulting in preemption have sometimes inspired dissenting opinions,\textsuperscript{238} and courts have resolved similar questions differently. For example, some courts have narrowly interpreted agricultural exemptions to zoning laws, characterizing CAFOs as “commercial,”

\begin{itemize}
\item \textsuperscript{232} Adams v. State Livestock Facilities Siting Review Bd., 820 N.W.2d 404, 409 (Wis. 2012).
\item \textsuperscript{233} See Goodell v. Humboldt Cnty., 575 N.W.2d 486, 489-90 (Iowa 1998).
\item \textsuperscript{234} Id. at 490.
\item \textsuperscript{235} See, e.g., Idaho Dairymen’s Ass’n, v. Gooding Cnty., 227 P.3d 907, 915 (Idaho 2010) (density requirements); Bd. of Dirs. v. Kenoma, 284 S.W.3d 672, 674 (Mo. Ct. App. 2009) (setback requirements); Craig v. Cnty. of Chatham, 565 S.E.2d 172, 174-75 (N.C. 2002) (financial responsibility, setback, and monitoring requirements).
\item \textsuperscript{236} See, e.g., Cnty. of Knox v. Highlands, LLC, 723 N.E.2d 256, 263 (Ill. 1999) (concluding that “hog confinement facilit[i]es” [fall] within the “agricultural purposes’ exemption from zoning regulation”); Kuehl v. Cass Cnty., 555 N.W.2d 686, 689 (Iowa 1996) (holding that the appellant’s hog confinement facilities were “exempt from county zoning regulations” because these were “primarily adapted for use for agricultural purposes”).
\item \textsuperscript{237} See, e.g., Commonwealth v. Locust Twp., 49 A.3d 502, 517-19 (Pa. 2012) (reasoning that conflicting state statutes preempt local regulation of odor and nutrient management plans); Adams, 820 N.W.2d at 480 (preempting a local zoning ordinance because it conflicts with state siting laws).
\item \textsuperscript{238} See, e.g., Goodell, 575 N.W.2d at 510-11 (Harris, J., dissenting in part) (arguing that some of the local ordinances at issue were consistent with state law); id. at 517 (Snell, J., dissenting) (arguing that legislature did not clearly state its intention to preempt local standards); Adams, 820 N.W.2d at 485 (Abrahamson, J., dissenting) (disagreeing with majority’s analysis that state law expressly withdrew local governments’ authority to regulate livestock facility siting).
\end{itemize}
rather than agricultural, uses. The only clear conclusion to be drawn from these cases is that this is contested terrain for state and local governments.

2. Federal Empowerment of Local Authority

CAFO regulation is a strong case for federal empowerment of local authority because it furthers the values underlying federalism. By preempting state laws that limit local governments’ authority to adopt ordinances protective of human health and the environment, federal law could help offset imbalances in power that occur when the concentrated interests of big agriculture lobby state governments for lax regulations and state agencies fail to monitor and enforce state pollution control standards. Ensuring local communities have the power to decide local land uses and to safeguard the rural landscape also furthers core democratic values by enhancing representation of local interests and encouraging citizen participation in local land use planning. Moreover, these democratic benefits do not come with distributional costs. That is, although local conditions on CAFO operations and siting may increase meat-production costs (thereby raising the price for everyone), they do not clearly lead to the environmental justice concerns present with other industrial uses. Perhaps the strongest justification is economic: the matching principle suggests that local regulation is optimal because it matches the geographic scope of the problem. As described above, pollution from CAFOs is essentially local in nature. Local standards and land use conditions designed to protect

239 See, e.g., Cnty. of Cochise v. Faria, 212 P.3d 957, 962 (Ariz. App. 2009) (holding that the legislature did not intend to include commercial feedlots in the term “general agricultural purposes”); see also Borron v. Farrenkopf, 5 S.W.3d 618, 625 (Mo. App. 1999) (holding that a town ordinance regulating CAFOs was a health, rather than zoning, ordinance and therefore not subject to the state exemption from zoning laws).


