

# BANNING LAWNS

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## ABSTRACT

*Recognizing their role in sustainability efforts, many local governments are enacting climate change plans, mandatory green building ordinances, and sustainable procurement policies. But thus far, local governments have largely ignored one of the most pervasive threats to sustainability—lawns. This Article examines the trend toward sustainability mandates by considering the implications of a ban on lawns, the single largest irrigated crop in the United States.*

*Green yards are deeply seated in the American ethos of the sanctity of the single-family home. However, this psychological attachment to lawns results in significant environmental harms: conventional turfgrass is a non-native monocrop that contributes to a loss of biodiversity and typically requires vast amounts of water, pesticides, and gas-powered mowing.*

*In this Article, I consider municipal authority to ban or substantially limit pre-existing lawns and mandate their replacement with native plantings or productive fruit- or vegetable-bearing plants. Although this proposal would no doubt prove politically contentious, local governments—especially those in drought-prone areas—might be forced to consider such a mandate in the future. Furthering this practical reality, I address the legitimate zoning, police power, and nuisance rationales for the passage of lawn bans, as well as the likely challenges they would face. I also consider more nuanced regulatory approaches that a municipality could use to limit lawns and their attendant environmental harms, including norm change, market-based mechanisms such as progressive block pricing for water, and incentivizing the removal of lawns.*

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## INTRODUCTION

“Mowing the lawn . . . is a civic responsibility.”<sup>1</sup>  
 “[T]he sign of a good citizen is a dead lawn.”<sup>2</sup>

Much of the U.S. is in the midst of the worst drought in 50 years.<sup>3</sup> At the same time, lawns, which front many suburban American homes,<sup>4</sup> are the largest irrigated crop in the country, occupying approximately three times more space than corn<sup>5</sup> and twice as much as cotton.<sup>6</sup> As cities and towns confront water shortages and other concerns associated with climate change, many are beginning to adopt sustainability plans and ordinances that impose environmentally-beneficial measures upon citizens and corporations—for example, mandatory green building ordinances, recycling requirements, plastic bag bans, and limits on what can be burned. As climate change adaptation measures become more common, it is likely that more municipalities will pass ordinances that aim to control individual actions that have a cumulatively significant impact on the environment.<sup>7</sup> At the same time, existing regulation across much of the United States actively encourages and arguably requires maintenance of lawns.

In this Article, I consider how municipalities can use the law to reduce lawns and their harms. Specifically, I examine the case for municipal lawn bans or similar ordinances or measures that would curtail the prominence or incentivize the demise of lawns. Because lawns are so prevalent and use such a large percentage of potable municipal water,<sup>8</sup> yet offer limited benefits, they are a

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<sup>1</sup> Michael Pollan, *Why Mow? The Case Against Lawns*, N.Y. TIMES MAGAZINE, May 28, 1989.

<sup>2</sup> Robert Smaus, *There Oughta Be a Lawn: While Some Have Switched to Gravel and Ground Covers, Others Can Make a Pretty Good Case for Grass*, L.A. TIMES, July 22, 1990 (statement of an unnamed federal water officer in Northern California).

<sup>3</sup> Editorial, *Drought and the Farm Bills*, N.Y. TIMES, July 24, 2012, at A24.

<sup>4</sup> FRED E. H. SCHROEDER, *FRONT YARD AMERICA: THE EVOLUTION AND MEANINGS OF A VERNACULAR DOMESTIC LANDSCAPE* 2 (1993).

<sup>5</sup> Rebecca Lindsey, *Looking for Lawns*, Nov. 8, 2005, NASA EARTH OBSERVATORY (NOV. 8, 2005), <http://earthobservatory.nasa.gov/Features/Lawn/> (quoting Cristina Milesi) (stating that lawns “could be considered the single largest irrigated crop in America in terms of surface area, covering about 128,000 square kilometers in all”).

<sup>6</sup> TED STEINBERG, *AMERICAN GREEN: THE OBSESSIVE QUEST FOR THE PERFECT LAWN* 4 (2006) (“[T]he lawn is one of America’s leading ‘crops,’ amounting to at least twice the acreage planted in cotton. It is estimated that there are roughly twenty-five to forty million acres of turf in the United States.”). This estimate includes lawns, athletic fields and golf courses. *Id.*

<sup>7</sup> Katrina Fischer Kuh, *When Government Intrudes: Regulating Individual Behaviors that Harm the Environment*, 61 DUKE L.J. 1111, 1112 (2012) (terming these actions “environmentally significant individual behaviors”).

<sup>8</sup> Bret Rappaport, *As Natural Landscaping Takes Root We Must Weed out the Bad Laws – How Natural Landscaping and Leopold’s Land Ethic Collide with Unenlightened Weed Laws and What Must be Done About It*, 26 J. MARSHALL L. REV. 865, 898 n. 114 (1993) (asserting that “[t]ypical suburban lawns are water wasters,” with lawns in Western cities using up to sixty percent of municipal water supplies and lawns in the East consuming up to thirty percent). *See*

logical point of attack for future sustainability ordinances. This is not far-fetched: a small number of southwestern localities have begun to prohibit or limit new turf installation;<sup>9</sup> others have incentivized the removal of existing lawns,<sup>10</sup> and watering and fertilizer limitations are fairly widespread.<sup>11</sup> However, to date there has been little scholarly discussion of limits on lawns.<sup>12</sup>

Part I of this Article provides a brief history of the lawn and discusses the reasons for its predominance in the United States. Lawns are prevalent, in part, because existing laws encourage their growth, but also because many Americans share a deep-seated psychological attachment to them. This commitment is rooted in some articulable benefits of lawns, including: a unifying aesthetic; their contribution to social capital as a place for children to play and for neighbors to

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*also* Smaus, *supra* note 2 (“California’s estimated 1.38 million acres of lawn are thought to use the bulk of the water applied to the landscape. Studies done by the North Marin County Water District indicate that, at least in that region, lawns soak up about 90% of all water used outdoors in suburban areas.”).

<sup>9</sup> See, e.g., SCOTTSDALE, ARIZ., CODE ch. 49, art. VII, div. 1, § 247 (2005) (limiting new model home landscaping by prohibiting new turf installation in front yards and limiting new turf installation to 10% of lots less than 9,000 square feet and to 5% of the remainder of larger lots up to 1 acre); TUCSON, ARIZ., LAND USE CODE ch. 23 art. 3, div. 7, § 2.2 (1995) (limiting new turf installation by multifamily residential developments to 5% of the site, 100 square feet, or 8% of the required open space, whichever is greater); LAS VEGAS, NEV., CODE ch. 14.11 § 150 (2009) (prohibiting new turf installation in residential front yards and limiting new turf installation in rear and side yards to the greater of 50% of gross area or 100 square feet).

<sup>10</sup> See, e.g., SCOTTSDALE, ARIZ., CODE ch. 49, art. VII, div. 1, § 243 (2005) (providing single-family residential customers up to \$1,500 in rebates and commercial and multifamily customers up to \$3,000 in rebates for removing existing turf and replanting with low-water-use landscaping); *Rebate Programs*, CHANDLER, ARIZ., <http://www.chandleraz.gov/default.aspx?pageid=746> (last visited Jan. 2, 2013) (rebating residents \$1.50 per square foot for removing at least 1,000 square feet of turf and replacing it with at least 50% non-grass plants); *Landscape Rebates - Existing Home Conversions*, GLENDALE, ARIZ., <http://www.glendaleaz.com/waterconservation/landscaperebates.cfm> (last visited Jan. 2, 2013) (rebating owners of existing homes \$150-\$750 for removing 500 or more square feet of grass and converting to low-water-use landscape).

<sup>11</sup> See, e.g., DOTHAN, ALA., CODE ch. 102, art. III, §165 (2007) (restricting the watering of lawns and gardens by Dothan Utilities customers on an “odd-even” basis to three days per week from April 1 to October 1 each year); CITY OF GLENDALE: DROUGHT MANAGEMENT PLAN (2004), available at [http://www.glendaleaz.com/-waterconservation/documents/DMP\\_200604.pdf](http://www.glendaleaz.com/-waterconservation/documents/DMP_200604.pdf) (allowing turf watering during a “stage 1 drought watch” only between the hours of 9pm and 6am; during a “stage 2 drought alert,” restricting watering by city facilities to every other day on an odd-even basis; during a “stage 3 drought,” imposing a drought surcharge on water use above a base level and applying the odd-even restriction to residential, commercial, and industrial water users; during a “stage 4 drought emergency,” prohibiting turf watering altogether); TUCSON, ARIZ., CODE ch. 27, § 95 (1995) (prohibiting all outdoor irrigation during a “water emergency,” except with reclaimed water); GARDEN GROVE, CAL., MUNICIPAL CODE § 14.40.025 (2012) (prohibiting the watering of lawns between 10am and 6pm and limiting watering that is not continuously attended to no more than 15 minutes per day per station).

<sup>12</sup> The existing scholarship focuses primarily on the need for norm change and the allowance of native plants, largely ignoring the idea of a lawn ban. See generally, Asmara M. Tekle, *Lawns and the New Watershed Law*, 95 MARQ. L. REV. 213 (2011) (arguing that changes in norms surrounding lawn ownership are necessary to protect waterways, and generally dismissing the role of bans); Rappaport, *supra* note 8, at 865 (discussing the need to overturn laws that prohibit natural landscaping).

gather; their impact on property values due to settled expectations and the status quo; and their role in the norms and ethos of suburban living.

Part I next recognizes that, although lawns offer some benefits, these benefits appear to be outweighed by the substantial number of harms that lawns create. The harms caused by lawns include: extreme water use in a time of water shortages; emissions tied to gas-powered lawn mowers and leaf blowers; pollution and runoff from petro-chemical-based fertilizers; fire hazards in dry climates; and propagation of monocultures and the loss of biodiversity. This Part situates lawn ownership and its harms within the literature addressing “environmentally significant individual behaviors.”<sup>13</sup> When examined cumulatively, such individual behaviors may warrant prohibition. Finally, the Part presents alternatives to lawns, including xeriscaping,<sup>14</sup> native plantings, productive plants such as vegetables and fruits, and environmentally sound synthetic lawns.

Part II outlines high-level regulatory techniques that might be applied to target and correct the harms associated with lawns, including norm change, market-based mechanisms and incentives, architecture, and law. Lawn norms are extremely entrenched, and are generally defined by a green, closely mowed expanse; many still view front-yard vegetable gardens and xeriscaping with skepticism.<sup>15</sup> And yet, a small number of communities have begun to incentivize the removal of existing lawns or the planting of landscapes that require less water.<sup>16</sup> After detailing the difficulties of regulating through norms, markets, and architecture, this Part argues that some local governments might consider legal mandates as a potentially powerful additional regulatory option, especially in the face of increasingly extreme climate conditions. Although a large-scale movement to ban lawns may currently be politically unlikely in many parts of the country,<sup>17</sup>

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<sup>13</sup> Kuh, *supra* note 7. The scale at which a locality considers cumulative lawn harms could be tied to the local watershed or the region.

<sup>14</sup> Xeriscaping involves using a dry or rocky desert landscape, or more generally a landscape native to the surrounding area.

<sup>15</sup> Pollan, *supra* note 1. See also Mark Bittman, *Lawns Into Gardens*, N.Y. TIMES (Jan. 29, 2013), <http://opinionator.blogs.nytimes.com/2013/01/29/lawns-into-gardens/>; Tekle, *supra* note 12, at 219.

<sup>16</sup> See e.g., SCOTTSDALE, ARIZ., *supra* note 10; SAN ANTONIO WATER SYSTEM, <http://www.saws.org/Conservation/-Outdoor/LandscapeRebate/> (last visited Feb. 4, 2013) (rebating customers up to \$400 if no more than fifty percent of their landscape is planted in turf, their shrubs and flowers are selected from an approved list, they plant shade trees, and no more than five percent of their landscape is annuals or unapproved plants).

<sup>17</sup> Many city council members would not vote in favor of an ordinance that impinges on personal freedoms or goes against the preferences of a majority of homeowners (which a lawn ban might do). See WILLIAM A. FISCHER, *THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND USE POLICIES* 6-7 (2001) (arguing that land use decisions tend to accommodate the interests of homeowners). Further, even if such a ban were adopted, it is likely that it would be unpopular and thus repealed (and that those who passed it would be voted out of office). See Kuh, *supra* note 7, at 1120 n. 21. Mandates on individual behaviors or private property are often opposed based on the view that they are too intrusive, or that they impinge too greatly on private property rights. Hope M. Babcock, *Global Climate Change: A Civic Republican Moment for Achieving Broader Changes in Environmental Behavior*, 26 PACE ENVTL. L. REV. 1, 5-6 (2009) [hereinafter Babcock, *Climate Change*] (arguing that mandates are likely to “trigger enormous political resistance because of the[ir] interference with individual liberty and invasion of privacy”).

such bans might be desirable or even necessary in the future as the effects of climate change—including water shortages—become more common.

Because prospective lawn bans are a very recent development and no local government has yet passed a retroactive ban,<sup>18</sup> they have not yet been discussed substantially in the literature. Therefore, Part III considers the contours of a potential mandate against lawns. It begins with a discussion of the sources of municipal authority to regulate lawns: the police power, regulating in furtherance of the public health, safety, and welfare of the community;<sup>19</sup> the zoning power, pursuant to enabling legislation;<sup>20</sup> and the ability to regulate nuisances.<sup>21</sup> It also addresses the probable defeat of any takings challenge to a lawn ban.

It then turns to the structure of a potential ban on lawns, discussing the timing of ordinance imposition and whether the ordinance would outlaw all turfgrass or just front yards. A municipality could impose a lawn ban at three different time periods, making it applicable: to all new construction; upon the sale, rental, or substantial modification of a given property; or retroactively, after a set amortization period. The case for applying such a ban to new construction is fairly straightforward and would face few legal challenges. However, a retroactive ban—even after an amortization period—would be viewed more skeptically. Moreover, if lawns are considered an existing use they might be afforded substantial protection from changes in zoning laws pursuant to vested rights or theories of estoppel. Finally, the Part briefly addresses the ability of a municipality to affirmatively require not only the removal of lawns but also their replacement with alternatives that the locality deems more environmentally friendly or suitable.

The Article concludes by recognizing that many people would dislike the idea of “banning lawns.” At least upon first impression, they may think it sounds like an unlikely, untenable, and possibly impermissible use of the police power. However, the Article will demonstrate that it is in fact well within a municipality’s police power to reduce or eliminate lawns, even by retroactively banning them. Moreover, these regulatory techniques are likely to become more common as climate conditions worsen and water becomes increasingly scarce. Thus, what might at first seem like an implausible proposal may be more likely than most would suspect.

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<sup>18</sup> By a retroactive ban, I mean one that would require people to tear up their existing lawns.

<sup>19</sup> Most states delegate general powers relating to the administration of local affairs, including the police powers, to their municipal corporations through a home rule act or provision in their constitution. YOKLEY, MUNICIPAL CORPORATIONS § 57 (1956); See also Richard Briffault, *Our Localism: Part I – The Structure of Local Government Law*, 90 Colum L. Rev. 1, 10-11 (1990).

<sup>20</sup> See Catherine J. LaCroix, *SEPA, Climate Change, and Corporate Responsibility: The Contribution of Local Government*, 58 CASE W. RES. L. REV. 1289, 1295 (2008) (“[L]ocal governments have land use regulatory power and power to adopt local environmental regulations, both through state legislation authorizing zoning, comprehensive planning, or other regulation, and through home rule power.”).

<sup>21</sup> “The guiding principle of [nuisance law] is an ancient maxim: *Sic utere tuo ut alienum non laedas*, meaning that one should use one’s own property in such a way as not to injure the property of another.” DUKEMINIER ET AL., PROPERTY 731 (7th ed. 2010).

## I. LAWNS

## A. History

Most suburban neighborhoods in the United States have a few common aesthetic qualities. One of these qualities is that most homes are fronted by an expanse of green, non-native turfgrass.<sup>22</sup> Although it is now hard to imagine neighborhoods without lawns, prior to the Civil War turf cultivation was a very uncommon use of property.<sup>23</sup> Rather, it was common to see houses fronted with productive vegetable gardens or native vegetation mixed with dirt.<sup>24</sup>

Some commentators suggest that the creation and maintenance of lawns stems from the human desire to dominate and impose order over nature.<sup>25</sup> The same could be said of landscape architecture generally.<sup>26</sup> “If any individual can be said to have invented the American lawn, it is Frederick Law Olmsted,” the famous landscape architect who designed Central Park in New York City, along with other well-known public and private outdoor spaces.<sup>27</sup> The aesthetic has its roots in the English manor, where the lord of the estate maintained a neat, green expanse by employing a “band of scythe wielding servants” or a shepherd and his flock; this suggests built-in class significance to the lawn as well.<sup>28</sup> In classic English literature, the lawn seems representative of order—a place where man has established his control over nature—while the wilderness outside the manor is untamed—a place where improper things may happen.<sup>29</sup> The American lawn is a “democratized” form of the aristocratic manor lawn, which was more of a

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<sup>22</sup> Lindsey, *supra* note 5. See also *Blades of Glory: America's Love Affair with Lawns*, THE WEEK (June 24, 2011), <http://theweek.com/article/index/216592/blades-of-glory-americas-love-affair-with-lawns> (estimating that 80 percent of homes in the U.S. have lawns).

<sup>23</sup> STEINBERG, *supra* note 6, at 11 (“Before [the Civil War], most people in towns and cities either maintained small fenced-in vegetable gardens or simply left the area alone, allowing it to revert to dirt interspersed with whatever vegetation flourished.”). See also SCHROEDER, *supra* note 4, at 5 (noting that before the Civil War, the grass-covered generic front yard did not exist; it became common only after 1900).

<sup>24</sup> STEINBERG, *supra* note 6, at 11.

<sup>25</sup> Pollan, *supra* note 1 (discussing the difference between lawns and forests, and noting that “the urge to dominate nature is a deeply human one, and lawn mowing answers to it”). Andrew Jackson Downing, author of the first landscape-gardening book aimed at an American audience, believed that an expanse of “grass mown into a softness like velvet” was an essential component of any perfect garden. Elizabeth Kolbert, *Turf War*, THE NEW YORKER (July 21, 2008), [http://www.newyorker.com/arts/critics/books/2008/07/21/080721crbo\\_books\\_kolbert-#ixzz29ygKShOD](http://www.newyorker.com/arts/critics/books/2008/07/21/080721crbo_books_kolbert-#ixzz29ygKShOD).

<sup>26</sup> See, e.g., Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1556 (1993) (“In a civilized society, human beings create the reality around them. Our direct surroundings are buildings and landscape architecture.”).

<sup>27</sup> Pollan, *supra* note 1.

<sup>28</sup> Kolbert, *supra* note 25.

<sup>29</sup> See, e.g., JANE AUSTEN, MANSFIELD PARK 92 (Everyman’s Library, 1992) (describing the grounds beyond the manicured lawn as a “wilderness”); *id.* at 102 (a scene in which young Miss Bertram becomes impatient waiting for her fiancé and squeezes in between a locked gate and a sharp hedge to go for a solitary stroll with Mr. Crawford, a man whose advances she is entertaining).

“setting for lawn games and [] a backdrop for flowerbeds and trees” than an aesthetic masterpiece in and of itself.<sup>30</sup>

In recent years, the rate of U.S. lawn expansion has been rapid,<sup>31</sup> such that the lawn is now “the single largest irrigated crop in America in terms of surface area, covering about 128,000 square kilometers in all.”<sup>32</sup> Many theories have been advanced explaining why lawns occupy the dominant position that they do.<sup>33</sup> People have long appreciated the lawn as an essential, beautiful component of the home,<sup>34</sup> and lawn dominance has likely continued due to status quo bias and preference—the lawn norm is deeply embedded.<sup>35</sup> But existing public and private laws also encourage and often effectively require a neat, short, turfgrass yard.<sup>36</sup>

From a public law perspective, after the Supreme Court declared zoning to be a valid exercise of the police power,<sup>37</sup> suburban development flourished.<sup>38</sup> Many of the first suburban municipal zoning ordinances included setback regulations, which required buildings to be constructed a certain distance from the street or sidewalk and thus created an area of space between the building and the street.<sup>39</sup> For commercial structures, this setback space was often filled in by parking lots; in residential neighborhoods, it was filled in with lawns. Many localities also have long had “weed ordinances” that effectively require lawns, both by mandating that ground cover be kept short, and by prohibiting certain native plantings or vegetable gardens in front yards.<sup>40</sup> From a private, contractual

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<sup>30</sup> Pollan, *supra* note 1.

<sup>31</sup> STEINBERG, *supra* note 6, at 4 (“[B]etween 1982 and 1997 . . . the lawn colonized over 382,850 acres of land per year.”).