241 This kind of “externality” — the increased costs of goods resulting from enhanced environmental protection — does not indicate suboptimal regulation, but results instead from the problem of scarcity. See Butler & Macey, supra note 142, at 29-30. It is a tradeoff that follows when the polluter bears the full costs of an activity.
local resources simply ensure that CAFO owners and operators internalize the full costs of their operations.\textsuperscript{242} More stringent local regulations also further the structure and values of dynamic federalism.\textsuperscript{243} Preemption of regulatory authority at any level of government sacrifices the plurality, dialogue, and redundancy characteristic of dynamic models. Local authority to regulate CAFOs encourages innovation and experimentation at local levels, which in turn leads to both horizontal and vertical dialogue. Localities may learn from each other’s regulatory innovations. In addition, to the extent that state or federal regulation is beneficial or more efficient, local regulation can prompt concurrent regulation at higher levels. State and federal pollution-control standards can function as floors, ensuring minimum protection, but allowing local governments to adopt more stringent standards and enforcement mechanisms.\textsuperscript{244} Lastly, federal empowerment in this context is also consistent with the objectives of federal environmental law and policy. Nonpoint source pollution from agricultural runoff, including runoff from animal feeding operations, is the number one source of water pollution in surveyed lakes and rivers.\textsuperscript{245} Although Congress passed the Clean Water Act largely to address the discharge of point-source pollutants (not agricultural runoff and other nonpoint-source pollutants), the Act defines “point source” to include “concentrated animal feeding operation[s]” that discharge into navigable waters.\textsuperscript{246} CAFOs may not, therefore, discharge pollutants into surface waters without a permit under the National Pollutant Discharge Elimination System (“NPDES”).\textsuperscript{247} In order to ensure all discharges are covered by the agricultural stormwater exemption, an animal feeding operation that

\textsuperscript{242} Moreover, local governments may be in the best position to assess the tradeoffs inherent in more or less regulation of a given land use. See Hirokawa, supra note 3, at 170-71 (arguing that local governments are important sites for the consideration of tradeoffs in ecosystem investments).

\textsuperscript{243} See discussion supra Part II.

\textsuperscript{244} Local ordinances would, of course, still be subject to constitutional constraints. Local governments cannot impose “arbitrary and unreasonable” requirements with “no substantial relation to the public health, safety, morals, or general welfare.” Vill. of Euclid v. Ambler Realty Co., 272 U.S. 365, 395 (1926).

\textsuperscript{245} See U.S. ENVTL. PROT. AGENCY, PROTECTING WATER QUALITY FROM AGRICULTURAL RUNOFF 1 (Mar. 2005), http://water.epa.gov/polwaste/nps/upload/2005_4_29_nps_Ag_Runoff_Fact_Sheet.pdf.

\textsuperscript{246} Clean Water Act § 502(14), 33 U.S.C. § 1362(14) (2012). Regulations define the term “concentrated animal feeding operation.” 40 C.F.R. § 122.23(b)(2) (2013). The definition divides CAFOs into small, medium, and large generally depending on the number of animals confined. See id. § 122.23(b).

\textsuperscript{247} Clean Water Act § 301(a) (2012).
meets the regulatory definition of a CAFO must comply with the terms of a general or individual NPDES permit. These terms will incorporate technology-based effluent limitations and require the implementation of a nutrient management plan (“NMP”) that addresses nine “minimum practices” outlined in EPA regulations.248

Federal law leaves much of the permit writing and enforcement to states. The EPA has delegated NPDES permitting authority to state agencies in all but a few states.249 For many CAFOs, state permitting agencies determine the specific technology-based standards on a case-by-case basis using best professional judgment.250 This means that best management practices are often specified at the state, rather than federal, level. Permitting authorities also largely determine which aspects of a CAFO’s submitted NMP are incorporated into the permit and are free to impose additional, more stringent conditions than those required by federal regulations.251 Monitoring and enforcement are also subject to state implementation and oversight.252

Federal CAFO regulations are clearly minimal measures — limited in both stringency and jurisdictional reach.253 Like federal regulations governing other NPDES permits, the CAFO regulations are minimum standards designed as floors, rather than ceilings, leaving ample room for states to tailor permits to local conditions. This tailoring is especially

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248 Id. § 302(a) (2012). The technology-based effluent limitations and new source performance standards for CAFOs may be found at 40 C.F.R. § 412 (2013). For the nine minimum measures, see 40 C.F.R. § 122.42(e)(1).


250 For example, EPA regulations specify the best management practices for the land application of waste from some animals (cows, pigs, and poultry), but not others (horses, sheep, ducks). See 40 C.F.R. § 412.4. In addition, small and medium CAFOs are not covered by the EPA’s technology-based requirements. In the absence of federal standards, state permitting authorities must specify standards on a case-by-case basis using best professional judgment. See 40 C.F.R. § 122.44(a)(1).

251 In fact, states must set more stringent standards when necessary to meet state water quality standards. See 40 C.F.R. § 122.44(d).

252 See, e.g., 40 C.F.R. § 122.41(h)–(m) (monitoring, inspection, and record-keeping conditions for state permits). States have not committed the necessary resources to oversight and enforcement. For example, “as of 2004, the Iowa Department of Natural Resources had only 27 full-time staff to inspect, permit and oversee 3,500 CAFOs, and all the legal enforcement fell to just one attorney.” DAVID N. CASSUTO, ANIMALS & SOC’Y INST., THE CAFO HOTHOUSE: CLIMATE CHANGE, INDUSTRIAL AGRICULTURE AND THE LAW 15 (2010), available at http://www.derechoanimal.info/images/pdf/Cassuto-CAFO-Nothouse.pdf.

253 See CASSUTO, supra note 252, at 15-17 (detailing the inadequacy of federal and state laws governing CAFOs).
important in addressing agricultural discharges. Unlike typical end-of-the pipe dischargers, CAFOs often discharge into surface water indirectly by failing to store, treat, and apply animal waste in ways that prevent it from running off into water. Requirements governing waste management therefore require knowledge of local conditions (for example, geography and weather). In short, adequate regulation of CAFOs requires local knowledge and oversight. By ensuring states do not limit local authority to regulate consistent with federal standards, Congress would further the objectives of the Clean Water Act.254

B. Lack of Regulation and Uncertain Risk: Unconventional Oil and Gas Drilling

1. Local Risks and State Preemption

Drilling for oil and gas in shale formations has exploded in the last decade. In Pennsylvania, for example, the number of wells drilled in the Marcellus Shale rose from 195 in 2008 to 1,751 in 2011.255 According to the U.S. Energy Information Administration, natural gas production continued to rise in 2012 an impressive 69%, even though the number of new wells drilled declined significantly.256 This increase is partly due to improvements in the state’s infrastructure (that is, pipelines and processing). Because drilling increased so rapidly over such a short period of time, it overwhelmed the capacity of the state’s infrastructure.257 The increase in production is a result of infrastructure improvements facilitating the transport and processing of natural gas from wells already drilled.

The boom in natural gas drilling is largely a result of fairly recent innovations in drilling technologies. Energy companies now combine horizontal drilling with a technique called hydraulic fracturing, a process that involves the injection of pressurized water, sand, and chemicals thousands of feet below the surface into the shale formation to loosen the shale and release the gas.258 The fracturing of one well can

254 Federal preemption of state authority would also further the objectives of the Safe Drinking Water Act by allowing local authorities to adopt ordinances protecting groundwater and the Clean Air Act by reducing air emissions from CAFOs.


257 Id.

258 See Unconventional Extraction in the Oil and Gas Industry, U.S. ENVTL. PROT.
require millions of gallons of water.\textsuperscript{259} Toxic chemicals, such as benzene, are added to the water to dissolve minerals and kill bacteria that can plug up the well.\textsuperscript{260} The chemicals used in the fracturing process make up a small percentage (two percent or less) of the mixture, but if released into the environment, many would be harmful even in small amounts.\textsuperscript{261} In addition to the chemicals, sand is added to prop open the fractures in the rock, so the gas can flow back up the well. Some of the water used in this process, along with water from the rock formation, returns to the surface. This wastewater (called “flowback water”) contains small amounts of radioactive elements and huge amounts of salt, in addition to chemicals used in the fracturing process.\textsuperscript{262}

As this basic overview of unconventional drilling highlights, many of the potential adverse impacts to the environment are local in nature. Because it requires millions of gallons of water, the fracturing process can deplete local surface water and groundwater sources and threaten aquatic ecosystems, including wetlands, by reducing stream flow.\textsuperscript{263} Migration of fracturing chemicals and methane from the shale formation into aquifers can contaminate drinking water supplies, particularly in rural areas where people depend on well water.\textsuperscript{264} Moreover, the improper storage, transport, or disposal of flowback water can release chemicals, salt, and radioactive elements onto land where it can travel into water bodies and leach into groundwater.\textsuperscript{265}


\textsuperscript{260} See id. § 5.4.2.