<sup>32</sup> Lindsey, *supra* note 5.

<sup>33</sup> For example, one commentator puts forth four possible reasons:

Lawns exist today for several reasons. First, lawns serve as a physical and psychological “moat” between the homeowner and the outside world. Second, it is theorized that humans are genetically predisposed to favor open grass-type landscapes as an artifact of our species’ development on the savannas and grasslands of East Africa. Third, to many sprawling green shaved lawns are a status symbol delineating suburban homeowners from their city brethren who generally have neither the land nor resources to make such a public statement of wealth. Finally, in the land of cookie-cutter tract housing a premium is placed on neatness and conformity both of which are promoted by mono-turf yards.

Manicured lawns are, unfortunately, the collective face of modern suburbia.

Rappaport, *supra* note 8, at 884 (internal citations omitted).

<sup>34</sup> STEINBERG, *supra* note 6, at 12 (quoting FRANK J. SCOTT, *THE ART OF BEAUTIFYING SUBURBAN HOME GROUNDS* (1870)) (noting that the lawn was viewed as “the most essential element of beauty on the grounds of a suburban house.”).

<sup>35</sup> See *infra* part II, § (B). See generally Eric Biber, *Climate Change and Backlash*, 17 N.Y.U. ENVTL. L.J. 1295, 1321-22 (2009) (discussing status quo bias generally).

<sup>36</sup> These restrictive covenants and ordinances are typically justified by concerns about aesthetics and property values or the health and safety of the community.

<sup>37</sup> *Village of Euclid, Ohio v. Ambler Realty Co.*, 272 U.S. 365, 387 (1926).

<sup>38</sup> STEINBERG, *supra* note 6, at 12.

<sup>39</sup> Charles James Smith, *The Law of Yards*, 33 *ECOLOGY L.Q.* 203, 206 (2006) (“[A] person who erected . . . a house had to have land in a proper use district, observe height and size limits, and comply with set-back, requirements which often mandated the size and existence of yards.”).

<sup>40</sup> See, e.g., Tekle, *supra* note 12, at 230 n. 72 (giving examples of weed height ordinances, including: “KALAMAZOO, MICH., CODE §17-131(B) (2011) (Great Lakes) (a weed control ordinance which prohibits uncontrolled weed growth over twelve inches in height or over seed

perspective, nearly twenty-five percent of Americans live in residential common-interest communities that are governed by covenants, conditions and restrictions (“CC&Rs”).<sup>41</sup> CC&Rs regularly require setbacks, limit hedge height or grass length, and may expressly require front lawns.<sup>42</sup> Some CC&Rs also prohibit the cultivation of vegetables, fruits or native plants.<sup>43</sup> Thus, both existing laws and agreed-to property rules tend to reinforce the lawn as a staple of American landscape design.

## B. Benefits

Whether the prevalence of lawns is a product of their entrenched legal status, or whether existing law simply reflects long-held practice, many feel an attachment to their lawns and believe that lawns offer benefits to them and their communities.<sup>44</sup> Lawns provide a consistent, unifying aesthetic when one looks down a street.<sup>45</sup> Because they are what people expect, lawns tend to “keep[] the neighbors happy and add[] to their property value.”<sup>46</sup> By maintaining a neat front yard, homeowners suggest that they have a relationship to and shared values with their neighbors.<sup>47</sup> Thus, not mowing, tending, or maintaining a lawn could be

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bearing height); ANNAPOLIS, MD., CODE § 10.20.010 (2011) (Chesapeake Bay) (the height limit of grass, weeds and ‘other rank vegetation’ is twelve inches); BREMERTON, WASH., CODE § 6.08.020(b)(1) (2011) (Puget Sound) (prohibiting owners and occupants of properties from allowing grass or weeds to exceed twelve inches in height); TACOMA, WASH., MUN. CODE § 8.30.040(C)(2) (2010) (Puget Sound) (considering a nuisance any hazardous vegetation (i.e., vegetation which ‘poses a threat to public health, safety and welfare, including vegetation which may harbor rodents or transient activity’) that is ‘over one foot in height or length’’)).

<sup>41</sup> See Justin Jouvenal, *Feud Over Sign Could Force Fairfax’s Olde Belhaven to Sell Square*, WASH. POST, (Feb. 9, 2013), [http://articles.washingtonpost.com/2013-02-09/local/37008721\\_1\\_hoas-covenants-neighborhood](http://articles.washingtonpost.com/2013-02-09/local/37008721_1_hoas-covenants-neighborhood) (noting that the number of association-governed communities in the U.S. grew from 10,000 in 1970 to 324,000 in 2012, and that one in five Americans now live in an association-governed community). See also *Industry Data, COMMUNITY ASS’NS INST.*, <http://www.caionline.org/info/research/Pages/-default.aspx> (last visited Feb. 17, 2013) (as of 2012, 63.4 million people lived in association-governed communities). Further, the percentage of people living in these communities is likely less than the percent of the total residential land base that is located in them.

<sup>42</sup> SCHROEDER, *supra* note 4, at 22 (discussing restrictions in deeds).

<sup>43</sup> See Sarah Schindler, *Of Backyard Chickens and Front Yard Gardens: The Conflict Between Local Governments and Locavores*, 87 TUL. L. REV. 231, 289 (2012) [hereinafter Schindler, *Of Backyard Chickens*] (discussing private covenants).

<sup>44</sup> See *infra* part II § (B) (discussing the role of norms).

<sup>45</sup> HERBERT BORMANN ET AL., *REDESIGNING THE AMERICAN LAWN: A SEARCH FOR ENVIRONMENTAL HARMONY* 9 (2001) (“[L]awns run together without interruption, giving a neighborhood a sense of unity and providing a source of community pride.”); Pollan, *supra* note 1 (“[T]he lawn has served to unify the American landscape; it is what makes the suburbs of Cleveland and Tucson . . . look more alike than not.”).

<sup>46</sup> STEINBERG, *supra* note 6, at 7.

<sup>47</sup> See, e.g., Pollan, *supra* note 1 (describing how the “lawn immediately establishes a certain relationship with one’s neighbors and, by extension, the larger American landscape” and how lawns allow us to “declare our like-mindedness to our neighbors”).

viewed as a dereliction of one's civic responsibility and duty as a member of the community.<sup>48</sup>

There are also some health and safety justifications for lawns: grass can help prevent soil erosion and runoff;<sup>49</sup> trap dust and particulate matter;<sup>50</sup> and can lower temperatures<sup>51</sup> and reduce glare and noise.<sup>52</sup> A lawn also provides a better carbon sink<sup>53</sup> than a parking lot.<sup>54</sup> Further, many people derive a psychological benefit from having a buffer between their homes and the outside world, and the law protects that buffer.<sup>55</sup>

Some also see lawns as providing a community-centered benefit<sup>56</sup>—a space where neighbors can gather.<sup>57</sup> They are also more user-friendly than, for

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<sup>48</sup> *Id.* (“Mowing the lawn, I realized the first time I gazed into my neighbor's yard and imagined him gazing back into mine, is a civic responsibility.”). Pollan wrote this article in 1989. Perhaps norms have since changed sufficiently for one to question the responsibility of maintaining a lawn in the face of the harms that lawns visit upon communities. *See infra* part I, § (C) (discussing harms associated with lawns).

<sup>49</sup> STEINBERG, *supra* note 6, at 7. *See also* Tekle *supra* note 12, at 226 (describing health-related benefits of lawns, including “absorbing glare, allergens, and noise, [and] guarding against fire”).

<sup>50</sup> INSTITUTE OF APPLIED AGRICULTURE. UNIVERSITY OF MARYLAND, MARYLAND TURFGRASS SURVEY: AN ECONOMIC VALUE STUDY (1996).

<sup>51</sup> *Id.*

<sup>52</sup> Smaus, *supra* note 2 (sharing the results of a report by Victor A. Gibeault, an “environmental horticulturist at UC Riverside and an authority on turf grasses in Southern California” who writes: “Turf grasses directly influence our immediate environment in many positive ways. Actively growing turf grasses have been shown to reduce high summer surface temperatures because of transpirational cooling. . . . [and to] reduce discomforting glare and traffic noise and increase infiltration of water in the soil and the water quality”).

<sup>53</sup> *See* Cristina Milesi et. al, *Mapping and Modeling the Biogeochemical Cycling of Turf Grasses in the United States*, 36 ENVTL. MGMT. 426, 426 (2005) (demonstrating that “well-watered and fertilized turf grasses act as a carbon sink,” meaning that they are able to absorb and store carbon dioxide); Y. Quian & Ronald Follett, *Assessing Soil Carbon Sequestration in Turfgrass Systems Using Long-Term Soil Testing Data*, 94 AGRON. J. 930 (2002). *See also* BES Long Term Stream and Watershed Study Update, BALTIMORE ECOSYSTEM STUDY, [http://www.beslter.org/frame4-page\\_3f\\_05.html](http://www.beslter.org/frame4-page_3f_05.html) (last visited Feb. 20, 2013) (suggesting that pervious lawns might be net nitrogen sinks, as opposed to nitrogen sources).

<sup>54</sup> Bittman, *supra* note 15 (noting that while a lawn is a better carbon sink than concrete, meadows and vegetable gardens provide better sinks than lawns).

<sup>55</sup> *See* Nancy M. Wells & Gary W. Evans, *Nearby Nature: A Buffer of Life Stress Among Rural Children*, 316 ENVIRONMENT AND BEHAVIOR 311, 321 (2003) (ranking an outdoor grass yard high on the “naturalness scale” and determining that “the presence of nearby nature moderates or buffers the impact of life stress on children”). A court may also use the “curtilage doctrine” to elevate the lawn’s protection under the Fourth Amendment. Curtilage is the area surrounding the home “to which extends the intimate activity associated with the ‘sanctity of a man’s home and the privacies of life.’” *Oliver v. U.S.*, 466 U.S. 170, 180 (1984) (quoting *Boyd v. U.S.*, 116 U.S. 616, 630 (1886)). Courts tend to protect “families and personal privacy in [the curtilage,] an area intimately linked to the home, both physically and psychologically, where privacy expectations are most heightened.” *California v. Ciarolo*, 476 U.S. 207, 213 (1986). *See also* *Poe v. Ullman*, 367 U.S. 497, 551 (1961) (Harlan, J., dissenting) (noting that if the physical curtilage is protected, “it is surely as a result of solicitude to protect the privacies of the life within”).

<sup>56</sup> *See, e.g.*, BORMANN ET AL., *supra* note 45, at 23 (citing BRUCE KELLY ET AL., *ART OF THE OLMSTED LANDSCAPE* 5 (1981)) (discussing the lawn as a unifier and provider of a sense of community).

example, a rocky desert landscape; they provide a soft place for children and dogs to play.<sup>58</sup> Lawns can enhance social capital in a given neighborhood by providing an area that facilitates such interactive behavior.<sup>59</sup> This ties into the idea of the lawn as something that is deeply seated in the ethos of the sanctity of the single family home and of home ownership itself.<sup>60</sup> Justice Douglas, in *Village of Belle Terre v. Boraas*, famously exclaimed, “A quiet place where yards are wide, people few, and motor vehicles restricted are legitimate guidelines in a land use project addressed to family needs.”<sup>61</sup> The police power is this broad: it can be used to mandate wide yards under the guise of furthering the public welfare.<sup>62</sup>

### C. Harms

Although many individuals have a strong psychological attachment to their lawns, that attachment comes with a significant cost; in many localities, lawns are inefficient<sup>63</sup> and may cause harms that outweigh their benefits.<sup>64</sup> Those harms include dramatic potable water consumption, the high energy costs of water, increased water and air pollution, and loss of biodiversity. Because lawns

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<sup>57</sup> *Id.* at 3 (“A lawn is a gathering place for family, friends, and neighbors, a place where we engage in our favorite activities. In cities, it is a place of verdure, a refuge from crowds, traffic and noise.”).

<sup>58</sup> Richard Benke, *Dew Point: Turf Lovers Come Up Dry In Tiff Over Desert Lawns*, CHI. TRIB. (Feb. 8, 1998) (“‘Most folks want a place for their kids to play . . .’ said Bobby Lee of Conroy’s Landscaping. ‘They see a need for grass.’”). But if lawns were banned, a locality could compensate for the loss of play space by installing more public parks in urban and suburban areas. Public parks provide space for the development of social ties. Aleksandra Kaźmierczak, *The Contribution of Local Parks to Neighbourhood Social Ties*, 109 LANDSCAPE AND URB. PLAN. 31, 40 (2013).

<sup>59</sup> See DOUGLAS FARR, SUSTAINABLE URBANISM: URBAN DESIGN WITH NATURE 147, Table 7-10 (2008) (listing lawns as a criteria for suburban, outdoor “third place[s]” for students, nonworking adults, working parents and working professionals). *But see* ROBERT PUTNAM, BOWLING ALONE 211 (Simon & Schuster 2000) (citing KENNETH T. JACKSON, CRABGRASS FRONTIER: THE SUBURBANIZATION OF THE UNITED STATES 272 (Oxford University Press 1985)) (discussing the decline in social capital caused by suburbanization, and observing that “[w]ith increased use of automobiles, the life of the sidewalk and the front yard has largely disappeared, and the social intercourse that used to be the main characteristic of urban life has vanished”).

<sup>60</sup> *Village of Belle Terre v. Boraas*, 416 U.S. 1, 9 (1974). *But see* Stephanie Stern, *Residential Protectionism and the Legal Mythology of Home*, 107 MICH. L. REV. 1093 (2009) (disputing standard accounts of the importance accorded the home).

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

<sup>63</sup> See Stephen E. Margolis, *Two Definitions of Efficiency in Law and Economics*, 16 J. LEGAL STUD. 471, 743-74 (1987) (defining “[a]n efficient legal system [a]s one in which property rights are assigned and liability rules are formulated so that the value of the things present in society, as measured by willingness to pay, is maximized over all alternative legal environments, given the costs of transacting”).

<sup>64</sup> The efficiency of a lawn is inherently tied to its location. There are parts of the United States where lawns, even non-native ones, grow well without substantial watering, fertilizing, or pesticide application. If individuals in these areas mow their lawns with push-mowers, many of the harms discussed in this section would not be applicable. Thus, the balance between lawn benefits and lawn harms is regionally dependent.

cover such a large percentage of our built environment, we must account for these harms cumulatively.

When considering large-scale environmental harms, one often imagines commercial manufacturing facilities with polluting smokestacks. However, a growing area of legal scholarship focuses on “the environmental significance of individual behaviors and lifestyles”—actions that scholars term “environmentally significant individual behaviors.”<sup>65</sup> Many existing environmental laws—especially comprehensive federal laws—fail to regulate individual actions that, cumulatively, result in significant harm to the environment.<sup>66</sup> Though the actions taken by a single individual to keep her lawn neat and green might be environmentally insignificant, on a nationwide scale, or even one based on the local watershed, lawn care warrants close consideration.<sup>67</sup> Further, while the government can control some sources of environmental harm by regulating a manufacturer, there is no upstream source through which to regulate the harms associated with lawns; thus, the most logical place to impose regulation is on the individual behavior.<sup>68</sup>

Although regulation of lawns is technically a property restriction, it is also inherently a limitation on individual actions; if a property restriction is put in place that retroactively bans all lawns, an individual may not plant a new lawn, may be forced to tear up an existing lawn, and may not continue to water or mow an existing lawn. Individual actions are environmentally significant because every person is a polluter; our individual actions “lie at the core of both the climate-change problem and its potential solutions.”<sup>69</sup> As one commentator notes, “[w]e pollute when we drive our cars, *fertilize and mow our yards*, pour household chemicals on the ground or down the drain, and engage in myriad other common activities.”<sup>70</sup> Thus, the law should find a way to capture these individual but cumulatively significant harms.<sup>71</sup> It is important to consider harms in this context,

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<sup>65</sup> Kuh, *supra* note 7, at 1116 n. 12 (citing existing scholarship); *id.* at 1117 n. 15 (defining these behaviors as “behaviors of individuals that, taken alone, have a negligible impact on the environment but that, in the aggregate, may significantly harm the environment.”); Paul C. Stern, *Toward a Coherent Theory of Environmentally Significant Behavior*, 56 J. OF SOC. ISSUES 407, 408 (2000) (defining environmentally significant individual behavior).

<sup>66</sup> Kuh, *supra* note 7, at 1116. For example, 32 percent of annual emissions in the U.S. are individual emissions. *Id.* at 1114 n. 3 (citing Michael P. Vandenberg & Anne C. Steinemann, *The Carbon-Neutral Individual*, 82 N.Y.U. L. REV. 1673, 1694 (2007)).

<sup>67</sup> See, e.g., Keith H. Hirokawa, *At Home with Nature: Early Reflections on Green Building Laws and the Transformation of the Built Environment*, 39 ENVTL. L. 507, 562 (2009) (“Actions that may not have previously appeared to be worthy of regulation have been found to cause significant adverse impacts cumulatively, over time, and in context-heading us toward a certain death by a thousand cuts.”). See also Hope M. Babcock, *Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm*, 33 HARV. ENVTL. L. REV. 117, 120-21 (2009) [hereinafter Babcock, *Assuming Personal Responsibility*] (discussing individual pollution).

<sup>68</sup> For example, there is less need to regulate the individual use of cars, because the government could require manufacturers to create cars that do not emit greenhouse gas emissions.

<sup>69</sup> Kuh, *supra* note 7, at 1114. The same could be said of air quality.

<sup>70</sup> Michael P. Vandenberg, *From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law*, 57 VAND. L. REV. 515, 518 (2004) (emphasis added).

<sup>71</sup> Kuh, *supra* note 7, at 1116 n. 12.

because it is only by considering the failures of the current systems that we can determine which types of regulatory approaches will best address and help to correct those failures.<sup>72</sup>

Lawns often require substantial quantities of water to maintain color, health, and appearance. For the last hundred years, Americans have come to see water as “abundant, cheap, and safe,” living in what one commentator has referred to as “the golden age of water.”<sup>73</sup> However, those days are waning; many parts of the U.S. are facing one of the worst water shortages in recent history, and climate change will alter weather patterns such that these droughts will become more common.<sup>74</sup> Thus, climate change adaptation is inherently linked to water concerns, and to lawns.<sup>75</sup>

People like green lawns, and in many parts of the country, green lawns mean heavily-watered and fertilized lawns.<sup>76</sup> Because most turfgrass is a non-native species,<sup>77</sup> it often needs assistance to thrive; some people water their lawn twice per day.<sup>78</sup> A large percentage of the potable municipal water supply is used for this purpose; studies suggest that approximately sixty percent in the west and thirty percent in the east is being used for lawn irrigation.<sup>79</sup> In real numbers, the

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<sup>72</sup> See generally CASS R. SUNSTEIN, *AFTER THE RIGHTS REVOLUTION* (1993) [hereinafter SUNSTEIN, *RIGHTS REVOLUTION*].

<sup>73</sup> CHARLES FISHMAN, *THE BIG THIRST: THE SECRET LIFE AND TURBULENT FUTURE OF WATER* 9 (2011) (“The last century has conditioned us to think that water is naturally abundant, safe, and cheap . . . . We are entering a new era of water scarcity—not just in traditionally dry or hard-pressed places . . . but in places we think of as water-wealthy.”).

<sup>74</sup> Holly Doremus, *Climate Change and the Evolution of Property Rights*, 1 U. CALIF. IRVINE L. REV. 1091, 1104-05, 1115 (2011) [hereinafter Doremus, *Evolution*] (suggesting that both flooding and droughts will increase as “[c]limate change will [] alter the total amount of precipitation. In general, the northern and eastern portions of the country are expected to get wetter, while the already arid Southwest gets drier”). See also Michael E. Webber, *Will Drought Cause the Next Blackout?* N.Y. TIMES, July 23, 2012 at A21 (“Climate-change models [] suggest that droughts and heat waves may be more frequent and severe.”).

<sup>75</sup> Doremus, *Evolution*, *supra* note 74, at 1103 (noting that “[t]he problem of adaptation to climate change is in many ways a water problem”).

<sup>76</sup> While a lawn in certain parts of the U.S. might grow well without a lot of assistance, “. . .out West. . . the only way to grow those grasses is with high use of water and nitrogen fertilizer.” Lindsey, *supra* note 5 (quoting Cristina Milesi).

<sup>77</sup> Lindsey, *supra* note 5 (“[M]ost of the grasses used in U.S. lawns aren’t native to the area where they are being grown.”).

<sup>78</sup> *Id.* (“I had a neighbor who would water every day, even twice a day.”). Compare this to green roofs: “Plant selections are typically hardy, drought-tolerant varieties that need little maintenance, no fertilizers or pesticides, and scant human intervention of any kind once established.” NOAH GARRISON ET AL., *LOOKING UP: HOW GREEN ROOFS AND COOL ROOFS CAN REDUCE ENERGY USE, ADDRESS CLIMATE CHANGE, AND PROTECT WATER RESOURCES IN SOUTHERN CALIFORNIA* 12 (NRDC Report June 2012).