\textsuperscript{261} See id. § 5.4.3.


\textsuperscript{263} See N.Y. EIS, supra note 259, § 6.1.1.

\textsuperscript{264} See id. §§ 6.1.4–.1.5.

\textsuperscript{265} See id. §§ 6.1.7–.1.9. A recent study compared water samples from natural gas drilling sites where spills had occurred with water samples from sites with little drilling and no spills. Researchers found a higher level of endocrine-disrupting chemicals at the drilling sites, suggesting that current drilling practices could increase local risks of “reproductive, metabolic, neurological and other diseases, especially in children.” Fracking May Increase Health Risks, Scientists Warn, GUARDIAN (Dec. 17, 2013),
Flowback water that is not recycled is typically disposed of in underground injection wells or released in local water treatment plants, many of which are unable to properly treat the water. Well construction also results in emissions of volatile organic compounds and methane. Construction and operation require the trucking in of water, chemicals, and other materials, increasing air pollution, noise, and traffic and significantly changing rural landscapes in many cases.

Some of these impacts are easier to predict than others. Although environmental impacts vary from one location to the next, regulators can theoretically anticipate and measure some impacts with a fair amount of certainty. For example, with adequate information from industry, regulators may be able to assess impacts caused by the use of local water to fracture wells and the ability of water treatment plants to handle flowback water. Risks to drinking water are, however, less certain. Some studies suggest that chemicals from fracturing fluids, as well as methane released from the shale formations, can migrate into overlying aquifers and contaminate drinking water. In 2011, the EPA released a draft report concluding that fracturing chemicals, such as benzene, were present in groundwater in Pavillion, Wyoming. In addition, a 2013 peer-reviewed study found a significant correlation between proximity to natural gas wells and contamination of drinking water with methane and other pollutants in a region of Pennsylvania.

http://www.theguardian.com/environment/2013/dec/17/fracking-increase-health-risks-hormone (quoting Dr. Susan Nagel, one of the study’s authors) (internal quotation marks omitted).


268 See N.Y. EIS, supra note 259, §§ 6.9–.12 (detailing visual, noise, transportation, and “community character impacts”).


Industry and some state and federal lawmakers have strongly criticized these and other such studies, raising questions about the methodologies and conclusions. In addition, other studies have demonstrated no correlation between water contamination and natural gas drilling.\footnote{See No Signs of Fracking Fluid Leaking in Pa., DOE Says, \textit{ENERGYWIRE} (July 22, 2013).}

Moreover, even if an uncontested case were to link water contamination to fracturing, uncertainty would still surround the pathways of contamination. Done properly, this kind of drilling may pose little risk. It may be that improper drilling methods, such as failed well casings, may result in the release of fracturing fluids. Or, abandoned wells at depths below gas wells may facilitate the migration of methane from horizontal gas wells to wells supplying drinking water.\footnote{See Ian Urbina, \textit{A Tainted Water Well, and Concern There May Be More}, \textit{N.Y. TIMES} (Aug. 3, 2011), http://www.nytimes.com/2011/08/04/us/04natgas.html.}

The bottom line is that the risks are uncertain. Some of this uncertainty is due to the sudden and rapid increase in fracturing horizontal wells. As the Pennsylvania example illustrates, state infrastructure and regulation must adapt to new practices and simply cannot do so overnight.\footnote{Pennsylvania state regulation, monitoring, and enforcement are clearly struggling to catch up with drilling practices. See Laura Legere, \textit{Sunday Times Review of DEP [Pennsylvania Department of Environmental Protection] Drilling Records Reveals Water Damage, Murky Testing Methods}, \textit{SCRANTON TIMES-TRIB.}, (May 19, 2013), http://thetimes-tribune.com/news/sunday-times-review-of-dep-drilling-records-reveals-water-damage-murky-testing-methods-1.1491547.} Impacts to water supplies and local water treatment facilities must be assessed. Effects on transportation and pipeline infrastructures must be analyzed. Emissions of air pollutants must be measured and addressed. Once the impacts are clear, a regulatory structure can be put into place. Some uncertainties, namely those involving risks to drinking water, may take more time to resolve. In fact, because the risks vary with local geology and drilling practices, scientific studies may never fully resolve the uncertainty — at least not in every case.

It is the uncertainty surrounding unconventional drilling that has motivated a growing number of local communities to ban hydraulic fracturing, a response that drilling proponents have argued is preempted by state laws. Not surprisingly, the results of state-level preemption litigation are varied. This past year, appellate courts in New
York and Pennsylvania rejected challenges to local bans. In June 2014, New York's highest court upheld two town ordinances banning oil and natural gas drilling. The court held that when the state legislature preempted local authority “relating to the regulation of the oil, gas and solution mining industries,” it did not clearly intend to preempt local authority “to pass zoning laws that exclude oil, gas and hydrofracking activities in order to preserve the existing character of [local] communities.” Last December, the Pennsylvania Supreme Court invalidated on state constitutional grounds several provisions of a state law designed to preempt local regulation of oil and gas and allow drilling in all zoning districts. Courts in other states, such as West Virginia and Ohio, have reached the opposite result, invalidating local regulations as preempted under state law, and litigation in some states, such as Colorado, is ongoing.

The preemption battles are not likely to stop soon. Over one hundred local governments and one state (Vermont) have enacted bans or restrictions on hydraulic fracturing. Citizens in California, a state with

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275 N.Y. ENVTL. CONSERV. LAW § 23-0303(2) (McKinney 2014).
277 58 PA. CONS. STAT. ANN. § 3303 (West 2014).
278 Robinson Twp. v. Commonwealth, 83 A.3d 901, 913 (Pa. 2013). Although a majority of the court held these provisions unconstitutional, the justices did not agree on the basis for the decision. Three justices held that several provisions violate the state constitution’s Environmental Rights Amendment, which places obligations on the state as trustee of Pennsylvania’s natural resources. Id. at 985. A fourth justice concurred in the result, but reasoned that the provisions were violations of property owners’ substantive due process rights under the state constitution. Id. at 1008. The lower court had similarly held the statutory zoning requirement unconstitutional on substantive due process grounds. Robinson Twp. v. Commonwealth, 52 A.3d 463, 484 (Pa. Commw. Ct. 2012), aff’d in part and rev’d in part, 83 A.3d 901.
282 For links to local bans and restrictions, see Local Actions Against Fracking, FOOD & WATER WATCH, https://www.foodandwaterwatch.org/water/fracking/fracking-action-center/local-action-documents (last visited Oct. 10, 2014) [hereinafter Local Actions]. During the recent November elections, voters in four communities (two in California, one
the largest oil shale formation, are deeply divided over whether the state should allow the practice. Some local governments have passed resolutions calling for a statewide moratorium. Illinois municipalities have similarly objected to the state's recent efforts to regulate hydraulic fracturing, expressing concerns that state regulations are too lax and the risks too uncertain. As these states open the door to drilling, more localities will consider bans and other restrictions, which will inevitably lead to more litigation and uncertainty regarding local governmental authority. Even when a court upholds local regulation, the decision is not likely to settle the issue of local authority. A court decision holding that state law does not preempt local zoning authority can prompt legislative amendments expressly preempting that authority, which can then be challenged on constitutional grounds and lead to further litigation and legislative action. In many cases, local communities will incur the costs of litigation and legal uncertainty for an indefinite period of time.

2. Federal Empowerment of Local Authority

Until the uncertain risks of unconventional drilling can be properly studied and regulators at the state and federal levels can evaluate the environmental impacts of drilling, local governments should be able to use their land use authority to regulate whether and where drilling can take place. Federal law should preempt state law that limits localities' zoning authority over oil and natural gas drilling (when those localities are vested with general zoning authority under state law). In this context, preservation of the traditional power to regulate land use for the protection of local health and welfare furthers federalism values and the objectives of federal environmental law.