<sup>79</sup> Rappaport, *supra* note 8, at 898 n. 114. See also Smaus, *supra* note 2 (“California’s estimated 1.38 million acres of lawn are thought to use the bulk of the water applied to the landscape. Studies done by the North Marin County Water District indicate that, at least in that region, lawns soak up about 90% of all water used outdoors in suburban areas.”); CONNIE LOCKHART ELLEFSON ET AL., *XERISCAPE GARDENING: WATER CONSERVATION FOR THE AMERICAN LANDSCAPE* 3 (1992) (suggesting that residential landscapes, including lawns, consume at least 50 percent of the domestic water used in the U.S.); *Conserving Water*, EPA, <http://www.epa.gov/greenhomes/ConserveWater.-htm#landscaping> (last updated Dec. 19, 2012)

EPA estimates that residential landscape irrigation accounts for approximately seven billion gallons of water per day, and one-third of all residential water use in the U.S.<sup>80</sup>

The amount of water used is additionally problematic when one considers its energy costs. In the U.S., water is typically collected, treated, and delivered to consumers before it is used to water lawns, consuming large amounts of energy at each step in the process.<sup>81</sup> Much of the water used for lawn care has to be transported from elsewhere, which contributes to emissions and thus global climate change.<sup>82</sup> Specifically, most municipal water is either surface water that must be extracted from rivers or streams, or groundwater that must be pumped from aquifers.<sup>83</sup> The utilities that then treat and distribute the water must use energy to do so, and because many of the pipe distribution systems in the U.S. are old, a substantial amount of this already-treated potable water is lost during transport.<sup>84</sup> As for the water that does reach end users, it is often further heated or cooled, requiring the expenditure of additional energy.<sup>85</sup> The high energy cost of water is also connected to the water subsidies that are prevalent in the U.S.; while people require drinking water for survival and certain agricultural pursuits warrant subsidized water costs, there is no valid reason that individuals are not paying for

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(stating that up to thirty percent of the total U.S. water supply is used for outdoor uses, primarily irrigation); Lindsey, *supra* note 5 (quoting Cristina Milesi) (noting that “drinking-quality water” is used to water most lawns).

<sup>80</sup> *Outdoor Water Use in the United States*, U.S. EPA, <http://www.epa.gov/WaterSense/pubs/-outdoor.html> (last updated Feb. 7, 2013). In considering both “domestic and commercial water use for lawns[, the amount] would be . . . 184 to 238 gallons [] per person per day if all lawns [in the Lower 48] were well-watered.” Lindsey, *supra* note 5. This works out to approximately 84 billion gallons of water per day used on lawns. STEINBERG, *supra* note 6, at 8 (noting that a Floridian golf course consumes approximately 178,800 gallons of water each day and that this amount is “enough to meet the daily water needs of more than twenty-two hundred Americans”). A standard lawn in the suburbs requires approximately 10,000 gallons of water each year, not including rainwater. *Conserving Water*, *supra* note 79.

<sup>81</sup> NRDC, *ENERGY DOWN THE DRAIN: THE HIDDEN COSTS OF CALIFORNIA’S WATER SUPPLY 2* (Aug. 2004), available at <http://www.nrdc.org/water/conservation/edrain/edrain.pdf> [hereinafter *ENERGY DOWN THE DRAIN*].

<sup>82</sup> Ben Jervey, *The Waterless City*, GOOD (April 23, 2011), [www.good.is/post/the-waterless-city](http://www.good.is/post/the-waterless-city) (noting that “today, roughly 85 percent of the water flowing through Los Angeles’ pipes comes from afar. A mere 15 percent of Los Angeles’ water comes from local groundwater sources.”).

<sup>83</sup> *ENERGY DOWN THE DRAIN*, *supra* note 81 (“The State Water Project (SWP) is the largest single user of energy in California. . . . SWP energy use accounts for 2 to 3 percent of all electricity consumed in California. The SWP consumes so much energy because of where it sends its water. To convey water to Southern California from the Sacramento–San Joaquin Delta, the SWP must pump it 2,000 feet over the Tehachapi Mountains . . . . Pumping one acre-foot of SWP water to the region requires approximately 3,000 kWh.”). See also *Water-Energy Connection*, U.S. EPA, <http://www.epa.gov/region9/waterinfrastructure/waterenergy.html> (last updated Dec. 15, 2012).

<sup>84</sup> *ENERGY DOWN THE DRAIN*, *supra* note 81, at 17 (noting that “[l]osses vary significantly among urban suppliers: typically from 6 to 15 percent, but as high as 30 percent”).

<sup>85</sup> See *id.* at v (determining that more energy is consumed by water’s end user than during its conveyancing or treatment).

the true costs of water, including its energy costs, when its use is merely for growing grass.<sup>86</sup>

Beyond energy production, emissions are associated with lawns in other ways as well. Specifically, almost all people with yards mow them (or hire others to do so), typically with a gas-powered lawn mower,<sup>87</sup> and many use leaf blowers to rid their lawns of debris.<sup>88</sup> Thirty minutes of leaf blower usage creates the same amount of pollution as “driving a car seventy-seven hundred miles at a speed of thirty miles per hour.”<sup>89</sup> Cumulatively, these individual actions substantially increase not only emissions, but smog and particulate matter as well. Lawns are also both expensive and time consuming to maintain. Estimates suggest that people in the U.S. spend approximately \$40 billion each year on lawn care,<sup>90</sup> and mowing and tending a lawn may occupy hours every week.<sup>91</sup>

Another lawn-related harm is tied to the petrochemical-based fertilizers with which many lawns are treated.<sup>92</sup> Although front yards may look identical in Ohio, Arizona, and Georgia, their local geography, weather, and growing conditions are not.<sup>93</sup> Homeowners require “the tools of 20<sup>th</sup>-century industrial civilization – its chemical fertilizers, pesticides, herbicides, and machinery” to keep lawns green and growing in many parts of the U.S.<sup>94</sup> These chemicals pollute stormwater runoff<sup>95</sup> that often flows into local bodies of water.<sup>96</sup> The U.S.

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<sup>86</sup> While a broad discussion of water subsidies is beyond the scope of this Article, *see generally* James L. Huffman, *The Federal Role in Water Resource Management*, 17 N.Y.U. ENVTL. L.J. 669 (2008). *See also infra* notes 169-171 and accompanying text.

<sup>87</sup> Mowers can cause bodily harm as well. “Between 1994 and 2004, an estimated average of 75,884 Americans per year were injured using lawn mowers.” STEINBERG, *supra* note 6, at 8.

<sup>88</sup> Of course, leaf-blowers might still be used on artificial lawns or xeriscaped yards.

<sup>89</sup> STEINBERG, *supra* note 6, at 8.

<sup>90</sup> *Id.* at 5.

<sup>91</sup> *See, e.g.*, Pollan, *supra* note 1 (describing spending four hours mowing his lawn each week).

<sup>92</sup> Rappaport, *supra* note 8, at 901 n. 119 (“[M]any homeowners apply fertilizers, pesticides and herbicides to maintain and beautify their exotic turf landscapes.”).

<sup>93</sup> *See* Pollan, *supra* note 1 (discussing the “green mantle of grass” that is identical across the continent).

<sup>94</sup> *Id.* (suggesting that lawns “receive, on average, more pesticide and herbicide per acre than just about any crop grown in this country”). *See also* Kevin S. Baldwin, *Rethinking Lawns*, 3 QUARKS DAILY (May 14 2012) (“[M]onoculture is a triumph of technology. It takes a lot of inputs to maintain such a beast: Regular mowing, herbicides, fungicides, pesticides, fertilizer, and in some areas, water. Perhaps that is the point.”).

<sup>95</sup> Non-point source pollution consists of pollution from diffuse sources. However, if water goes to storm drains, it is not considered non-point source runoff. *What is Nonpoint Source Pollution?*, U.S. EPA, <http://water.epa.gov/polwaste/nps/-whatis.cfm> (last updated Aug. 27, 2012).

<sup>96</sup> Tekle, *supra* note 12, at 216 (noting that “when introduced into bodies of water, lawn chemicals, especially phosphorous and nitrogen from lawn fertilizer, create ‘dead zones’ where algae bloom in excess”) (citing *Resources: Q&A*, PUGET SOUND STARTS HERE, <http://pugetsoundstartshere.org/resources/q-a> (last visited Jan., 2, 2013) (describing dead zones, which lead to “suffocation of important food sources for fish and shellfish, [creating] hazardous conditions for both plant and animal life, and [having] serious ecological and economic impacts on the region”)).

is not meeting water quality standards in large part because of urban runoff.<sup>97</sup> Although some point source pollution—from defined sources like factories and wastewater treatment plants—has been substantially reduced through regulations, urban stormwater runoff is still a major source of environmental harm, and it is within the purview of local governments to regulate much of the land use that results in that form of pollution.<sup>98</sup> Further, although runoff is much more pronounced from truly impervious surfaces, such as pavement, “compacted soils mono-turf landscapes” like lawns can be “near impervious,” and thus result in much greater amounts of runoff than would a natural landscape with a greater variety of topography.<sup>99</sup> Runoff from lawns also contributes to the prevalence of pesticides in urban waterways.<sup>100</sup> In addition to environmental harm, there is also some evidence that lawn chemicals and weed killers can increase cancer in pets and humans, respectively.<sup>101</sup>

The non-native nature of turfgrass also results in harms associated with ecological principles and loss of species biodiversity.<sup>102</sup> This landscape reduces the amount of habitat that might otherwise be available for native plants, thus “hasten[ing] the process of plant extinction.”<sup>103</sup> For example, prairies are an extremely endangered ecosystem that provides an important habitat for birds and butterflies, and requires little water.<sup>104</sup> Additionally, in many dry climates, lawns are a potential fire hazard; fire hazards maybe be reduced if native plants or xeriscaping is used instead of lawns.<sup>105</sup> Lawns also tend to create more allergy-

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<sup>97</sup> U.S. GENERAL ACCOUNTING OFFICE, WATER QUALITY: BETTER DATA AND EVALUATION OF URBAN RUNOFF PROGRAMS NEEDED TO ASSESS EFFECTIVENESS 37 (2001), *available at* [www.gao.gov/new.items/d01679.pdf](http://www.gao.gov/new.items/d01679.pdf).

<sup>98</sup> John R. Nolon, *Historical Overview of the American Land Use System: A Diagnostic Approach to Evaluating Governmental Land Use Control*, 23 PACE ENVTL. L. REV. 821, 838 (2006).

<sup>99</sup> Rappaport, *supra* note 8, at 901 n. 119.

<sup>100</sup> *See generally* US GEOLOGIC SURVEY (USGS), PESTICIDES IN STREAM SEDIMENT AND AQUATIC BIOTA: CURRENT UNDERSTANDING OF DISTRIBUTION AND MAJOR INFLUENCES, *available at* <http://water.usgs.gov/nawqa/-pnsp/pubs/fs09200/fs09200.pdf>. *See also* *The Quality of Our Nations Water: Nutrients and Pesticides* USGS FACT SHEET 116-99 (May 1999), *available at* <http://permanent.access.gpo.gov/waterusgsgov/-water.usgs.gov/pubs/circ/circ1225/> (noting the prevalence of pesticides in both groundwater and streams and finding that 90% of stream water sampled contained at least one pesticide).

<sup>101</sup> Rappaport, *supra* note 8, at 923 (“[R]esearchers at the National Cancer Institute have linked frequent chemical-lawn treatments to an increased incidence of deadly cancer in dogs and suggest a link between the weed killer, 2, 4-D, and cancer in humans.”).

<sup>102</sup> *See, e.g., id.* at 877 n. 30 (“Mono-turf landscapes destroy diversity. The restoration and maintenance of the native (natural) characteristics of the bioregion is a key to species preservation.”).

<sup>103</sup> *Id.* at 885.

<sup>104</sup> Hollie O’Connor, *Saving the Prairie, Planting Some New Ones*, N.Y. TIMES (Aug. 18, 2012) (lamenting the loss of existing prairies to serve as seed banks for others and noting the hurdles of planting prairies in cities, including the view that they are weeds or could hide snakes or bodies).

<sup>105</sup> *See, e.g.,* NATIONAL FIRE PROT. ASS’N, OAKLAND/BERKELEY HILLS FIRE 7 (1991), *available at* <http://www.nfpa.org/assets/files/MbrSecurePDF/FIoakland.pdf> (describing a dry spell in 1991 that turned the “once-lush grass” of the Oakland and Berkeley Hills region into a “rich source of dry fuel” that fed a devastating fire). Fires are a clear health and safety issue, and fire

producing pollen than native plantings.<sup>106</sup> They also fail to provide the same level of ecosystem services that native plants<sup>107</sup> or even some vegetable gardens would.<sup>108</sup> All of these factors combine to lead some to view lawns as “the most obvious example of humankind’s disregard for Nature.”<sup>109</sup>

Although in many ways the current legal structure mandates lawns, they are often environmentally and financially inefficient, for the reasons discussed above. Yet property rules and laws are typically organized in such a way as to incentivize or encourage the productive use of property and to avoid waste.<sup>110</sup> These rules are informed by numerous strands of property theory. For example, Locke’s labor theory of property suggests that people have ownership interests in property in which they invest their labor.<sup>111</sup> Law and economics theorists have described the way that private property ownership serves to internalize externalities, thus fostering more efficient use of property.<sup>112</sup> Such theories form the basis of property doctrines such as adverse possession,<sup>113</sup> which seek to

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prevention was one of the early reasons that zoning ordinances were adopted. ROBERT C. ELLICKSON & VICKI L. BEEN, *LAND USE CONTROLS* 75 (Erwin Chemerinsky et al. eds., 3d ed. 2005) (describing a Boston ordinance from 1906 that sought to minimize fire hazards). However, certain native vegetation is also prone to burning; prairie fires were once common events.

<sup>106</sup> See *Green Landscaping: Greenacres*, U.S. EPA, <http://www.epa.gov/greenacres/nativeplants/-factsht.html#Will Native Plants> (explaining that native flowers do not cause allergies because they are insect-pollinated rather than wind-pollinated, and that many species of turfgrass are responsible for pollen allergens).

<sup>107</sup> Rappaport, *supra* note 8, at 899 n. 116 (“[N]ative plants curtail non-point source pollution by trapping run-off, anchoring existing soil and slowing and filtering run-off from melting snow and summer storms.”).

<sup>108</sup> Generally, ecosystem services are “basic services [of nature] that support life itself . . . such as purification of air and water, pest control, renewal of soil fertility, climate regulation, pollination of crops and vegetation, and waste detoxification and decomposition.” James Salzman, *A Field of Green? The Past and Future of Ecosystem Services*, 21 *J. LAND USE & ENVTL. L.* 133, 133 (2006). These services are not accounted for in traditional markets, and thus are often undervalued. LISA HEINZERLING & FRANK ACKERMAN, *PRICING THE PRICELESS: COST-BENEFIT ANALYSIS OF ENVIRONMENTAL PROTECTION* (2002).

<sup>109</sup> Rappaport, *supra* note 8, at 886.

<sup>110</sup> Christopher Serkin, *Existing Uses and the Limits of Land Use Regulations*, 84 *N.Y.U. L. REV.* 1222, 1275 (2009) (describing this as the “now familiar—if not standard—account of property law”).

<sup>111</sup> John Locke & J.W. Gough, *The Second Treatise of Civil Government and a Letter Concerning Toleration*, in *BLACKWELL’S POLITICAL TEXTS* 15 (C. H. Wilson & R. B. McCallum eds., 1948) (“[E]very man has a property in his own person . . . . The labour of his body, and the work of his hands, we may say, are properly his. Whatsoever, then, he removes out of the state that nature hath provided, and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property.”).

<sup>112</sup> Armen A. Alchian & Harold Demsetz, *The Property Right Paradigm*, 33 *J. OF ECON. HIST.* 16, 22 (1973). See also Richard A. Epstein, *How to Create – or Destroy – Wealth in Real Property*, 58 *ALA. L. REV.* 741, 762 (2007) (suggesting that the Council’s decision to sell the property at issue in *Lucas v. South Carolina Coastal Council*, 505 *US.* 1003 (1992), is an example of the internalization that accompanies private ownership).

<sup>113</sup> Other theories, including personhood, also justify adverse possession. See, e.g., Oliver Wendell Holmes, Holmes, *The Path of the Law*, 10 *HARV. L. REV.* 457, 477 (1897) (“A thing which you have enjoyed and used as your own for a long time, whether property or an opinion, takes root in your being and cannot be torn away without your resenting the act and trying to defend yourself, however you came by it.”).

decrease inefficient use of land and to increase its efficient use.<sup>114</sup> In contrast, the law in many communities currently requires, and certainly allows, lawns that are inefficient and that affirmatively cause harms to those communities. Alternative productive uses of property—food-producing gardens or native plants, for example—would provide ecosystem services benefits and thus would be more efficient. Such a result would be more in line with standard views of the purpose of property law.<sup>115</sup>

#### D. Alternatives

Given that lawns create numerous harms, the door is open for municipal action to devise a new lawn paradigm. There are a number of options that would likely produce many of the same or perhaps even more benefits than lawns, and substantially fewer harms.<sup>116</sup> Specifically, lawns could be replaced with: native plantings or xeriscaping; productive landscapes, including vegetable gardens or fruit-bearing trees; or synthetic lawns.<sup>117</sup>

##### 1. Xeriscaping and Native Planting

Xeriscaping is often thought of as desert or dry landscaping, but can be used more generally to describe any landscaping that uses native plants and is thus sustained primarily by natural rainfall.<sup>118</sup> Native plants are those that are adapted to local climates, and thus typically require less maintenance and water than non-native turfgrass.<sup>119</sup> These are not new ideas,<sup>120</sup> yet many people hold biases against xeriscaping, viewing it as nothing more than bland gravel and cacti. “Looking down a row of lawns interrupted by xeriscape is like looking at

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<sup>114</sup> Similarly, reciprocal negative easements are permissible, in part, because they benefit entire neighborhoods.

<sup>115</sup> See *supra* notes 110 - 114 and accompanying text.

<sup>116</sup> Of course, some potential lawn substitutes would create equal, or perhaps worse, impacts. For example, if lawns were replaced with non-native vegetation, impervious pavement or surfaces, crushed rock, or larger building footprints, the lawn ban might have net negative effects. Thus, this Article asserts that it is important for a municipality that is considering a lawn ban to also mandate the options with which the lawn may be replaced. See *infra* part III, § (C).

<sup>117</sup> See generally Tekle, *supra* note 12, at 219 (discussing “‘green’ and permeable residential landscapes . . . such as xeriscaping or native planting, wildflowers or meadow, ‘working’ or edible landscapes such as gardens or fruit trees, artificial turf, micro-wetlands, permaculture, the less-is-more lawn or freedom lawn”) (citations omitted).

<sup>118</sup> Christian D. Petrangelo, Note, *Altering the Home Landscape from London's Boroughs to America's "Sin City": Are Urban Authorities Using the Right Set of Land Use Law and Policy Tools in Adapting to Climate Change?*, 36 VT. L. REV. 779, 798 (2012) (“[X]eriscaping emulates the flora of the local environment, leading (in the ideal long-term) to a simple, complete reliance on natural precipitation rather than human watering.”). See also GAYLE WEINSTEIN, XERISCAPE HANDBOOK: A HOW-TO GUIDE TO NATURAL RESOURCE- SISE GARDENING vii-viii (Fulcrum Publishing 1999).

<sup>119</sup> *Green Landscaping: Greenacres*, *supra* note 106 (describing the needs of native plants).

<sup>120</sup> A 1993 article discusses the “many seminars held on natural landscaping, prairie restoration, xeriscaping, or wildflower propagation, [which are attended by] suburban yuppies, week-end ecologists, and seniors whose retirement hobby is gardening.” Rappaport, *supra* note 8, at 867.

someone ‘who has a tooth missing,’ said [the] chairman of [an] architectural control committee.”<sup>121</sup> Thus, those communities interested in promoting or requiring, native plantings and xeriscaping first have to work on “myth busting”—ensuring that people understand the ecological,<sup>122</sup> monetary, and water-saving<sup>123</sup> benefits of this type of landscape.<sup>124</sup>

## 2. Productive Landscapes

Productive landscapes, such as those containing vegetable- and fruit-producing plants and bushes, do not necessarily require less water than lawns,<sup>125</sup> but they provide other environmental, ecological, and sustainability benefits such that a municipality might decide that, on balance, they are more appropriate than mono-cultured turf.<sup>126</sup> In a sense, productive landscapes represent a return to past, pre-zoning practices.<sup>127</sup> Currently, however, many localities’ weed ordinances prohibit individuals from growing vegetables in their front yards.<sup>128</sup> That said, there is a recent trend toward relaxing those ordinances and allowing or encouraging productive front yards for a number of reasons. As I discussed in a prior article, allowing individuals full use of their property to grow their own food has a number of benefits, including an increase in food safety, and a reduction in food insecurity, food deserts, reliance on processed foods, and food miles traveled—and thus a reduction in harms associated with climate change, monocropping, and polluted runoff.<sup>129</sup> Further, allowing, encouraging, or even requiring productive landscapes in suburban communities could have the added benefit of partially offsetting the loss of farmland that has resulted from suburban sprawl and population growth.