Similar to the CAFO example, local ordinances banning or limiting drilling can provide a check on rent-seeking behavior by industry at the state and federal levels. Rather than allowing drilling while


284 See Local Actions, supra note 282.

285 Kari Lydersen, Rural County to Take Illinois Fracking Debate to the Ballot Box, MIDWEST ENERGY NEWS (Jan. 16, 2014), http://www.midwestenergynews.com/2014/01/16/rural-county-to-take-illinois-fracking-debate-to-the-ballot-box.
policymakers study the environmental risks and adopt a regulatory structure, a local community empowered by federal law can insist on a precautionary approach. Local opposition therefore serves to offset interest-group capture at the state and federal levels. Local authority in this context also strengthens local democratic values, allowing citizens a venue to voice their opposition and to participate in shaping their local communities and landscapes. Furthering these interests does not, moreover, result in social inequities because the siting of oil and natural gas wells depends on the location of oil and gas reserves and the profitability of extracting these resources at the location.286

This is not to say that oil and gas extraction is not a vital component of our national energy policy. It is. It is also an important part of state economies. For example, in Pennsylvania, natural gas drilling in 2008 generated an estimated “$2.3 billion in total value, added more than 29,000 jobs, and $240 million in state and local taxes.”287 In fact, the matching principle suggests that state or regional regulation of oil and natural gas drilling may be preferable to local regulation in cases where it most closely matches the geographic scope of the activity.288 Shale formations with natural gas, like the Marcellus Shale, underlie more than one local community, as does the supporting infrastructure (namely, pipelines). In addition, administration and enforcement of oil and gas regulations at the state level can result in economies of scale. States clearly have a strong interest in regulating natural resources within their jurisdictions to the benefit of the state-wide economy. If these more diffuse benefits outweigh the local costs, local bans on fracturing could theoretically result in suboptimal overregulation.289

The economic justification for federal empowerment of local authority is therefore strongest as long as the risks of unconventional drilling remain uncertain. Because adverse impacts, particularly to drinking water, are local in nature, state preemption of local authority forces localities to bear the uncertain environmental risks. Until the risks and impacts of drilling can be adequately assessed, regulators cannot engage in the cost-benefit analysis at the heart of the matching

287 N.Y. EIS, supra note 259, § 2.2 (citing a Penn State University study).
288 See Spence, supra note 286, at 493.
289 See id. at 496-97. A discussion of the optimal balance between state and federal regulation of unconventional drilling is beyond the scope of this article. For the argument that states are the optimal sites of regulation, see id. at 493-95. For an argument that federal regulation is appropriate, see Michael Burger, *The (Re)federalization of Fracking Regulation*, 2013 MICH. ST. L. REV. 1483.
principle. The objective of environmental regulation from an economic (or welfarist) perspective is to force industry to bear the costs of drilling — to internalize “externalities.” The uncertain costs of drilling obviously complicate this analysis and suggest that precaution is prudent. The moratoria on unconventional natural gas drilling by New York State and the Delaware River Basin Commission are examples of such a precautionary approach. But given economic pressures, states may move forward before scientific studies can characterize the risks and an adequate regulatory structure is in place. In these cases, federal preemption of state law can empower localities to protect themselves from uncertain costs.

Federal empowerment of local zoning authority over drilling is also consistent with the dynamic model of federalism. In particular, local restrictions on unconventional drilling may encourage dialogue between localities and state and federal regulators. Just as local toxics laws may prompt national legislative action, local zoning restrictions can lead to political compromise at higher levels of government, increasing the likelihood that industry will support more stringent governmental oversight and regulators will allocate the necessary resources to monitor and enforce regulations.

Lastly, local authority in this context will help further the objectives of federal environmental law and policy. As scholars have argued, federal environmental statutes apply structurally and substantively to the potential adverse effects of oil and natural gas drilling. The

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291 See discussion supra Part II.

292 See discussion supra Part I.B.1 (arguing that the growing number of toxic laws at the local level may convince the chemical industry to support federal legislation).

293 See, e.g., Michael Burger, Fracking and Federalism Choice, 161 U. PA. L. REV. ONLINE 150, 154, 163 (2013) (arguing that hydraulic fracturing “fit[s] squarely within the competencies” of federal environmental statutes and the justifications for its exemption are “outdated, unjustified, or both”); Nolon & Gavin, supra note 280, at 1000 (noting that “[s]everal federal statutes apply, either directly or theoretically, to hydraulic fracturing,” but federal law in this area “is rife with ambiguity and is in a state
current lack of federal regulation is a result of interest-group politics, not inadequate regulatory structures or authority. Due to industry lobbying, federal laws exempt oil and gas drilling from a number of requirements.\textsuperscript{294} For example, the injection of fracturing fluids into the ground is exempt from the Safe Drinking Water Act’s underground injection control program unless the fluid contains diesel fuel.\textsuperscript{295} Oil and gas wastes are also exempt from the requirements governing the generation, transport, and disposal of hazardous waste under the Resource Conservation and Recovery Act,\textsuperscript{296} and natural gas and natural gas liquids are excluded from provisions of the Comprehensive Environmental Response, Compensation, and Liability Act.\textsuperscript{297} By encouraging the kind of dynamic dialogue described above, local restrictions on drilling may offset some of the imbalances in political influence at the federal level and lead Congress to question some of these exemptions.

Local restrictions can also facilitate the federal rulemaking process in areas where the EPA has authority to regulate. The EPA has only recently begun using the authority it does have under environmental statutes to regulate both direct and indirect discharges of flowback water under the Clean Water Act\textsuperscript{298} and the emissions of air pollutants, including volatile organic compounds, toxics, and methane, from well sites under the Clean Air Act.\textsuperscript{299} In addition, in 2011, the EPA began a national study of the effects of hydraulic fracturing on drinking water, but has thus far only released a progress report.\textsuperscript{300} Industry is more likely to support these federal regulatory efforts if more federal oversight results in less local opposition or if Congress promises to lift

\textsuperscript{294} For an excellent overview of the exemptions noted in the next, as well as others, see Nolon & Gavin, supra note 280, at 1000-13.

\textsuperscript{295} 42 U.S.C. § 300h(d)(1)(B) (2012). This exemption, which Congress passed as part of the Energy Policy Act of 2005, is often referred to as the “Halliburton Loophole” because it passed as a result of intense lobbying by the energy industry. See Nolon & Gavin, supra note 280, at 1003-04.

\textsuperscript{296} 42 U.S.C. § 6921(b)(2) (2012).

\textsuperscript{297} Id. § 9601(14) (2012).

\textsuperscript{298} More specifically, the EPA is developing a proposed rule that would revise the Effluent Limitation Guidelines applicable to unconventional natural gas drilling. See Unconventional Extraction in the Oil and Gas Industry, supra note 258.


federal preemption of state law once the risks are more certain and adequate state and federal regulations are in place.

CONCLUSION

Contemporary local governments have considerable regulatory authority — both in legal and in practical terms. Given their extensive authority, they are likely to confront state opposition from time to time. In some of these cases, the federal government is also likely to have an interest in supporting local authority. To conclude that Congress is powerless because local power is simply a matter of state sovereignty is to ignore precedent and practice that suggest otherwise. In many cases, federal support for local power furthers the democratic and economic values traditionally associated with federalism. Similarly, federal support of local authority often furthers the values of dynamic federalism, particularly when federal power preempts state laws that would otherwise limit more stringent local protections for human health and the environment. Furthermore, although legal precedents grounded in formal dualistic conceptions of federalism focus on drawing lines between state and federal authority, they do not necessarily preclude federal-local partnerships.

Local governments are playing a critical role in solving environmental problems. Unless federalism theory recognizes this reality, courts and legislatures will struggle to reconcile regulatory practices with theoretical accounts of how regulatory power is allocated across levels of government. Instead of avoiding questions of local identity in the name of federalism, this Article recommends that courts, legislatures, and commentators look to federalism doctrine and theory to create concepts of local identity and authority consistent with the values that underlie our constitutional system of government.

To this end, the framework offered in Part III justifies federal empowerment of local authority when it furthers one or more of these values (namely liberty, democratic participation, and economic efficiency) without undermining any one of them. As local efforts to regulate CAFOs and unconventional drilling illustrate, federal empowerment of local authority is often strongly justified when serious environmental hazards are under-regulated and when uncertain environmental risks are not regulated at all. In these cases, when federal empowerment of local authority is grounded in federalism values, it can further the objectives of good governance and help solve local environmental problems.