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<sup>121</sup> Benke, *supra* note 58.

<sup>122</sup> Rappaport, *supra* note 8, at 897-98 (noting that some local governments have embraced natural landscaping, and stating that “[e]cologically there is no doubt that natural landscapes are preferable particularly when compared to traditional suburban exotic lawns”).

<sup>123</sup> Taylor E.C. Hawes, *Water Conservation*, 34 No. 1 ABA TRENDS 10, September/October 2002.

<sup>124</sup> O’Connor, *supra* note 104.

<sup>125</sup> *Vegetable and Flower Gardens*, DENVER WATER, <http://www.denverwater.org/-Conservation/-TipsTools/Outdoor/VegetableGarden/> (last visited Feb. 16, 2013) (“A healthy vegetable and annual flower garden can use less or about the same amount of water as a lawn does.”). The use of drip-irrigation systems can sufficiently water many fruit and vegetable plants while using relatively little water. *Id.*

<sup>126</sup> See, e.g., Pollan, *supra* note 1 (“What is the alternative [to lawns]? To turn them into gardens. I’m not suggesting that there is no place for lawns in these gardens or that gardens by themselves will right our relationship to the land, but the habits of thought they foster can take us some way in that direction.”). See also Bittman, *supra* note 15.

<sup>127</sup> Pollan states that “19th-century visitors [to the U.S.] noted . . . the typical yard was ‘landscaped’ in the style Southerners would come to call ‘white trash’ – a few chickens, some busted farm equipment, mud and weeds, an unkempt patch of vegetables. This might do for farmers, but for the growing number of middle-class city people . . . something more respectable was called for.” Pollan, *supra* note 1. There is now a way to have chickens and gardens that is more urban-hipster-chic than “white trash” (and note, trucker hats—once the purview of the rural and “white trash”—have been co-opted by urban hipsters).

<sup>128</sup> See Schindler, *Of Backyard Chickens*, *supra* note 43, at 240.

<sup>129</sup> *Id.* at Part IV, § A.

### 3. Synthetic Lawns

Certainly, synthetic lawns avoid many of the harms that monocropped turf poses. They do not need to be watered or mowed, and therefore require less maintenance and time.<sup>130</sup> Estimates suggest that a typical home would save around 234,000 gallons of water over ten years by installing a synthetic lawn.<sup>131</sup> However, there are environmental costs associated with producing them, especially if the product is produced from plastic.<sup>132</sup> Further, synthetic lawns provide none of the ecosystem services that native plantings provide, and depending on the material, could increase runoff. Finally, it is debatable whether they provide the same connection to nature and the natural that even a non-native lawn might.<sup>133</sup>

### 4. Weeds

Finally, lawns could be left to revert to their natural states, which was common in the past and is still common in many parts of the world. For example, in Italy, “[i]f there is grass in the yard, it is generally a mixture of clover, dandelions, and lots of other so-called weeds, able to survive the long dry summers with little additional water.”<sup>134</sup> Of course, in many localities, existing weed ordinances would need to be revised in order to allow this type of growth to flourish.<sup>135</sup> Further, because the basis of many of those weed ordinances is the idea that an unkempt lawn is a nuisance, prone to harboring vermin and opening the door to additional blight, the norms underlying those ideas would likely have to change.<sup>136</sup>

Given these alternatives, the question is: how does a municipality encourage or force their adoption? The next Part considers four fundamental tools for achieving the policy goal of replacing the traditional lawn with these more sustainable alternatives.

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<sup>130</sup> Pollan, *supra* note 1 (discussing the four hours per week he spent mowing his lawn).

<sup>131</sup> Andrew Abramson, *West Palm Set to Lift Ban on Artificial Turf for Parks, Fields*, THE PALM BEACH POST, June 3, 2012, available at <http://www.palmbeachpost.com/news/news/west-palm-set-to-lift-ban-on-artificial-turf-for-p/nPMdz/>.

<sup>132</sup> Of note, many synthetic lawns are now being made with recycled and environmentally-friendly materials. Nick Leech, *Faking It: Why Artificial Grass Makes Sense*, THE NATIONAL (April 6, 2012), <http://www.thenational.ae/lifestyle/house-home/faking-it-why-artificial-grass-makes-sense>.

<sup>133</sup> See generally Laurence H. Tribe, *From Environmental Foundations to Constitutional Structures: Learning from Nature's Future*, 84 YALE L. J. 545 (1975); Laurence H. Tribe, *Ways Not to Think About Plastic Trees: New Foundations for Environmental Law*, 83 YALE L. J. 1315 (1974) (discussing the utility of nature and the natural); Mark Sagoff, *On Preserving the Natural Environment*, 84 YALE L. J. 205 (1974) (rejecting the utilitarian calculation that plastic trees cost less and last longer than real trees).

<sup>134</sup> Lindsey, *supra* note 5 (quoting Cristina Milesi).

<sup>135</sup> See Rappaport, *supra* note 8, at 914 n. 152 (providing examples of weed ordinance language).

<sup>136</sup> See Schindler, *Of Backyard Chickens*, *supra* note 43, at 241 (“[A]esthetics and the prevention of blight, which could lead to a nuisance, are both of concern to the town in determining what belongs in a front yard.”).

## II. REGULATING LAWNS

Change in environmental law and policy requires intentional action.<sup>137</sup> Such action can take the form of law (including mandates and bans),<sup>138</sup> norms,<sup>139</sup> market-based mechanisms (including economic incentives),<sup>140</sup> or architecture.<sup>141</sup> While scholars have shown an increased interest in determining the appropriate regulatory scope for individual behavior that impacts the environment,<sup>142</sup> and have debated which techniques would be most appropriate for different types of harms,<sup>143</sup> few have focused on bans.<sup>144</sup> Although some scholars and regulators view bans as too harsh and broad-stroked for the harms that they target, they are currently used in some instances.<sup>145</sup> Further, worsening climate change impacts might alter the physical and regulatory landscape, necessitating a more stringent approach to regulation in the future.<sup>146</sup> In fact, many local ordinances that once

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<sup>137</sup> Doremus, *Evolution*, *supra* note 74, at 1093 (“Changes in law are always intentional, chosen by some human agency.”) Of note, even deregulation can be a form of intentional action. *See infra*, part II, § (C).

<sup>138</sup> Law “directs behavior in certain ways” and threatens individuals with sanctions if they do not comply. *See* Lawrence Lessig, *The New Chicago School*, 27 J. LEGAL STUD. 661, 662 (1998). By mandates, I mean laws that prohibit some action; that limit the extent of that action or the conditions under which it may be taken; or that affirmatively require some course of action. *See generally*, Edward K. Cheng, *Structural Laws and the Puzzle of Regulating Behavior*, 100 NW. U. L. REV. 655, 659 (2006). By bans, I mean the subset of mandates dealing with the complete prohibition of a certain behavior or action.

<sup>139</sup> Norms constrain behavior through community enforcement, not through some official rule or source. *See generally* Lessig, *supra* note 138; Richard A. Posner, *Social Norms and the Law: An Economic Approach*, 87 AM. ECON. REV. 365, 365 (1997).

<sup>140</sup> “Markets regulate through the device of price.” Lessig, *supra* note 138. Although technically economic incentives are a way that the law regulates markets, I will address incentives along with markets.

<sup>141</sup> *See* Lessig, *supra* note 138, at 662-63. In practice, it is hard to separate these categories from one another.

<sup>142</sup> JASON J. CZARNEZKI, *EVERYDAY ENVIRONMENTALISM: LAW, NATURE, AND INDIVIDUAL BEHAVIOR passim* (2011). *See also* Vandenberg, *From Smokestack to SUV*, *supra* note 70, at 554.

<sup>143</sup> *See generally* CZARNEZKI, *supra* note 142; SUNSTEIN, *RIGHTS REVOLUTION*, *supra* note 72; Gunnar S. Eskeland & Emmanuel Jimenez, *Choosing Policy Instruments for Pollution Control: A Review* (The World Bank, Working Paper No. 624 1991), *available at* [http://www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1991/03/01/000009265\\_3961001045114/Rendered/PDF/multi\\_page.pdf](http://www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1991/03/01/000009265_3961001045114/Rendered/PDF/multi_page.pdf).

<sup>144</sup> *See supra* note 138 (defining bans).

<sup>145</sup> For example, health concerns have led to bans on using asbestos and smoking. *See, e.g.*, *U.S. Federal Bans on Asbestos*, U.S. EPA, <http://www.epa.gov/asbestos/federalbans.html> (last updated Nov. 14, 2012); Julie Steenhuysen, *Half of U.S. States Have Comprehensive Smoking Bans*: CDC, REUTERS (Apr. 21, 2011 11:43 PM), <http://www.reuters.com/article/2011/04/22/us-usa-smoking-idUSTRE73K6JM20110422>.

<sup>146</sup> Water shortage is already a pressing problem. *See, e.g.*, Tim Gaynor & Steve Gorman, *Fast-Growing Western U.S. Cities Face Water Crisis*, REUTERS (Mar. 11, 2009, 5:19 PM), <http://www.reuters.com/article/2009/03/11/us-water-cities-idUSTRE52A1WY20090311>.

To save precious water, some say, Californians will simply have to get rid of their lawns. Incredible suggestions are being made as water-saving alternatives. Some seem ridiculous, such as filling entire front yards with artificial plants and dyeing lawns green. Others sound sublime, such as replacing water-needy plants

seemed innocuous—those limiting front yard cover to lawns, for instance—are now being placed under the microscope as municipalities try to find many small ways in which they can increase their sustainability.<sup>147</sup> Because “[c]limate change is a private property problem,” it will likely lead to greater restrictions on individual behavior and the use of private property.<sup>148</sup>

This Part will first consider the benefits and shortcomings of regulatory methods other than law that could be used to reduce the predominance of lawns in the U.S. It will then bracket those approaches, and focus on the role that legal regulation might play. It will address arguments against relying on mandates and bans, but conclude that those arguments are less compelling than their critics suggest, and that bans could serve an important role in alleviating lawn-related harms in some instances.

### A. Norm Change

The preeminent role of front lawns in the U.S. is due in large part to a pervasive norm.<sup>149</sup> Author Michael Pollan believes that this norm involves “a deep distrust of individualistic approaches to the landscape. The land is too important to our identity as Americans to simply allow everyone to have his own way with it.”<sup>150</sup> The strength of the norm, evinced by the fear of social sanctions for failing to maintain a neat front lawn, results in entrenchment despite the many

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with Mediterranean and California natives that can survive almost entirely on natural rainfall. There is talk among city and county officials not only of limits on how much area around a home can be planted with turf and of ‘official’ plant lists that would mandate which plants can and cannot be grown, but of outright bans on lawns.

Smaus, *supra* note 2. The fact that the Los Angeles Times mentioned a lawn ban suggests that this possibility is one that has at least been discussed over time, even if it has not yet been broadly adopted. *See* Smaus, *supra* note 2.

<sup>147</sup> *See* Rappaport, *supra* note 8 at 918 n. 165 (referring to weed laws as “generally irrational because enforcement of the prohibition does not further the articulated public safety and health goals”).

<sup>148</sup> Paul Babie, *Climate Change: Government, Private Property, and Individual Action*, SUSTAINABLE DEV. L & POL’Y, 19, 19 (2011).

<sup>149</sup> *See generally*, Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338, 359 (1997) (discussing lawn norms). Pollan, *supra* note 1 (“I daydreamed of scalping the entire yard. But I didn’t do it – I continued to observe front-yard conventions, mowing assiduously and locating all my new garden beds in the backyard.”). The norm, bolstered by ordinances, supports the idea that only lawns belong in front yards. There is some evidence that this norm is starting to change in some parts of the country, as front-yard gardens are becoming legally and normatively acceptable. *See* Schindler, *Of Backyard Chickens*, *supra* note 43, at 294-95.

<sup>150</sup> Pollan, *supra* note 1, at 41 (noting that Americans are bound by “common land, rather than race or tribe,” and “once we decide that the land should serve as a vehicle of consensus, rather than an arena of self-expression, the American lawn-collective, national, ritualized, and plain – begins to look inevitable”). Of course, this norm could evolve; eventually, front yards might still look identical, but would not be filled by turf. Further, norms vary by locality; not every U.S. neighborhood follows the industrial lawn norm. *See* Eric A. Posner, *Strategies of Constitutional Scholarship*, 26 LAW & SOC. INQUIRY 529, 542 (2001).

harms associated with lawns.<sup>151</sup> The norm could be what Ellickson terms “welfare maximizing—one that seeks to solve collective action problems.”<sup>152</sup> Under this theory, the goal of the lawn norm might be maximization of aggregate property value in a neighborhood.<sup>153</sup> But this norm appears to be self-reinforcing and circular: property value is tied to lawns due, in part, to the historic expectation of lawns. But this is not because the lawn norm is inherently good or valuable; it is because no one wants to deflect from the norm for fear of social sanctions (and because the norm has likely resulted in some having a true preference for lawns).<sup>154</sup> A locality interested in norm shift might consider how it can change expectations about lawns and at the same time protect property values if the neighborhood moves away from lawns.

In some instances, informational campaigns can work to change norms,<sup>155</sup> which can in turn result in more environmentally responsible behavior.<sup>156</sup> For example, a locality could work to promote information about how much money a household could save by not watering its lawn; a similar approach has been used in the context of energy efficiency.<sup>157</sup> However, norms are often slow to change, even with the aid of informational campaigns.<sup>158</sup> And norms are often sticky—they persist even when they do not make much sense or are harmful to the

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<sup>151</sup> Tekle, *supra* note 12, at 228 (discussing “a fear . . . that our neighbors will look down upon or think less of us, subtle actions that may translate into the harsher acts of gossip, isolation, and social excommunication or banishment because we have opted out of the front-lawn social code”). Tekle describes the social sanctions imposed on Michael Pollan’s family when his father stopped mowing the lawn, including neighbors slowly and angrily driving by the house, and eventually resulting in self-imposed exile. *Id.* at 228-229, (citing MICHAEL POLLAN, *SECOND NATURE: A GARDENER’S EDUCATION* 20–21 (1991)). See generally ROBERT C. ELLICKSON, *ORDER WITHOUT LAW* (1991) (discussing the role of gossip in enforcing norms in certain tight-knit communities).

<sup>152</sup> ELLICKSON, *supra* note 151, at 167 (1991) (“Members of a close-knit group develop and maintain norms whose content serves to maximize the aggregate welfare that members obtain in their workaday affairs with one another.”).

<sup>153</sup> See *supra* part I, § (B) (discussing property values in the context of lawn norms). See also FISCHEL, *THE HOMEVOTER HYPOTHESIS*, *supra* note 17, at 4-5 (suggesting that homeowners seek to preserve their home’s value, and therefore make self-interested regulatory decisions).

<sup>154</sup> See Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903, 929 (1996) (“[T]he deterrent effect of social norms on acts and beliefs creates a sharp disjunction between public acts (including speech) and private thought. Hence a state of affairs may persist even though there is widespread opposition to it. And eventually the norms may affect private thought itself.”).

<sup>155</sup> Kuh, *supra* note 7, at 1118 (noting academic discussions of the important role of informational and norm campaigns). See also *id.* at 1116 (“A public-information campaign designed to encourage people to cease backyard burning is a regulation of norms designed to influence, and thereby to regulate indirectly, individual behaviors.”).

<sup>156</sup> Babcock, *Assuming Personal Responsibility*, *supra* note 67, at 120-21 (discussing norm change).

<sup>157</sup> Sarah Schindler, *Encouraging Private Investment in Energy Efficiency*, 2011 UNIV. OF CONN. SCH. OF L. CENTER FOR ENERGY & ENVTL. L. POL’Y PAPER 1, 13-15.

<sup>158</sup> See Eric A. Posner, *Law, Economics, and Inefficient Norms*, 144 U. PA. L. REV. 1697, 1713 (1996) (attributing the stubbornness of norms and norm change to information lag and coordination problems, where some are aware of new information that supports the abandonment of an old norm, but others are not).

community.<sup>159</sup> One commentator suggests that the current lawn norm will only fade when more sustainable front yard norms rapidly attract broad public interest.<sup>160</sup> Perhaps this is beginning to happen independently—members of the popular press have begun to write about the growing interest in front-yard gardens and the wastefulness of lawns,<sup>161</sup> and certain thought-leader communities are adopting policies to promote alternatives to standard lawns in response to citizen demands.<sup>162</sup> Although current norms might suggest that homeowners would prefer to retain their existing lawns, and norms often change slowly, a few pioneering communities could lead to an avalanche of changing preferences.<sup>163</sup> Further, movement away from an entrenched norm might occur more naturally when the historic norm is shown to be harmful in contemporary settings.<sup>164</sup>

However, it is also possible that something stronger, like mandates, might be necessary to force change surrounding an entrenched norm more quickly.<sup>165</sup>

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<sup>159</sup> See generally Sunstein, *Social Norms and Social Roles*, *supra* note 154, at 958-59 (1996) (noting that laws shape norms even when they are not regularly enforced “because there is a general norm in favor of obeying the law”); McAdams, *supra* note 149. See also Dan M. Kahan, *Gentle Nudges vs. Hard Shoves: Solving the Sticky Norms Problems*, 67 U. CHI. L. REV. 607, 607-608 (describing the “sticky norms problem” as one where “the prevalence of a social norm makes decisionmakers reluctant to carry out a law intended to change that norm” and suggesting that the law is not always effective at changing norms).

<sup>160</sup> Tekle, *supra* note 12, at 230 (“[R]eal change concerning the front residential landscape benefiting waterways will take place only when ‘green’ front-lawn social norms embracing diverse residential landscapes ‘go viral.’”).

<sup>161</sup> Bittman, *supra* note 15; Steven Kurutz, *The Battlefront in the Front Yard*, N.Y. TIMES (Dec. 19, 2012), <http://www.nytimes.com/2012/12/20/garden/gardeners-fight-with-neighbors-and-city-hall-over-their-lawns.html>; Steven Kurutz, *Giving Gardens a Hand*, N.Y. TIMES (Dec. 19, 2012) <http://www.nytimes.com/2012/12/20/garden/in-santa-monica-calif-gardens-and-gardeners-are-welcome.html>. See also Petrangelo, *supra* note 118, at 779; Tekle, *supra* note 12, at 225 (“simply posing the question of what landscapes are acceptable to front a dwelling or even challenging it in the form of ‘dissident’ landscapes, suggests a slow march to overthrowing the standard-form front lawn and replacing it with landscape choice”); SARA STEIN, NOAH’S GARDEN: RESTORING THE ECOLOGY OF OUR OWN BACK YARDS 244 (1992) (“Some time in the future, the value of a property will be perceived in part according to its value to wildlife. A property hedged with fruiting shrubs will be worth more than one bordered by forsythia.”).

<sup>162</sup> See Schindler, *Of Backyard Chickens*, *supra* note 43, at 236.

<sup>163</sup> See Sunstein, *Social Norms and Social Roles*, *supra* note 154, at 912 (describing “[n]orm cascades [that] occur when societies experience rapid shifts toward new norms”). Communities could usher in change by demonstrating the relationship between a new form of behavior (e.g., lawn alternatives) and values that others hold in high regard (e.g., environmentalism). See Amitai Etzioni, *Social Norms: Internalization, Persuasion, and History*, 34 LAW & SOC’Y REV. 157, 169 (2000). Under those circumstances, homeowner preferences would point towards legal change.

<sup>164</sup> See Stern, *supra* note 65, at 413 (describing norm change as a process that is driven by awareness of adverse consequences to the things that people value). See also Smaus, *supra* note 2 (“Even without threats from city governments, some gardeners have already said their farewells to front lawns, the least used of lawns. ‘I got sick and tired of pushing a lawn mower for almost 80 years,’ says [a Los Angeles man], who tore out an aging Bermuda-grass lawn and replaced it with various succulents and ground covers . . . . ‘All that mowing, edging, fertilizing and weeding got to me. . . .’”)

<sup>165</sup> See Sunstein, *Social Norms and Social Roles*, *supra* note 154, at 910 (“Some norms are obstacles to human well-being and autonomy. It is appropriate for law to alter norms if they diminish well-being.”). Recently, governments have attempted to impose mandates to force norm change with respect to limits on the size of sugary drinks and on smoking in public spaces. See,

Because climate change problems are intensifying and the current drought is increasing water scarcity problems in much of the country, rapid action is necessary. Further, while the harms from norm defection are internalized in the first person in the neighborhood to replace a lawn with xeriscaping—she risks damaging her property value and angering her neighbors for little (cumulative) environmental benefit—harms from maintaining lawns are broadly dispersed. Law is useful at coordinating behavior in the face of collective action problems and internalizing externalities.<sup>166</sup>

## B. Markets and Incentives

Many governments view market-based strategies as an efficient tool for abating pollution.<sup>167</sup> There is similar potential for incentives to play an important role in furthering sustainable policies in the face of water scarcity and climate change.<sup>168</sup> With respect to limiting the existence of lawns, there are a number of possible market-based solutions and incentives that would effectively impose stiff economic penalties on those who choose to maintain a lawn. Some of these would directly relate to water usage. Although many do not realize it, water in the U.S. is dramatically subsidized,<sup>169</sup> leading to “ridiculously low” water prices.<sup>170</sup> Thus, localities could charge consumers the true marginal cost of water in order to disincentivize wasteful water usage, including use for lawns.<sup>171</sup>

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Jill Colvin, *New York Soda Ban Approved*, THE HUFFINGTON POST (Sept. 13, 2012), [http://www.huffingtonpost.com/-2012/09/13/new-york-approves-soda-ban-big-sugarydrinks\\_n\\_1880868.html](http://www.huffingtonpost.com/-2012/09/13/new-york-approves-soda-ban-big-sugarydrinks_n_1880868.html) (describing New York City’s attempted prohibition on the sale of “sugar-sweetened drinks in cups larger than 16 ounces”); *U.S. Smoking Bans, State by State*, THE HUFFINGTON POST, [http://www.huffington-post.com/2011/02/23/smoking-bans-state-by-state\\_n\\_826672.html-#s244139&title=Alabama](http://www.huffington-post.com/2011/02/23/smoking-bans-state-by-state_n_826672.html-#s244139&title=Alabama) (last updated May 25, 2011) (“In the U.S., 38 states have some kind of state-wide legislated action banning smoking.”). One commentator suggests that the use of reusable bags instead of plastic bags at the grocery store is an example of norm change. Tekle, *supra* note 12, at 242. However, in some localities, public laws have been enacted banning plastic bags. See LONG BEACH, CAL., MUN. CODE § 8.62.030 (2011) (prohibiting stores from providing customers with plastic carryout bags). Other municipalities have incentivized reduced plastic bag use by providing a discount for using a reusable bag or charging for using a plastic bag. See, e.g., LOS ANGELES COUNTY, CAL., CODE § 12.85.040 (2010) (requiring stores that provide recyclable paper bags to customers to charge 10 cents for each bag provided). Thus, it is not clear that the norms changed without the help of public law in this instance.

<sup>166</sup> See Epstein, *supra* note 112, at 747.

<sup>167</sup> Glenn P. Jenkins & Ranjit Lamech, *International: Market-Based Incentive Instruments for Pollution Control*, INT’L BUREAU OF FISCAL DOCUMENTATION BULL. 523, 524 (Nov. 1992) available at [http://jdintl.econ.queensu.ca/publications/qed\\_dp\\_99.pdf](http://jdintl.econ.queensu.ca/publications/qed_dp_99.pdf).

<sup>168</sup> These are not pure market mechanisms. They are a hybrid of law and market regulation, in part because we do not have pure markets for public utilities like water.

<sup>169</sup> See generally Tekle, *supra* note 12, at 241 n. 117.

<sup>170</sup> Robert Glennon, *Water Scarcity, Marketing, and Privatization*, 83 TEX. L. REV. 1873, 1882-84 (2005) (discussing the elimination of water subsidies).

<sup>171</sup> “Economic theory suggests that if the monetary value of the environmental damage [] can be determined, an environmental charge equal to the cost of damage could be established to serve as a disincentive for environmentally harmful behaviour.” Jenkins & Lamech, *supra* note 167 (discussing incentives and market-based mechanisms for addressing environmental harms).

One example of a water conservation incentive is progressive block-pricing for water usage.<sup>172</sup> Under this scheme, a baseline of water usage is priced moderately, but each additional increment of water used is priced higher.<sup>173</sup> Because conventional lawns consume such a large amount of water, affected homeowners might respond to increased water prices by watering their lawns less frequently or removing and replacing them with less water-intensive options (assuming the local ordinances permit them to do so).<sup>174</sup> These incentives tied to water usage would serve to treat water more like a commodity by forcing consumers to pay for its actual value.<sup>175</sup>

Incentives might instead relate directly to lawns. For example, some municipalities and water districts pay people to tear up their existing lawns.<sup>176</sup> Although it is not clear why governments should pay people to avoid harming others, lawn removal and replacement can be expensive, and this approach has had some success in Las Vegas.<sup>177</sup> Local governments could also impose a “lawn

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<sup>172</sup> See, Hawes, *supra* note 123 (“On the residential side, the greatest opportunity to save [water] occurs regarding outdoor use. Incentives to encourage outdoor conservation include metering coupled with rate structures that reflect actual water use: the more a household uses, the more it pays and vice versa.”); *Water Rates*, SW. FLA. MGMT. DISTRICT, <http://www.swfwmd.state.fl.us/-conservation/waterrates/> (last visited Feb. 21, 2013) (“Without decreasing revenues, utilities can lower water use by inclining block rates, that is, water price increases with increasing blocks of water use.”); *Residential Water Rates*, TUALATIN VALLEY WATER DISTRICT, <http://www.tvwd.-org/customer-services/residential-water-rates.aspx> (last visited Feb. 22, 2013).

<sup>173</sup> Similar techniques are used with energy pricing. See Kuh, *supra* note 7, at 1128 (describing “pricing mechanisms” including “charging more for energy use above a set baseline”).

<sup>174</sup> But see Michael P. Vandenberg et al., *Individual Carbon Emissions: The Low-Hanging Fruit*, 55 UCLA L. REV. 1701, 1704 (2008) (citing research that suggests that price signals may have only a limited effect on behavior).

<sup>175</sup> Barton H. Thompson, *Water as a Public Commodity*, 95 MARQ. L. REV. 17, 24-25 (2011) (addressing subsidization of water). Another water-based incentive would provide rebates for installing water-efficient devices. See, e.g., SCOTTSDALE, ARIZ., CODE ch. 49, art. VII, div. 1, § 243 (2005) (rebating property owners the lesser of cost or \$250 per unit for installation of programmable irrigation controllers).

<sup>176</sup> See, e.g., “Cash-for-Grass” Turf Rebate, NORTH MARIN WATER DISTRICT, [http://www.nmwd.com/-conservation\\_exterior.php#CashForGrass](http://www.nmwd.com/-conservation_exterior.php#CashForGrass) (last visited Feb. 20, 2013) (describing the North Marin Water District’s rebate program that pays residential customers \$50 per 100 square feet of lawn removed and converted to native low-water-use landscape or synthetic turf); SCOTTSDALE, ARIZ., CODE ch. 49, art. VII, div. 1, § 243 (2005) (rebating single-family residential customers up to \$1,500 and commercial and multifamily customers up to \$3,000 for removing turf and replanting with low-water use landscaping).

<sup>177</sup> See *Water Smart Landscapes Rebate*, S. NEV. WATER AUTH., <http://www.snwa.com/-rebates/wsl.html> (describing the rebate program); S. NEV. WATER AUTH., A REGIONAL SOLUTION: MILESTONES 1991-2011 15 (May 4, 2012), available at <http://www.leg.state.nv.us/Interim/-76th2011/Exhibits/Lands/E050412B-1.pdf>. (“The SNWA’s...rebate program is one of the most successful initiatives of its kind in the world. The [ ] rebate program has resulted in the conversion of more than 157 million square feet of lawn to water-efficient landscaping, saving Southern Nevada more than 8.7 billion gallons annually.”). The money for this program comes from federal grants, water service delivery and connection charges, usage fees, sales tax, and municipal bonds. U.S. BUREAU OF RECLAMATION, WATERSMART WATER AND ENERGY EFFICIENCY PROGRAM AND WATER CONSERVATION FIELD SERVICES GRANTS: WATER SMART LANDSCAPE REBATE PROGRAM IN CLARK COUNTY, NEVADA FINAL SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT 1 (Sept. 2010), available at

tax,”<sup>178</sup> which would allow people to maintain their lawns, but would require them to pay a price to do so. The tax could be coupled with and fund an incentive payment for the removal of existing lawns.<sup>179</sup> In the alternative, a locality could decide to grant a tax credit or reduction to those individuals who opted to remove their lawns, or who instead planted environmentally-friendly landscapes.<sup>180</sup> This would alleviate the need to find a positive funding source for the lawn removal incentive.

While they offer numerous avenues for change, there are also concerns associated with market-based mechanisms and incentives. For example, Professor Doremus suggests that markets will not adequately protect public, collective interests, but rather, “changes to underlying property rules will be needed if those interests are to be sustained.”<sup>181</sup> She posits that markets will only look after private interests; regulation through law is best suited to protect “public values,” including the quality of the environment.<sup>182</sup> Thus, in order to effectively protect the many aspects of the environment that are public goods, including things like biodiversity and ecosystem services, individuals will need to sacrifice some control over private property usage. More broadly, one commentator warns against a global commodities market for water, drawing analogies to problems associated with derivatives and mortgage-backed securities as well as food prices, food shortages, and speculation.<sup>183</sup>

Further, regulation via incentive is inherently tied to norms: if people care more about the benefits that they receive from their lawns than the benefits they would receive from an incentive, they may not take action pursuant to that incentive; the norm may be stronger than the incentive, especially in the case of wealthy individuals. The incentive might even reinforce the norm among the

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\_SNWA\_Final\_Supp\_EA\_and\_FONSI\_09-27-2010.pdf; S. NEV. WATER AUTH., A REGIONAL SOLUTION *supra* note 177, at 15. *See also* “Cash for Grass” Turf Rebate, *supra* note 176 (describing a similar program run by the NMWD). Of course, these are not pure market based solutions. They are a combination of markets and legal regulation, and they may be aimed at changing norms. In practice, various mechanisms of regulation overlap and influence each other.

<sup>178</sup> *See* Editorial, *Unthinkable? A Lawn Tax: Lawns, Once a Celebration of Status, are Nowadays an Affront to Changing Climate*, THE GUARDIAN, (Apr. 6, 2012), <http://www.guardian.co.uk/-commentisfree/2012/apr/06/editorial-unthinkable-lawn-tax> (suggesting that “a tax on private lawns beyond a certain size is within the gift of every chancellor”).

<sup>179</sup> The tax proceeds could be remitted to fund lawn removal programs.

<sup>180</sup> For example, New Jersey is currently entertaining a bill that would provide taxpayers owning property within 1,000 feet of Barga Bay and its tributaries with a recurring annual state tax credit of \$250 for replacing grass lawns on their property with stones, crushed shells, or other materials that require no fertilizers or pesticides. H.R. 406, 215<sup>th</sup> Leg., Reg. Sess., (N.Y.) (as introduced, Jan. 1, 2012). A Florida statute requires water districts to encourage local governments to incentivize landscaping that decreases water usage, eliminates invasive species, and limits the amount of ground that can be covered by turfgrass. FLA. STAT. ANN. § 373.185 (West 2009).

<sup>181</sup> Doremus, *Evolution*, *supra* note 74, at 1091, 1118 n. 159 (also noting that “markets typically underprovide public goods”—including environmental quality—due to free-rider problems).

<sup>182</sup> *Id.* at 1119. This critique might apply with less force to quasi-market forces like tax incentives.

<sup>183</sup> Frederick Kaufman, *Wall Street’s thirst for water*, 490 NATURE 7421 (Oct. 25, 2012).

wealthy because it increases the cost of maintaining the lawn as a sort of Veblen good.<sup>184</sup> Thus, incentives might further segregate rich from poor neighborhoods, and function as a form of exclusionary zoning with rich neighborhoods being defined by their ability to afford lawns. Of course, because localities should primarily care about the cumulative harms associated with lawn maintenance, the existence of a few holdouts is acceptable, and economic theory would suggest that so long as the incentive price is set correctly, most households will participate.<sup>185</sup>

### C. Architecture

Architectural solutions—“features of the world”—are almost always difficult to decouple from the other vectors of regulation.<sup>186</sup> For example, one could argue that building up to the property line but installing a green roof, harvesting rainfall to water lawns, or separating the drinking water supply from the non-potable water system, are architectural solutions. Each alters the built world in a way that reduces lawns or mitigates their harms. To the extent that a municipality neither expressly permits nor forbids those behaviors, perhaps they are architectural solutions. But in the realm of land use and lawns, legal intervention into architecture (e.g., setbacks, rainwater capture prohibitions, and water distribution network design) and markets (e.g., water pricing)—and their resulting influence on social norms—all but guarantees that there are no pure design solutions. Much like markets and norms, architectural solutions cannot be decoupled from changes to existing legal structures.

Further, perhaps the greatest architectural change has already happened—climate change and drought. Although localities are working against this change via mitigation techniques, they are also beginning to implement adaptation measures.<sup>187</sup> Put simply, the physical world that we have created by our behavior is, in many parts of the country, one less hospitable to lawns. So, if we choose to maintain lawns at their current levels in the face of that change, it will require even more substantial legal and market intervention.

Deregulation might offer an attractive first step. Local governments could begin to address lawn harms by removing existing restrictions that encourage lawns: weed laws and setback requirements. Although this would not actively incentivize individuals to stop maintaining industrial-style lawns, it would *allow* them to do so.<sup>188</sup> If deregulation in conjunction with norm change was not

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<sup>184</sup> The expense of a Veblen good makes it desirable as a status symbol. *See generally* THORSTEIN VEBLÉN, *THE THEORY OF THE LEISURE CLASS; AN ECONOMIC STUDY OF INSTITUTIONS* (1899). *See also* *It's Expensive, So It Must Be Good*, *THE ECONOMIST* (Sept. 2, 2009), [http://www.economist.com/blogs/-freeexchange/-2009/09/its\\_expensive\\_so\\_it\\_must\\_be\\_go](http://www.economist.com/blogs/-freeexchange/-2009/09/its_expensive_so_it_must_be_go).

<sup>185</sup> *See* Sharon Beder, *Economic Incentives for Environmental Protection*, 15(3) *ECODATE* 6 (2001) (“In the case of price-based measures, their effectiveness will depend on whether the prices or charges are high enough.”).

<sup>186</sup> Lessig, *supra* note 138, at 662-63.

<sup>187</sup> *See generally*, Sally Kane & Jason F. Shogren, *Linking Adaptation and Mitigation in Climate Change Policy*, 45 *CLIMATIC CHANGE* 75 (2000).

<sup>188</sup> When property owners are free to use their land as they wish, they will theoretically use it efficiently and for its highest and best use. *See generally* Schindler, *Of Backyard Chickens*, *supra* note 43, at 282-83 (discussing the trend toward deregulation and the economic benefits of

sufficient to address the harms, affirmative mandates could be adopted to *force* lawn replacement. Any autonomy concerns would be managed if the municipality allowed various alternatives—xeriscaping, vegetable gardens, etc.<sup>189</sup>—with which a homeowner could replace the lawn.<sup>190</sup>

#### D. Law: Mandates and Bans

As lawn-related harms become more pressing, it is likely that deregulation alone will not be sufficient; localities may turn to the aforementioned regulatory methods to foster sustainability and ensure harm-reduction. While incentives may be sufficient to reduce water consumption and alleviate other lawn-related harms at the present time, mandated reductions in water consumption might be more important policy tools in the future. Further, legal regulation encompasses varying levels of strictness—from mandated reductions to outright bans.<sup>191</sup> This section will address some concerns with legal regulation, but will then discuss why these solutions may be appropriate to address the harms associated with lawns in the future.

As a starting point, it is important to acknowledge that, at the present time, pervasive lawn regulation is unlikely in all but the most drought-ridden areas. This is in part because mandates—and especially bans—are often seen as unlikely or politically untenable for a number of reasons. First, they are generally disfavored and unpopular.<sup>192</sup> Public choice theory suggests that mandates—those that would provide amorphous benefits to the community at large, but would substantially burden individual homeowners—would not garner enough organized support to persuade local politicians to implement them.<sup>193</sup> Further, some commentators suggest that mandates are politically unlikely because laws will not

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deregulated property). *See also* Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 720 (1986).

<sup>189</sup> *Supra*, Part I, § (D).

<sup>190</sup> *See* Sunstein, *Social Norms and Social Roles*, *supra* note 154, at 961 (“A citizen can be understood as autonomous insofar as she is able to choose among a set of reasonably good options and to be reflective and deliberative about her choice.”).

<sup>191</sup> A ban entirely outlawing all turfgrass is an extremely restrictive form of mandate—“the most burdensome regulatory option.” *See* *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201, 1215-16 (5th Cir. 1991) (discussing the retroactive asbestos ban). However, a municipality could instead simply limit the amount of ground area that turfgrass can occupy. *See, e.g.*, Benke, *supra* note 58 (discussing Albuquerque, and noting that “[w]ith water becoming scarce, [ ] the city is restricting the cultivation of lawns . . . [by] limit[ing] high-water-use lawns to just 20 percent of any new home lot”).

<sup>192</sup> *See, e.g.*, Vandenbergh et al., *Individual Carbon Emissions*, *supra* note 174, at 1103-04 (“Regulations that seek to direct personal behavior by fiat are exceedingly unpopular”); Cheng, *supra* note 138, at 659-62 (criticizing mandates). *See also* Kuh, *supra* note 7, at 1120 n. 21 (stating that “even if such mandates were adopted, they would engender public outcry and be repealed or disobeyed”). *See also* *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201, 1215-16 (5th Cir. 1991) (petitioners describing the EPA ban on existing and future asbestos use as the “death penalty alternative”).

<sup>193</sup> Public choice theory suggests that “[t]here is no public or general or social interest, there are only concatenations of particular interests or private preferences.” Frank I. Michelman, *Political Markets and Community Self-Determination*, 53 IND. L.J. 145, 148 (1977-9178).

change until the norms underlying those laws change.<sup>194</sup> But this argument is specious because it ignores the fact that norm change often follows legal change, and that the police power is broad enough to lead despite opposing norms.<sup>195</sup>

Although widespread lawn bans are currently unlikely, climate change may put many of these issues on the table; “[c]risis can lower political barriers to legal change.”<sup>196</sup> Some would call the current drought in many parts of the U.S. a crisis,<sup>197</sup> and looking forward, climate scientists almost universally predict that radical, catastrophic changes in the natural environment will soon occur as a direct result of climate change.<sup>198</sup> In times of national crisis, policies that were previously politically untenable—or even viewed as illegal or unconstitutional—may become the controlling policies to address the problems that are causing the crisis.<sup>199</sup> As more individuals in more parts of the country feel the effects of

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<sup>194</sup> See, e.g., Tekle, *supra* note 12, at 239; Kuh, *supra* note 7, at 1118. In her informative article about lawns, Professor Tekle addresses the idea of a ban on lawns only briefly and dismissively. She states,

In the absence of meaningful cultural change, government mandates in the form of public law requiring or even suggesting alternative landscapes likely will not work. In theory, 160 years of front lawn norms could be changed by the stroke of the mayor and town council's pen, but in practice, this change is likely highly illusory. Citizens may find it difficult to comply with the new laws, and, consequently, local officials may find it difficult to enforce them. Once culture catches up with science, then the law, as a reflection of societal values, can catch up with culture.

Tekle, *supra* note 12, at 239. This discussion seems to conflate the issues of power to enact a ban with its subsequent enforcement. The fact that enforcement might be difficult (although this author would suggest otherwise, especially if the ban only covers front yards) does not weaken the police power justifications for the passage of a ban in the first place. Further, Professor Tekle fails to explain why such a ban would be “illusory” and “will not work,” especially given the fact other sustainability mandates, such as green building ordinances, have been quite successful.

<sup>195</sup> *Supra* note 165.

<sup>196</sup> Doremus, *Evolution*, *supra* note 74, at 1115.

<sup>197</sup> See, e.g., Brad Plumer, *As Food Prices Spike, How Close is the World to Another Crisis?*, WASH. POST (Aug. 9, 2012), <http://www.washingtonpost.com/blogs/wonkblog/wp/2012/08/09/could-the-u-s-drought-trigger-another-global-food-crisis/>.

<sup>198</sup> See, e.g., ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT, ENVIRONMENTAL OUTLOOK TO 2050: CLIMATE CHANGE CHAPTER 21 (2010) (In Africa, “[b]y 2020, between 75 and 250 million people are projected to be exposed to increased water stress.”); INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT – PUMMARY FOR POLICYMAKERS 11 tbl. 2 (2007) (In Australia and New Zealand, “[b]y 2020, significant loss of biodiversity is projected to occur in some ecologically rich sites.”).

<sup>199</sup> See BRUCE ACKERMAN, WE THE PEOPLE: TRANSFORMATIONS 409 (1998) (“During normal politics, the center of American politics is occupied by politicians and parties content with interstitial modifications of the existing regime . . . . While there are many groups devoted to fundamental reform, each wants to transform the system in very different ways, and none can plausibly claim to set the agenda for the mainstream of American opinion. That is what changes during a constitutional moment . . . a broad movement of transformative opinion has now earned the authority to set major aspects of the political agenda.”). See also Philip J. Weiser, *Ackerman's Proposal for Popular Constitutional Lawmaking: Can It Realize His Aspirations for Dualist Democracy?*, 68 N.Y.U. L. REV. 907, 907 (1993) (“[T]he public will muster sufficient support to enact constitutional referendum proposals only in those times of crisis which he terms “constitutional moments.”); Mark V. Tushnet, *The Flag-Burning Episode: An Essay on the Constitution*, 61 U. COLO. L. REV. 39, 47-48 (1990) (Ackerman distinguishes “between times of

severe water shortage, pollution, and climate change,<sup>200</sup> they may become more likely to support policies previously thought to be radical, as well as the politicians who adopt those policies, in order to target crisis-related harms.<sup>201</sup>

Another concern is that mandates directed at individuals sometimes suffer from an “intrusion objection,” which involves opposition to a perceived invasion of “privacy or other civil liberties in a manner unpalatable to the public.”<sup>202</sup> Many believe that banning the actions of private citizens impinges too substantially on private rights, including private property rights.<sup>203</sup> Challenges to land use ordinances are often founded in general libertarian property rights theory, the idea being that the fewer regulations on the use of the property there are, the better, as

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ordinary politics, when the mundane and routine dominate the nation's consideration of political issues, and . . . constitutional moments, [when] the public is attentive to fundamental issues of constitutional government—we consider what sort of government we want to have, we consider what kinds of limits we want to place on that government, and, most important, we recognize that the arrangements we put in place will persist for a relatively long time.”). *See also* Walter Dean Burnham, *Constitutional Moments and Punctuated Equilibria: A Political Scientist Confronts Bruce Ackerman's We the People*, 108 YALE L.J. 2237, 2246 (1999) (describing Ackerman's “view that in constitutional moment crises the public is also transformed for the duration of the crisis. It becomes energized, mobilized, and, even less plausibly, proactive rather than reactive, as it usually is. At these times, the public can and sometimes does lead politicians, rather than the other way around.”).

<sup>200</sup> One could argue that this is already happening. *See, e.g., Climate Change Facts: Answers to Common Questions*, U.S. EPA, <http://epa.gov/climatechange/facts.html> (last updated June 14, 2012) (noting that the rise in global temperatures has been accompanied by more intense storms, more frequent and severe heat waves, and rising sea levels, which have “already put coastal homes, beaches, roads, bridges, and wildlife at risk”).

<sup>201</sup> An important distinction between this idea and Ackerman's concept of constitutional moments is that currently, according to the analysis set forth in this Article, these bans are already “legal,” even if they are applied retroactively. *Cf.* Gregg Costa, *John Marshall, the Sedition Act, and Free Speech in the Early Republic*, 77 TEX. L. REV. 1011, 1047 (1999) (noting that “Ackerman's influential theory of ‘constitutional moments,’ [] posits that political crises can result in fundamental constitutional reinterpretation”). They are not, however, likely politically tenable in most jurisdictions at the present time. This is the key tie-in to Ackerman's ideas. In times of crisis, the idea of a lawn mandate may become sufficiently politically palatable to withstand challenges, or at least to withstand the removal of those public elected officials who passed the ordinances imposing the bans.

<sup>202</sup> *Kuh, supra* note 7, at 1119-1120. *See also* *Olmstead v. United States*, 277 U.S. 438, 479 (Brandeis, J., dissenting) (overruled on other grounds) (“The greatest dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding.”); Babcock, *Global Climate Change, supra* note 17, at 5-6 (2009) (describing individual mandates as “costly” and likely to “trigger enormous political resistance because of the interference with individual liberty and invasion of privacy”); Vandenberg, *From Smokestack to SUV, supra* note 70, at 598 (noting concerns with the “intrusiveness” of enforcing mandates on individual behavior which might “undermine compliance or produce a political backlash”).

<sup>203</sup> There is a prevailing cultural view that Americans “accept that individual landowners rightly ought to be vested with decisions about how best to use” their land. Timothy Beatley, *Americanizing Sustainability: Based Approaches to the Global Challenge*, 27 WM. & MARY ENVTL L. & POL'Y REV. 193, 212 (2002). *See also* Hawes, *supra* note 123 (“Elected officials may consider conservation [to be the same as] ending green lawns and therefore politically unpalatable. Water users might think conservation is inconvenient or interfering with private property rights.”).

this will foster more efficient use of property.<sup>204</sup> These views relate to lawns because “[a] strong view of private property empowers the landowner to do what she wishes with her yard.”<sup>205</sup> Indeed, property rights proponents believe that having a lawn is a right—a form of democracy.<sup>206</sup> Even proponents of natural landscapes sometimes take this view, assuming that there is a right to environmentally unfriendly landscapes, and ignoring the strength of the police powers.<sup>207</sup> One commentator suggests that “it would stretch our customary understanding of the appropriate role of regulation to attempt to mandate that an owner . . . systematically remove invasive species.”<sup>208</sup> Although the police power is broad, local governments are still quite deferential to property rights, and thus often fail to pass otherwise legally permissible ordinances that would support principles of sustainability and biodiversity.<sup>209</sup>

However, “the right to use one’s real property as desired, historically cherished as it is, was never conceived as absolute.”<sup>210</sup> And local governments already regulate lawns in the U.S. via weed ordinances, front-yard garden bans, and setbacks, as discussed previously.<sup>211</sup> This effectively eliminates the libertarian argument because the government already interferes with individual lawn choice. Because individuals own property subject to the government’s police power, governments have the ability to “redefine the content of property rights.”<sup>212</sup> The

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<sup>204</sup> See Epstein, *supra* note 112, at 763 (using *Lucas* as an example). It is worth noting that the liberty objection seems to entrench weak property owner preferences. What people value in their neighborhoods is consistency; they do not want their yard to be an outlier. However, once a shift away from lawns occurs, whether through norm pioneering or legal regulation, one could imagine property owners readily embracing xeriscaping, front yard gardens, or synthetic lawns.

<sup>205</sup> Smith, *supra* note 39, at 215.

<sup>206</sup> Beatriz Colomina, *The Lawn at War: 1941-1961*, in *THE AMERICAN LAWN* 149 (Georges Teyssot ed., 1999) (“The lawn represents democracy . . . . Everybody can have a lawn. The lawn is a right . . .”).

<sup>207</sup> See, e.g., Rappaport, *supra* note 8, at 927 (arguing for natural landscapes, but stating, seemingly non-ironically, “[p]eople have a right to astro-turf-covered stoops, closely cropped evergreens, and spinning plastic sun-flowers in their yards. That is the American way.”). See also Bittman, *supra* note 15 (advocating for turning lawns into gardens, but stating, “I’m not going to argue that we should be limiting the size or number of lawns”).

<sup>208</sup> John D. Echeverria, *Regulating Versus Paying Land Owners to Protect the Environment*, 26 J. LAND RESOURCES & ENVTL. L. 1, 7 (2005).

<sup>209</sup> See, e.g., Holly Doremus, *Biodiversity and the Challenge of Saving the Ordinary*, 38 IDAHO L. REV. 325, 346 (2002) (“Despite an under-appreciated history of substantial regulation, real property has somehow become an iconic symbol of individual liberty in America. Landowners assume that they are or should be free to use their land in virtually any way they please, so long as other people are not directly injured by that use. Because that assumption is widespread and politically powerful, the effort to impose the kinds of regulatory controls on land use that are essential to biodiversity protection faces particularly formidable institutional barriers.”). This is beginning to change, as more local governments are beginning to impose sustainability requirements such as green building mandates. See Sarah B. Schindler, *Following Industry’s LEED: Municipal Adoption of Private Green Building Standards*, 62 FLA. L. REV. 285, 285 (2010).

<sup>210</sup> Smith, *supra* note 39, at 215.

<sup>211</sup> *Supra* part I, § (A).

<sup>212</sup> Serkin, *supra* note 110, at 1259. But most discussion of property rights focuses on their strengthening over time, and that that strengthening leads to increases in growth and development. Doremus, *Evolution*, *supra* note 74, at 1095 (internal citation omitted) (“[T]he [scholarly] focus

key is striking the appropriate balance between regulatory control and honoring the autonomy interest in using one's property as one wishes.<sup>213</sup>

The collective fear of imposing mandates—both from the perspective of academics and policymakers—might also be unfounded and less formidable than imagined.<sup>214</sup> That this fear is overstated is evidenced by the fact that “sustainability mandates”<sup>215</sup> are becoming more common. Courts have long recognized that the exercise of the police power “must become wider, more varied and frequent, with the progress of society,”<sup>216</sup> and local government trends toward sustainable policies are an example of that progress. For example, green building ordinances, which require private developers to construct their private development projects to meet certain levels of energy efficiency or sustainable design are now quite common.<sup>217</sup> Some communities restrict leaf blower usage on “ozone action” days;<sup>218</sup> others limit whether and when people can wash their cars or water their lawns;<sup>219</sup> and in some areas, residents are required to separate their

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has remained primarily on the initial emergence and subsequent strengthening of individuated property rights as a reaction to the inefficiencies of collective ownership. The tacit assumption seems to be that change should uniformly run in the direction of increased property rights, because stronger property rights mean increased economic development and growth.”) Although it is understood that governments do at times use law to weaken private property rights, such action is viewed by some as “an aberration.” *Id.* at 1095 n. 16. Thus, the proposal in this Article suggesting a ban on lawns is counter to the general trend. One method of climate change adaptation is changing property rules, which are motivated by recognition of the shared sacrifice that will be necessary to confront a changing climate. *See id.* at 1092 (“The changes that climate change calls for will largely be toward *weaker*, rather than stronger, individual property rights. Strong property rights encourage moral hazard, increasing the costs of adaptation to a warmer world, and may stand directly in the way of societal adaptation.”).

<sup>213</sup> *Supra* part I, § (A).

<sup>214</sup> Kuh, *supra* note 7, at 1112 (discussing the “cost and feasibility of imposing mandates on environmentally significant individual behaviors”).

<sup>215</sup> I use this term to mean mandates or bans, imposed via public law, that aim to require or curtail an action that can lead to a more sustainable environment, and perhaps reduce some negative impacts associated with climate change.

<sup>216</sup> *Boston & Me. R.R. v. County Comm'rs*, 79 Me. 386, 393 (1887).

<sup>217</sup> *See generally* Schindler, *Following Industry's LEED*, *supra* note 209. Green building ordinances may be distinguishable, as they often only apply to large development projects or commercial enterprises, and not to single-family residential homeowners—the group that would be most directly impacted by a retroactive lawn ban.

<sup>218</sup> CZARNEZKI, *supra* note 142, at 41-47.

<sup>219</sup> Kuh, *supra* note 7, at 1114 n. 110 (discussing limits on car washing); *id.* at 1133, (discussing “water-conservation ordinances that prohibit or limit the time or duration of outdoor water use, require the use of hoses that have an automatic shut-off nozzle, bar the washing of impervious surfaces, or require the installation of low-flow fixtures before the sale or major modification of a residential home”). One locality has prohibited the “non-beneficial use of water”. RIO RANCHO, N.M., CODE §§ 52.01-.09 (2011). Thus, if the city of Rio Rancho decided to define lawns as a “non-beneficial use,” their existing ordinance might be interpreted to ban the watering of lawns, and thus could lead to the demise of the lawns themselves. *See also* GARDEN GROVE, CAL., MUNICIPAL CODE § 14.40.042-14.40.44 (2012) (during a “stage 2 water alert,” restricts watering to every other day on an odd-even basis; during a stage 3 water warning, restricts watering to twice a week on an odd-even basis and prohibits watering between 6 AM and 6 PM; during a stage 4 water emergency prohibits all watering); PASCO COUNTY, FLA., CODE § 62-98 (2007) (restricts the watering of established lawns to once per week, except by hand).

recyclables from their trash.<sup>220</sup> Some municipalities have placed restrictions on watering golf courses<sup>221</sup> and at least one prohibits restrictive covenants that require turfgrass.<sup>222</sup> And even affirmative removal mandates are not unheard of: for example, many cities require homeowners to remove snow from the sidewalks fronting their homes.<sup>223</sup> From a private law perspective, some intentional communities are beginning to incorporate sustainability mandates—including bans on gas-powered mowers, leaf-blowers, and industrial fertilizers—into their CC&Rs.<sup>224</sup>

Further, lawn bans should suffer less risk of an intrusion objection than other mandates on individual behaviors because lawn bans are primarily a *property* restriction, not a direct restriction on individual behaviors.<sup>225</sup> Of course, a ban on lawns *de facto* regulates individual behavior, because individual action is inherently limited by property restrictions, but that is not a lawn ban's primary purpose.<sup>226</sup> Further, while many environmentally significant individual behaviors are conducted in private inside the home, this is not so with respect to lawns, on which all activities are conducted outside the home.<sup>227</sup> Thus, the intrusion concerns related to privacy and civil liberties should be less pronounced in the face of a property restriction that only indirectly limits publicly visible behaviors.

Finally, as the effects of climate change make themselves more evident to citizens and policy-makers, the externalities associated with environmentally

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<sup>220</sup> Kuh, *supra* note 7, at 1132 n. 60 (citing S.F., CAL., ENVIR. CODE §§1901-1912 (2011) and NANTUCKET, MASS., CODE §§ 125-2 & 125-5 (2009)).

<sup>221</sup> See, e.g., DOTHAN, ALA., CODE ch 102, art. III, § 166 (2007) (prohibiting watering of golf course fairways during a water emergency); Las Vegas Valley Water District Service Rules § 12.6 (2012) (requiring golf courses using District supplied water to conform to a water budget, pay a surcharge for exceeding the budget, and submit water use reduction plans).

<sup>222</sup> DENVER, COLO., CODE ch. 57, art. V, § 100 (2002) (prospectively prohibiting restrictive covenants that require turfgrass).

<sup>223</sup> The majority of courts considering these ordinances have found them to be valid exercises of the police power. See, e.g., *State v. McMahon* 76 Conn. 97 (1903); *State v. Small* 126 Me. 235 (1927); *Flynn v. Canton Co.* 40 Md. 312 (1874). But see *Chicago v. O'Brien* 111 Ill. 532 (1884) (finding removal ordinance unconstitutional).

<sup>224</sup> See Amy Bray, *How to Create a Green Community*, 24 No. 4 PRAC. REAL EST. LAW 47 (2008) (suggesting prohibition of leaf-blowers and lawn mowers that are gas-powered, as they generate pollution and excessive noise, and stating, “[w]ith respect to landscaping, require use of native plants in landscaping, including wildflowers. Use guidelines to minimize lawn areas and encourage tree planting.”). Bray suggests that “requiring vast expansive lawns are practices that are not appropriate in a community that seeks to be environmentally responsible and ignores the growing trend favoring environmental responsibility in everyday choices.” *Id.*

<sup>225</sup> Lessig, *supra* note 138, at 663-64 (discussing architectural restrictions). See also Kuh, *supra* note 7, at 1128 n. 46 (distinguishing mandates that regulate individuals from those that regulate architecture, and specifically identifying zoning ordinances and green building codes as “mandates directed to individuals at the juncture of construction or renovation, [which] do not directly operate on specific day-to-day behaviors” but recognizing that they “indirectly constrain behavior” and thus categorizing them as “a direct regulation of architecture that indirectly regulates individuals”).

<sup>226</sup> A lawn ban would effectively bar individuals from maintaining a lawn, and would extend to actions like watering, mowing, and fertilizing.

<sup>227</sup> Kuh, *supra* note 7 at 1120. Further, if a ban were limited to the front yard, the behaviors that would be curtailed would be visible to the public.

significant individual behaviors should emerge as a natural target of regulation.<sup>228</sup> Regulation serves as a means of forcing internalization of externalities, which is often necessary in the context of environmental law.<sup>229</sup> Indeed, “[m]ost economic theorists recognize that some level of environmental regulation is necessary because environmental problems frequently involve significant externalities, require solutions that carry high transaction costs, and concern threats to a public good, all factors that may contribute to market failures.”<sup>230</sup> Thus, mandates should be less troubling in the context of a lawn ban than they would be if private individual behaviors were being directly targeted, and they may even be necessary to target and alleviate the harms associated with lawns specifically, and climate change more broadly.<sup>231</sup>

### III. THE ANATOMY OF A LAWN BAN

This Article seeks to examine what a lawn ban might look like in the event that such bans become more necessary and accepted. Thus, this Part begins by addressing the appropriate scale of regulation and sources of governmental power to enact a lawn ban, and then discusses how it might be implemented.

#### A. Regulatory Structure

##### 1. Scope: State Versus Local

Because climate, resource scarcity, and environmental priorities are so dependent upon location, a ban on lawns would not make sense for all states or municipalities in the country.<sup>232</sup> Certainly, a federal ban on lawns would not be appropriate, at least not given the disparate current U.S. climate and water usage patterns. State regulation might be useful in certain states that face similar water usage patterns and demands across their jurisdictions. Perhaps those states could establish standards that would trigger targeted incentives or disincentives, and eventually, as water shortages became more acute, bans on lawns. However, local governments are likely more adept at addressing climate change in larger states

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<sup>228</sup> See *supra* notes 196-201 and accompanying text.

<sup>229</sup> Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 300 (2007) (“Environmental laws and regulation generally aim to force externality-producing agents . . . to fully account for the consequences of their actions.”).

<sup>230</sup> Carl J. Circo, *Using Mandates and Incentives to Promote Sustainable Construction and Green Building Projects in the Private Sector: A Call for More State Land Use Policy Initiatives*, 112 PENN. ST. L. REV. 731, 749 (2008).

<sup>231</sup> See generally Kuh, *supra* note 7, at 1177 (describing a successful mandate as one that “do[es] not impose disproportionate burdens on a select few, [that does] not unduly transgress the home, [that is] designed to minimize inconvenience and other costs to the public, and [that is] effectively ‘sold’ to the public through communication and demonstration of the measure’s benefits”).

<sup>232</sup> In many parts of the country, including the northeast, lawns often grow with little need for watering or fertilizer. Thus many of the harms associated with lawns discussed earlier in this Article would not be present, and therefore would not be alleviated, by a lawn ban.

with many different climates.<sup>233</sup> Further, because the real power to effect change lies in the police power, which is delegated to local governments,<sup>234</sup> they are the ones who are already taking action on lawns.<sup>235</sup> A benefit of regulating at the municipal level is that municipalities can be innovative and local ordinances can be specifically tailored to the needs, concerns, and geographically-related harms of each individual community.<sup>236</sup> Thus, pragmatically, local regulation seems to make the most sense. However, there are also theoretical justifications for local action to alleviate lawn harms.

Because a lawn ban is a controversial proposal, the political capital necessary to pass such an ordinance may be lacking in many (or all) states.<sup>237</sup> However, localities are different. First, in many major “thought-leader” cities in the U.S., lawn norms are starting to change.<sup>238</sup> There already exists a market-driven desire in these places for sustainable policies and efforts to reduce greenhouse gas emissions. Effective regulation at the local level can harness that market desire, and when these cities adopt cutting-edge policies, others tend to follow.<sup>239</sup> Further, according to Charles Tiebout, different communities provide different services and benefits—and adopt different policies—in order to attract different types of residents.<sup>240</sup> So if lawn bans are enacted at the local instead of the state level, those with a preference for lawns can (theoretically) move to a jurisdiction without a ban, thus allaying some concerns over property rights and free choice that might otherwise be associated with lawn bans.

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<sup>233</sup> For example, in California, a large state with many different climates, the state building codes permit regional variation for climatic purposes, and many of the first green building codes in that state were enabled under that exception to the standard rules. *See* CAL. CODE OF REGULATIONS, Title 24 (2010). When California passed its first state green code, it provided local governments with options to choose from depending upon their climate. CAL. CODE OF REGULATIONS, Title 24, Chapter 11 (2010). Similarly, California uses regional governments to implement its State Implementation Plan under the Clean Air Act.

<sup>234</sup> *See infra* part III, § (A)(2).

<sup>235</sup> *See, e.g.,* LAS VEGAS, NEV., CODE ch. 14.11 § 150 (2009) (prohibiting new turf installation in residential front yards). *See generally*, Robert M. Verichick, *Why the Global Environment Needs Local Government: Lessons from the Johannesburg Summit*, 35 URB. LAW 471, 472-73 (2003) (“The level of involvement of localities in sustainable development problem solving has increased dramatically in recent years.”).

<sup>236</sup> Schindler, *Following Industry’s LEED*, *supra* note 209, at 289-90 (discussing the benefits of ordinances that are crafted at the local level by local government actors).

<sup>237</sup> This does not mean that there might not be valid reasons to consider a state-level ban at some point—at least in certain states that have water shortage or pollution problems. Such a state-level approach might ensure uniformity so that rich and poor municipalities share an equal burden; it would insulate local politicians from an unpopular decision; and it might be less subject to revision in future years.

<sup>238</sup> *See generally*, Schindler, *Of Backyard Chickens*, *supra* note 43.

<sup>239</sup> *See* Sunstein, *Social Norms*, *supra* note 154, at 912 (describing norm bandwagons and cascades). *See generally* Sushil Bikhchandani et al., *A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades*, 100 J. POL. ECON. 992 (1992).

<sup>240</sup> Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416, 420 (1956) (describing residents as “consumer-voters” who look for municipalities that provide a mix of public goods and services that appeal to them).

The Matching Principle provides some support for the idea that certain local harms tied to climate change are ripe for local regulation.<sup>241</sup> Specifically, the Principle posits that the regulating jurisdiction should not be larger than the regulated activity.<sup>242</sup> At base, the costs of lawns go beyond each individual municipality. Water crosses jurisdictional boundaries; its availability and the harms that lawns impose manifest themselves at regional scales—the watershed for water use impacts and runoff, and the grid-scale for energy issues. While regional or watershed-level governance might be ideal in this context, the U.S. generally lacks strong regional structures.<sup>243</sup> Thus, the next smallest unit of government—local governments—would most appropriately address these problems.<sup>244</sup> For example, most lawns exist in the suburbs, and greenhouse gas emissions in the suburbs are higher than in central cities.<sup>245</sup> This suggests that the policies implemented in suburbs with respect to lawns might differ from those implemented in cities.

Finally, the general purpose local government should take action instead of a special use district. Although much concern about lawns stems from a concern about water, municipalities cannot assume that water providers will—or even have the authority to—act.<sup>246</sup> And even if they have the authority to ban water usage at certain times, the water providers often prefer not to because bans are viewed as “less ‘customer friendly’ than incentives or education.”<sup>247</sup>

## 2. Power: Home Rule, Police Powers, and Zoning Enabling Acts

Although to some, the idea of a local government banning lawns might seem draconian, local governments in fact have many sources of authority to enact lawn bans. First, a land use ordinance generally only requires a rational

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<sup>241</sup> See generally Henry N. Butler & Jonathan R. Macey, *Externalities and the Matching Principle: The Case for Reallocating Environmental Regulatory Authority*, 14 YALE L. & POL’Y REV. 23, 32 (1996) (arguing that “purely local externalities” should be dealt with locally). See also Schindler, *Following Industry’s LEED*, *supra* note 209 at 295-96 (discussing the Matching Principle).

<sup>242</sup> Butler & Macey, *supra* note 241, at 25.

<sup>243</sup> In the alternative, if sufficient organization and desire were present, lawn regulation could occur through regional compacts.

<sup>244</sup> Butler & Macey, *supra* note 241 at 25. Of course, within each watershed, local governments face a collective action problem, where the costs of water consumption are spread to other municipalities sharing the same watershed.

<sup>245</sup> See Edward L. Glaeser & Matthew Kahn, *The Greenness of Cities*, RAPPAPORT INSTITUTE 6, (2008) available at [http://www.hks.harvard.edu/var/ezp\\_site/storage/fckeditor/file/pdfs/centers-programs/centers/taubman/policybriefs/greencities\\_final.pdf](http://www.hks.harvard.edu/var/ezp_site/storage/fckeditor/file/pdfs/centers-programs/centers/taubman/policybriefs/greencities_final.pdf).

<sup>246</sup> See Hawes, *supra* note 123 (“Challenges arise where water providers are special districts rather than municipal or county governments. Without land use authority, these entities have no control over the type of new development that may be approved and cannot dictate plumbing codes or landscaping requirements.”).

<sup>247</sup> *Id.* (citing DENVER WATER BOARD, UPDATE OF THE INTEGRATED RESOURCE PLAN 3 (Feb. 2002)) (noting that “usually only in extreme situations, such as drought or emergency, water providers impose mandatory restrictions on water usage. Throughout Colorado in the summer of 2002, mandatory watering restrictions were the norm”).

basis to be upheld.<sup>248</sup> So long as the municipality had “fairly debatable” reasons for the enactment, the ordinance will stand.<sup>249</sup> This is due in part to broad police powers: local governments have the power to act in furtherance of the public health, safety, welfare, and morals of the community.<sup>250</sup> This power flows from the state’s plenary regulatory authority,<sup>251</sup> coupled with municipal home rule authority, which now exists in most states.<sup>252</sup> When a land use ordinance is enacted pursuant to the locality’s police power, it is presumed to be valid.<sup>253</sup> Police powers are broad and may change to encompass the times and the context.<sup>254</sup> Thus, scholars recognize that these powers justify “development regulations intended to conserve natural resources and protect the environment” including regulations that “broadly seek to curb unsustainable land development, even when they impose significant burdens on the landowner.”<sup>255</sup>

An additional source of local power flows from enabling legislation, which exists in all states, and expressly grants zoning powers to municipalities.<sup>256</sup> Because every state has adopted a zoning enabling act, “the question of inherent power to zone is rarely litigated.”<sup>257</sup> However, there is a question whether the power to regulate lawns would be considered within a locality’s zoning power, especially if one is in a jurisdiction with a fairly specific zoning enabling act.

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<sup>248</sup> See, e.g., *City of Lilburn v. Sanchez*, 491 S.E.2d 353, 355 (Ga. 1997) (“So long as an ordinance realistically serves a legitimate public purpose, and it employs means that are reasonably necessary to achieve that purpose, without unduly oppressing the individuals regulated, the ordinance must survive a due process challenge.”).

<sup>249</sup> *Village of Euclid, Ohio v. Ambler Realty Co.*, 272 U.S. 365, 388 (“If the validity of the legislative classification for zoning purposes be fairly debatable, the legislative judgment must be allowed to control.”).

<sup>250</sup> See, e.g., Anthony J. Samson, Comment, *A Proposal To Implement Mandatory Training Requirements for Home Rule Zoning Officials*, 2008 MICH. ST. L. REV. 879, 886 (“Absent expressed or implied powers to regulate a particular activity, home rule municipalities may rely on their police powers to safeguard and promote public health, safety, morals, and general welfare.”).

<sup>251</sup> *Hunter v. City of Pittsburgh*, 207 U.S. 161, 178 (1907) (explaining that localities are “created as convenient agencies for exercising such of the governmental powers of the State as may be entrusted to them”), overruled on other grounds by *Kramer v. Union Free Sch. Dist. No. 15*, 395 U.S. 621 (1969).

<sup>252</sup> *Supra* note 19. Home rule authority permits municipalities to regulate without first needing express authorization from the state. See DALE KRANE ET AL., *HOME RULE IN AMERICA: A FIFTY-STATE HANDBOOK* 14 (2001). See also James G. Hodge, Jr., *An Enhanced Approach to Distinguishing Public Health Practice and Human Subjects Research*, 33 J.L. MED. & ETHICS 125, 130 (2005) (“Primary responsibility for protecting the public’s health, however, is held by the states (and local governments via delegated state authority).”).

<sup>253</sup> Serkin, *supra* note 110, at 1257-58.

<sup>254</sup> *Village of Euclid, Ohio v. Ambler Realty Co.*, 272 U.S. 365, 387 (“[W]hile the meaning of constitutional guaranties never varies, the scope of their application must expand or contract to meet the new and different conditions which are constantly coming within the scope of their operation.”). See also *Boston & Me. R.R. v. County Comm’rs*, 79 Me. 386, 393 (1887) (The police power’s “exercise must become wider, more varied and frequent, with the progress of society.”).

<sup>255</sup> Circo, *supra* note 230, at 745. The harms laid out in part I, § (C) above suggest that the support for a ban is *at least* fairly debatable.

<sup>256</sup> See ELLICKSON & BEEN, *supra* note 105, at 29.

<sup>257</sup> 1 KENNETH H. YOUNG, *ANDERSON’S AMERICAN LAW OF ZONING* § 2.16 (4<sup>th</sup> ed. 1996 & Supp. 2008).

Most states began the process of zoning by enacting the Standard State Zoning Enabling Act (“SZEAs”), which was promulgated in 1922,<sup>258</sup> but many have now adopted their own modified, state-specific acts.<sup>259</sup> Thus, the power to regulate lawns as a form of zoning would vary based on the specific language of the state statute. Historically, because most zoning laws did not mention yard vegetation, many communities adopted “special purpose controls”—the aforementioned weed ordinances—outside their normal zoning ordinances in order to regulate landscaping.<sup>260</sup> However, some zoning enabling acts do specifically address these issues. For example, the Texas SZEAs expressly refers to the “size of yards” as zoning that is covered by the act.<sup>261</sup> Thus, a locality seeking to ban lawns in Texas could likely rely upon its express zoning powers, instead of falling back on its broader home rule authority, to do so.<sup>262</sup> On the other hand, if a locality is situated in a Dillon’s Rule<sup>263</sup> state whose SZEAs does not specifically delegate or mention the ability to ban or control lawns, the locality might not be able to do so.<sup>264</sup>

A final municipal source of power to enact lawn bans could derive from a determination that lawns might be considered a nuisance, or a “public bad,” due to their negative impacts on the health and safety interests of the public.<sup>265</sup> To facilitate this legal construction, a municipality could identify a “lawn” as a nuisance *per se*, such as by defining “weeds” or “noxious vegetation” in a

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<sup>258</sup> Alan R. Madry, *Judging Ziervogel: The Twisted Path of Recent Zoning Variance Decisions in Wisconsin*, 91 MARQ. L. REV. 485, 492 (2007).

<sup>259</sup> See, e.g., MICH. COMP. LAWS ANN. §§ 125.3101 – NS IDER IIE EST 2006); OKLA. STAT. ANN. tit. 43, §§ 101-109 (West 2012).

<sup>260</sup> Smith, *supra* note 39, at 216-217, and n. 51 (but noting that the issue of whether the ordinance is within or outside of zoning is “purely semantic” in that “there is no difference between living in a residential community that is ‘zoned’ to prohibit bamboo vegetation than one that has a special purpose ‘no bamboo’ ordinance.”).

<sup>261</sup> TEX. LOCAL GOVT CODE § 211.003 (2007).

<sup>262</sup> Regardless of the approach taken, a local government should be certain that any ordinance it adopts complies not only with the SZEAs (or is pursuant to home rule authority), but that it also complies with other state statutes that might limit the use of zoning or agriculture ordinances or govern water consumption. See, e.g., MASS GEN. LAWS ANN. ch. 40A, § 3 (West 2004) (zoning ordinances cannot prohibit use of land owned by religious groups for religious or educational purposes).

<sup>263</sup> Not all states are home rule states, Briffault, *supra* note 19, at 11, and even in those that are, not all municipalities operate under home rule powers, *id.* at 10 (noting that in order to take advantage of home rule, a municipality typically must adopt its own charter). In states that follow Dillon’s Rule, the powers of a local government general include only: powers granted to them expressly; powers “necessarily or fairly implied in or incident to” powers granted expressly; and powers indispensable to a municipality’s purposes. YOKLEY, *supra* note 19, at § 52.

<sup>264</sup> This concern may be academic, as zoning enabling acts regularly grant the power to zone consistent with the police powers. See, e.g., YOUNG, ANDERSON’S AMERICAN LAW OF ZONING, *supra* note 257, at § 2.22 (describing the SZEAs as “delegat[ing] the zoning power in a single sentence [which] begins by attaching the power securely to the orthodox components of the police power”).

<sup>265</sup> States and their authorized municipalities may proscribe nuisances pursuant to their exercise of the police power. *Northwestern Laundry v. City of Des Moines*, 239 U.S. 436, 491-92 (1916) (upholding a Des Moines ordinance declaring “the emission of dense smoke in...populous neighborhoods to be a nuisance”).

nuisance vegetation ordinance to include lawns, and ban them in that way.<sup>266</sup> As a nuisance *per se*, a local government would engage a direct attack on the very existence of lawns, as many have done against funeral homes or houses of ill-repute in residential areas; the ban would seek to prevent the harm that lawns cause.<sup>267</sup> For example, because turfgrass is a non-native species, a locality could address it in the same way it addresses other exotic species. Because non-native flora and fauna have the ability to harmfully modify local ecosystems, local governments might take an aggressive position on removal and remediation to alleviate the threat; indeed, local governments often regulate and eradicate invasive species, and do so with the support of the police powers.<sup>268</sup>

The nuisance approach may be attractive to local governments because of the deference that courts afford to governments that act to protect their communities. Of course, many land-owners will object to a ban on lawns, and are likely to assert that a newly enacted land use ordinance works a taking of their property. On balance, however, a local government enacting a lawn ban has support against a Constitutional challenge. First, the idea of a “regulatory taking” is a recent creation: previously, the Supreme Court held that government regulations that control nuisances are *per se* not subject to property protections afforded by the Fifth Amendment because the police power is broad enough to cover these situations.<sup>269</sup> This is because “[u]nder the police power, rights of property are impaired not because they become useful or necessary to the public, or because some public advantage can be gained by disregarding them, but because their free exercise is believed to be detrimental to the public interests.”<sup>270</sup>

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<sup>266</sup> Of course, such a determination could not be arbitrary, or it could be struck down as violative of substantive due process. A finding that lawns are nuisances would have a greater likelihood of success in an area facing water shortages or water pollution problems. *See also* Serkin, *supra* note 110, at 1240 (2009) (“Applying the nuisance exception, the government can regulate away a hazardous or injurious activity without paying compensation.”).

<sup>267</sup> Lawn bans would be both harm preventing and benefit conferring because lawn removal would result in environmental benefits to the broader community. In *Lucas*, the Court notes that the difference between the two is “often in the eye of the beholder.” *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1024 (1992). However, this distinction is important to some courts, which

reason that harm prevention is a valid exercise of a state’s police power and that, since all property is owned subject to the police power, no such harm prevention can trigger a compensation requirement. Fundamentally, the inquiry in these [] opinions is whether the regulation is an invalid exercise of the police power—that is, whether it is irrational or arbitrary.

Serkin, *supra* note 110, at 1248.

<sup>268</sup> *See, e.g.*, PALM BEACH COUNTY, FLA., UNIFIED LAND DEV. CODE, art. 14, ch. D (2012) (requiring owners of property located near “natural areas” to remove invasive non-native species, and prohibiting the their planting). *See also* 321 MASS. CODE REGS. § 2.12 (1996) (establishing “requirements for the licensing, possession, propagation, maintenance, and disposition of wild birds, mammals, reptiles and amphibians”).

<sup>269</sup> *Hadacheck v. Sebastian*, 239 U.S. 394, 410 (1915). *See also* Thomas W. Merrill, *The Economics of Public Use*, 72 CORNELL L. REV. 61, 70 (1986) (“[T]he outer limit of the police power has traditionally marked the line between *noncompensable* regulation and *compensable* takings of property . . . . Legitimately exercised, the police power requires no compensation.”).

<sup>270</sup> ERNST FREUND, THE POLICE POWER § 511 (1904).

In addressing nuisances to protect the public, “the government can regulate away a hazardous or injurious activity without paying compensation.”<sup>271</sup>

Even if a regulatory takings challenge were to succeed to the merits, those claims would be examined under the *per se* test of *Lucas* if they deprive a landowner of all economically viable use of their property.<sup>272</sup> Because land uses that involve a lawn are typically not dependent on the presence of the lawn itself, a landowner would likely have a difficult time establishing that being forced to remove a lawn was a deprivation of all use of the property, especially given that the doctrine of conceptual severance suggests that a court must look at the parcel as a whole when considering what has been taken.<sup>273</sup> A lawn ban would result in the homeowner losing the value of the lawn, but retaining the value of the rest of the property. Only in the rarest of cases would a lawn ban be considered under the *Lucas* jurisprudence. Therefore, a court would instead apply the ad-hoc analysis set forth by the Supreme Court in *Penn Central*,<sup>274</sup> considering the regulation’s economic impact, its interference with reasonable investment backed expectations, and the character of the governmental action.<sup>275</sup> In practice, “landowners rarely win these cases,”<sup>276</sup> and a court applying these factors to a lawn ban would likely find in favor of the municipality, at least because the extent of loss the lawn owner is not likely to be dramatic.<sup>277</sup>

The only remaining question is whether a court might consider a retroactive lawn ban with an affirmative replacement requirement to be a permanent physical occupation of property constituting a *per se* taking.<sup>278</sup> Although there has been little scholarship addressing the government’s ability to require people to take action on their private property, the Supreme Court has recognized that a regulation may force action without being deemed an

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<sup>271</sup> Serkin, *supra* note 110, at 1240. See also Christine A. Klein, *The New Nuisance: An Antidote to Wetland Loss, Sprawl, and Global Warming*, 48 B.C. L. REV. 1155, 1195 (2007) (“In theory, traditional takings law has long recognized a nuisance exception under which landowners are not entitled to compensation when they are precluded from using their land to create a nuisance.”).

<sup>272</sup> *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1027 (1992). Although there would be a defense if maintaining a lawn would have been considered a nuisance at common law, that is unlikely. See, e.g., Robert L. Glicksman, *Making a Nuisance of Takings Law*, 3 WASH. U. J. OF LAW AND POL’Y 149, 162-163 (2000) (noting that *Lucas* “shifted the authority to determine what is a legitimate governmental purpose from the legislature to the courts, crippling the legislative role in defining the limits of governmental intervention in the private land use market”).

<sup>273</sup> *Lucas*, 505 U.S., at 1016 n. 7.

<sup>274</sup> *Lucas*, 505 U.S. at 1019 n. 8 (citing *Penn Central Transportation Co. v. New York City*, 438 U.S. 104, 124 (1978)) (“Depending on the residual value remaining in the regulated property, many existing uses could still be eliminated without triggering liability.”).

<sup>275</sup> *Kaiser Aetna v. United States*, 444 U.S. 164, 175 (1979).

<sup>276</sup> Bradley C. Karkkainen, *Biodiversity and Land*, 83 CORNELL L. REV. 1, 90 (1997). *But see* *Eastern Enterprises v. Apfel*, 524 U.S. 498 (1998) (plurality holding that extreme retroactive liability that only applies to a small number of individuals who could not have predicted their liability could constitute a taking).

<sup>277</sup> Here, the first two factors would be comparatively small because the lawn constitutes a small portion of the entire economic value of most parcels of land. However, the character of the action could resemble a physical taking. See *infra* notes 278-282.

<sup>278</sup> *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 440 (1982) (permanent physical occupation of property by a third party pursuant to government authority is a taking).

impermissible taking.<sup>279</sup> In *Loretto*, the Court explained that a physical “occupation [of land by a third party] is qualitatively more severe than a regulation of the *use* of property, even a regulation that imposes affirmative duties on the owner.”<sup>280</sup> Thus, while there might be a taking if the government requires a landlord to allow third parties to enter his land and install something thereupon, there would not be a taking if the landlord were required to install the thing himself.<sup>281</sup> So, it would seem that, so long as a lawn ban provides a homeowner with multiple replacement alternatives, and allows the homeowner to install those alternatives himself, the ban would not run afoul of *Loretto*.<sup>282</sup>

### B. Crafting the Ban

Because lawns are not only ubiquitous in most American residential communities, but also legally permissible and often required, banning them would be what some commentators have referred to as a “[r]egulatory transition[]”—a movement away from one legal regime to another.<sup>283</sup> These transitions “are inevitable over the long run, and often represent socially adaptive responses to changed circumstances or increased information. They are difficult to achieve, however, because substantial psychological and political barriers stand in the way.”<sup>284</sup> Times of legal transition also bring about the risk of legal challenges. Municipalities face a “problem of how to be fair to landowners who acquired property under one set of rules, only to see the uses of the property drastically limited as morals, technology, or scientific understanding change.”<sup>285</sup> This Part will first address the different temporal circumstances under which a lawn ban could be imposed, and the legal challenges that might accompany or inform that timing decision.<sup>286</sup> It will then consider who or what a ban could cover and control.

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<sup>279</sup> *Id.* at 436.

<sup>280</sup> *Id.*

<sup>281</sup> *Id.* at 436-437; *id.* at 449 (Blackmun, J., dissenting).

<sup>282</sup> After *Loretto*, a number of attorneys did attempt to “shoehorn” their clients’ cases into the “permanent physical occupation” rule set forth by the court in *Loretto*, as the dissent in that case feared. See *Loretto*, 485 U.S. at 451 (Blackmun, J., dissenting). The court clarified its holding in *Yee v. City of Escondido*, 503 U.S. 519, 527 (1992), stating, “[t]he government effects a physical taking only where it requires the landowner to submit to the physical occupation of his land.” *Id.* at 527. However, plaintiffs could still try to use *Yee* to assert that a requirement by a local government that they must replace their former lawns with something else is a permanent physical occupation and thus a taking. One could argue that the local government is “compel[ling] a landowner over objection” to plant something on his property in violation of *Yee*. *Id.* at 528.

<sup>283</sup> Holly Doremus, *Takings and Transitions*, 19 J. LAND USE & ENVTL. L. 1, 45 (2003-2004).

<sup>284</sup> *Id.*

<sup>285</sup> ELLICKSON & BEEN, *supra* note 105, at 140. See also Doremus, *Takings and Transitions*, *supra* note 283, at 46.

<sup>286</sup> Whenever a local government considers adopting a new land use ordinance—especially one that is controversial, uncommon, or provocative—it must consider its likelihood of being sued. Oftentimes, the threat of a lawsuit is enough to discourage a local government from enacting forward-thinking legislation. See Douglas T. Kendall et al., *First Steps in Defending Against Takings Challenges to Land Use Regulations: Insurance Coverage, Case Review, and Settlement Possibilities*, 23 ZONING & PLANNING L. REP. 65 (2000).

## 1. Timing of Ordinance Imposition

In considering *when* to impose a ban on lawns, a municipality has three options. The mandate: (1) could apply only to new construction—thus allowing the continuation of existing lawns but prohibiting new ones; (2) it could apply only when the property at issue is sold, rented, or modified in some way—so prior to a conveyance of the property, any existing lawn would have to be torn up and replaced with another acceptable form of ground cover; or (3) it could be imposed retroactively—a requirement that all existing lawns be torn up, perhaps pursuant to an amortization schedule. This section will address the reasons for and legal consequences of each possibility.

### a. Applicable Prospectively

The most straightforward and (relatively) least controversial approach to a ban on lawns would be to prohibit any new construction (commercial, residential, or both) from including a turfgrass lawn. This was the approach taken in Las Vegas, which now prohibits new turf installation in front yards and limits it in rear and side yards.<sup>287</sup> Applying a ban prospectively avoids some of the political concerns that accompany retroactive ordinances that force existing community residents and homeowners to take actions that they might not support or desire; existing residents often prefer land use patterns to freeze once they have moved in.<sup>288</sup>

However, there are also some substantial problems with only applying a new rule prospectively. Specifically, because a ban on lawns would be put in place in order to reduce harms, and hopefully alleviate some climate change-related concerns, applying it only prospectively would curtail its potential benefits.<sup>289</sup> Especially in a community that is already substantially developed, it is unlikely that only banning new lawns would have much of a cumulative impact. In contrast, for a still-developing area, beginning with a baseline of existing lawns and banning new ones could still result in a substantial decrease in water and fertilizer usage.

### b. Applicable at a Point of Sale or Modification

A second approach that a municipality could take would be to prospectively ban all new lawns, but also to require the removal of existing lawns at the time that the owner of property covered by the ordinance sells the property, rents to someone new, or seeks discretionary permits to alter the property in a way

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<sup>287</sup> LAS VEGAS, NEV., CODE ch. 14.11 § 150 (2009). *See also* LAS VEGAS, NEV., CODE ch. 14.11 § 140 (2009) (prohibiting installation of new turf in non-residential developments and in common areas of residential neighborhoods, but allowing installation of new turf on school grounds and in parks).

<sup>288</sup> *See* William A. Fischel, *Why Are There NIMBYs?*, 77 LAND ECON. 144, 146 (2001) (“[H]omeowners are touch[y] about changes in their neighborhood.”).

<sup>289</sup> *See* Serkin, *supra* note 110, at 1265 (discussing problems with new rules that improve the legal system, yet are only applied prospectively).

that is related to the lawn. The imposition of ordinances at a point of change is a technique already used in some situations.<sup>290</sup> For example, under the Clean Air Act, if a stationary source is “subsequently modified,” it will then need to comply with new source performance standards.<sup>291</sup> Similarly, some suggest that the only way that states will succeed in achieving energy efficiency will be to require homeowners to retrofit their homes with energy efficient appliances and fixtures prior to a sale.<sup>292</sup> Further, the highest court in the state of New York upheld the facial validity of a local ordinance that banned mobile homes from certain areas of the Village of Valatie upon a transfer of ownership of the land containing the mobile home or the mobile home itself.<sup>293</sup>

Conditioning the point of ban implementation on change in ownership instead of applying it immediately is a form of amortization. In the context of land use law, some localities build in an amortization period to newly adopted ordinances that would otherwise immediately force lawful pre-existing non-conforming uses to come into compliance with the new ordinance.<sup>294</sup> The idea behind amortization is that property owners should be given enough time to realize on their investments before being forced to comply with the new law,<sup>295</sup> an ordinance faces a greater risk of being deemed a taking or violative of substantive due process if it is immediately applied to a non-conforming use.<sup>296</sup> However,

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<sup>290</sup> See, e.g., MASS. GEN. LAWS ANN. ch. 40A, § 6 (West 2004) (if structures are “lawfully in existence or lawfully begun” before notice of a new zoning ordinance, the ordinance shall not be applied to those structures, but they must be applied to “any change or substantial extension of such use”). In addition to imposing mandatory water conservation measures on new construction, Prescott, Arizona, requires that whenever “a homeowner in an existing home replaces fixtures in his or her home, these replacements must comply with certain water conservation requirements.” Julian Conrad Juergensmeyer, *Rainwater Recapture: Development Regulations Promoting Water Conservation*, 43 J. MARSHALL L. REV. 359, 365 (2010) (citing PRESCOTT, ARIZ., CODE § 3-10-3 (2009)).

<sup>291</sup> Serkin, *supra* note 110, at 1226.

<sup>292</sup> Sarah Schindler, *Encouraging Private Investment in Energy Efficiency*, U. CONN. CENTER FOR ENERGY & ENVTL LAW POL. PAPER (2011) at 20 (discussing mandates and recognizing that “voluntary approaches to energy efficiency probably will not be enough to reach the levels of deep cuts that are needed to reduce greenhouse gas emissions”) (citing telephone interview with Blair Hamilton, Policy Dir., Vt. Energy Inv. Corp. (Oct. 18, 2010)). See also S.F., CAL., HOUS. CODE § 12A05-12A10 (2011) (inspector must analyze whether to require replacement of certain fixtures with low-flow versions prior to a sale); Edna Sussman, *Reshaping Municipal and County Laws to Foster Green Building, Energy Efficiency, and Renewable Energy*, 16 N.Y.U. ENVTL. L.J. 1, 21 (2008) (recognizing that “garnering voluntary action is a slow process and municipalities may wish to consider opportunities to mandate energy efficiency upgrades”).

<sup>293</sup> Village of Valatie v. Smith, 632 N.E.2d 1264, 1265 (N.Y. 1994).

<sup>294</sup> But see Margaret Collins, *Methods of Determining Amortization Periods for Nonconforming Uses*, 3 WASH. U. J.L. & POL’Y 215, 216 (2000) (suggesting that use of amortization periods is not very common, in that “[a] survey of 489 cities showed that, although planners in 159 cities had access to amortization programs, only 27 cities had actually used them”).

<sup>295</sup> Doremus, *Evolution*, *supra* note 74, at 1093-94 (“Law by its very nature favors stability over time. Legal rules are supposed to facilitate investment and allow people to make long-term decisions with confidence.”).

<sup>296</sup> See City of Los Angeles v. Gage, 274 P.2d 34, 44 (1954) (noting that an amortization period “allows the owner of the [eliminated] nonconforming use, by affording an opportunity to make new plans, at least partially to offset any loss he might suffer”). Generally, a court analyzing

some jurisdictions deem any amortization period to be *per se* unreasonable.<sup>297</sup> Further, there is a real question as to whether a lawn would be considered a lawful, pre-existing, non-conforming “use” for purposes of this analysis, and thus subject to greater protections.<sup>298</sup> This inquiry is relevant because heightened protections are often afforded to existing uses of land.<sup>299</sup> However, at least one commentator argues that the additional protection is unjustified.<sup>300</sup> Thus, one could assert that lawn bans applied at the time of a property change should not be viewed differently, and should not be more likely to result in a taking or due process violation, than those applied only prospectively.<sup>301</sup>

Assuming that amortization periods are permissible in a state,<sup>302</sup> this approach—applying a ban at the time of a change in status of the property—

the legality of an ordinance that would remove a nonconforming use would balance the harm that the ordinance imposes on the property owner against the broader benefits to the public. Serkin, *supra* note 110, at 1237.

<sup>297</sup> See Jay M. Zitter, Annotation, *Validity of Provisions for Amortization of Nonconforming Uses*, 8 A.L.R. 5<sup>th</sup> 391, § 3[b] (1992) (listing cases holding amortization provisions to be *per se* invalid). See also Serkin, *supra* note 110, at 1243 (noting that “[a] number of courts have held that an amortization period is nothing but a deferred taking of property”). Some states’ SZEAs provide that zoning cannot be applied to existing uses. Comment, *Retroactive Zoning Ordinances*, 39 YALE L.J. 735, 735 & n. 6 (1930). However, such a statement in the SZEAs begs the question of whether lawn control ordinances would constitute “zoning ordinances” for purposes of such a ban on retroactive application. Cf. *PA Northwestern Distributors, Inc. v. Zoning Hearing Board*, 584 A.2d 1372, 1377 (Sup Ct Penn 1991) (Nix, J., concurring) (“The weight of authority supports the conclusion that a reasonable amortization provision would not be unconstitutional. . . . [A] blanket rule against amortization provisions should be rejected because such a rule has a debilitating effect on effective zoning, unnecessarily restricts a state’s police power, and prevents the operation of a reasonable and flexible method of eliminating nonconforming uses in the public interest.”).

<sup>298</sup> As discussed in part III §(A)(2), it is uncertain whether the zoning power could be used to pass lawn bans because landscaping ordinances are often viewed as separate from zoning ordinances. “[M]odern zoning ordinances usually say nothing about vegetation, grass cutting, and the like. [] These matters are handled by special purpose ordinances.” Smith, *supra* note 39, at 206 n. 9. Thus, one could argue that lawns are not a “use” of land; rather, they are merely a type of landscaping that is situated on the land. *But see* FLA. STAT. ANN. § 70.001(2) (existing use is “an actual, present use *or activity* on the real property”) (emphasis added). Thus, in some jurisdictions, growing grass could be considered an existing use, because it is an activity or a way that the property is being used.

<sup>299</sup> Serkin, *supra* note 110, at 1244 (noting that courts could find that a “land use regulation[] eliminating [an] existing use[]” is either a taking, or that it is unreasonable, and thus a raises a due process problem).

<sup>300</sup> *Id.* at 1242-43 (observing that courts assume that existing uses are protected by the Takings and/or Due Process Clause of the constitution, but do not explain specifically why or how, and arguing that those clauses do not actually require that courts afford special protection to existing uses).

<sup>301</sup> See *id.* at 1230 (disputing the “assum[ption] that there is something different . . . about the unfairness associated with regulating existing as opposed to future uses”).

<sup>302</sup> See Osborne M. Reynolds, Jr., *The Reasonableness of Amortization Periods for Nonconforming Uses – Balancing the Private Interest and the Public Welfare*, 34 WASH. U. J. URB. & CONTEMP. L. 99, 109 (1988) (“[M]ost courts held that amortization provisions are valid if they are reasonable in nature. This is currently the majority view in America.”). See also Serkin, *supra* note 110, at 1244 (“The majority of courts, however, have upheld amortization statutes – but only after applying a takings analysis.”); *PA Northwestern Distributors, Inc.*, *supra* note 297 at

would be beneficial in communities that are already built-out, in that it would cover more property than a purely prospective ban. There is, of course, an enforcement concern associated with this approach; for example, homeowners might attempt to get around the ban by failing to report new leases. However, it is unlikely that a homeowner would forego the protections of a recording statute and not record the sale or transfer of an interest in their property merely to avoid having to remove a lawn.<sup>303</sup> Further, because permit applications are matters of public record submitted directly to a municipality, the municipality would be on notice of such changes, and thus able to enforce the lawn ban.

There is also an efficiency concern with a ban applied at the time of sale in that there might be an incentive for people to hold onto their property. If there is a close community in a given neighborhood, there might be pressure from neighbors urging others not to sell or rent because they want to maintain the existing uniform lawn aesthetic.<sup>304</sup>

A final concern might tie back into the intrusion objection discussed earlier.<sup>305</sup> Although a lawn ban would generally have only an indirect impact on a homeowner's behavior—because lawns are banned, a person can not continue actions that would maintain the lawn—if that ban is imposed at the point of sale or permit-seeking, one could argue that such a ban is actually directly regulating individual behavior; it would force a person to directly remove an existing lawn.<sup>306</sup> Therefore, intrusion objections might be less concerning for future homeowners, but more pressing for those owning the property at the time of sale.<sup>307</sup>

### c. Applicable Retroactively

Finally, a municipality could adopt a retroactive lawn ban: a ban imposed at the time the ordinance is adopted, which requires all covered property owners to tear up their existing lawns and replace them with something else,<sup>308</sup> or let them die. At the time of this writing, there does not appear to have been a legal challenge to any existing lawn ban. However, a municipality considering implementing a retroactive ban pursuant to the discussion above might expect to

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1378 (Nix, J., concurring) (“A community should have a right to change its character without being locked into pre-existing definitions of what is offensive.”).

<sup>303</sup> DUKEMINIER ET AL., *supra* note 21, at 646 (listing functions of the recording system including preservation of important documents, and protecting bona fide purchasers and creditors against prior unrecorded interests); Corwin W. Johnson, *Purpose and Scope of Recording Statutes*, 47 IOWA L. REV. 231, 231 (1961) (noting that recording acts serve “to provide a public record of transactions affecting title to land”).

<sup>304</sup> *Supra* notes 149-154 and accompanying text.

<sup>305</sup> *Supra* notes 225-226 and accompanying text.

<sup>306</sup> See Kuh, *supra* note 7, at 1129 n. 46 (noting the difference between current and future homeowners, and that “regulations might be viewed as indirect with respect to individuals who are prospective homeowners, renters, or residents – and who thus are likely to experience the codes primarily in terms of how they have already defined existing architecture – but direct when they affect an existing property owner’s use or renovation”).

<sup>307</sup> Kuh, *supra* note 7, at 1129 n. 46.

<sup>308</sup> See *supra* part I, § (d).

be sued by landowners unhappy with the requirement that they remove their existing lawns. Indeed, some of these individuals might assert that they bought their homes, in part, because of the specific landscaping that fronts it, and that the ban interferes with their vested rights. But pursuant to the analysis in the previous section, retroactive bans would also likely withstand such challenges.<sup>309</sup>

That said, a retroactive approach is bold and would certainly be viewed with disfavor by many.<sup>310</sup> Scholars have described retroactive laws as “anathema to liberty and a well-ordered society”<sup>311</sup> and “a monstrosity.”<sup>312</sup> Others view them as unfair, believing that individuals must be able to rely on existing laws in structuring their actions and behaviors.<sup>313</sup> Further, they are somewhat rare;<sup>314</sup> for example, this author is unaware of a recent situation in which a city adopted a residential zoning ordinance and forced all lawful, pre-existing, non-nuisance commercial uses in the zone to immediately cease operation.<sup>315</sup>

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<sup>309</sup> *But see supra* note 297.

<sup>310</sup> The SZEA seemed to expressly recognize that, at times, retroactive application of zoning ordinances would be necessary and should be permitted, at least with respect to individual cases.

While the almost universal practice is to make zoning ordinances nonretroactive, it is recognized that there may arise local conditions of a peculiar character that make it necessary and desirable to deal with some isolated case by means of a retroactive provision affecting that case only. For this reason it does not seem wise to debar the local legislative body from dealing with such a situation.

Standard State Zoning Enabling Act 2 (Advisory Comm. on Zoning, U.S. Dep’t of Commerce 1926), *available at* <http://myapa.planning.org/growingSMART/pdf/SZEnablingAct1926.pdf>.

<sup>311</sup> Serkin, *supra* note 110, at 1262.

<sup>312</sup> LON L. FULLER, *THE MORALITY OF LAW* 53 (rev. ed. 1969) (“[A] retroactive law is truly a monstrosity.”).

<sup>313</sup> Doremus, *Takings and Transitions*, *supra* note 283, at 14 (“Changing the rules after people have adjusted their conduct on the basis of those rules often seems unfair, because we generally think that people are entitled to, and indeed should, govern their behavior according to the existing rules.”). *See also* Serkin, *supra* note 110, at 1266 (“vested rights and, potentially, zoning estoppel might preclude application of the zoning change to the property, presumably to vindicate some combination of reliance interests and fairness”); Smith, *supra* note 39, at 220 (discussing the Baton Rouge Audubon Society case, and noting that when the Society “acquired its property and commenced its natural landscaping, there was no weed ordinance in effect. Only after neighbors complained did the parish extend the ordinance to the Audubon Society’s property. Arguably, this sequence justifies protecting the Audubon Society because they were proceeding lawfully, with no notice of any legal problem, when they acquired and developed their property. . . . [T]hey had a vested right to continue a nonconforming use. The law of regulatory takings provides another way to express the importance of the timing: the Audubon Society had investment-backed expectations, which the parish could not destroy without compensation.”).

<sup>314</sup> *See* J.S. Young, *City Planning and Restrictions on the Use of Property*, 9 MINN. L. REV. 593, 628 (1925) (“Retroactive zoning is not to be recommended except in very unusual cases [when] public protection imperatively demands it.”). Pasco County, FL, however, at least entertained an ordinance that would have “force[ed] some existing businesses to dig up their parking lots to plant trees and bushes.” James Thorne, *Critics Snip Away at Landscape Ordinance*, ST. PETERSBURG TIMES (Jan. 20, 2002), [http://www.sptimes.com/2002/01/20/Northoftampa/Critics\\_snip\\_away\\_at\\_.shtml](http://www.sptimes.com/2002/01/20/Northoftampa/Critics_snip_away_at_.shtml). The ordinance as adopted only requires existing lots to be torn up upon redevelopment of the property. *See* PASCO COUNTY, FLA., LAND DEVELOP. CODE § 905 (2012).

<sup>315</sup> It is likely that such action would impinge upon vested rights and constitute a taking. *See, e.g.*, Serkin, *supra* note 110, at 1224 (“A local government enacting a new zoning ordinance must almost always grand-father existing uses. . . . Try even to imagine what it would mean for a local

Despite their unpopularity, and thus political unlikelihood, there are a number of benefits that would derive from a retroactive lawn ban (assuming the lawn were replaced with an environmentally-friendly alternative). Importantly, this approach would most immediately and directly target the harms caused by lawns because it would encompass the greatest amount of property.<sup>316</sup> In addition to the broad societal and ecosystem services benefits that would flow from lawn removal, there are also individual savings: lawnless homes should use less water, and their proprietors might gain free time that would otherwise be spent caring for the lawn.<sup>317</sup>

## 2. What Would be Covered

A municipality considering a ban on lawns should think carefully about how much lawn to ban. Specifically, will all turfgrass be outlawed—that surrounding both residences and commercial properties—or just “front yards”? If all turfgrass were banned, golf courses, athletic fields, corporate campuses, and public parks would all be impacted. Such a broad ban would target and alleviate lawn harms most thoroughly, assuming that all turf, regardless of location or use, contributes to the same harms.

However, such an extensive ban would intrude on some commercial uses of the lawn itself, and thus could raise additional considerations in a takings analysis.<sup>318</sup> Further, if the replacement material for turfgrass in play fields and parks did not allow for play, their utility might be decreased, leading to a decrease in social capital in the neighborhood.<sup>319</sup> Finally, a ban on all turf would cover not just publicly visible private property in front of the house, but the backyard as well. Although the primary justifications pertain to water consumption and environmental harm rather than aesthetics, a ban on backyard lawns might raise

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government to force preexisting houses to conform to new setback requirements.”). *But see* *Mugler v. Kansas*, 8 S. Ct. 273, 285 (1887) (holding that the police power allows for the removal of an existing use which the legislature deems to be a nuisance); *Hadacheck v. Sebastian*, 239 U.S. 394, 410 (1915) (suggesting that if a regulation prohibits a common law nuisance, it is not a taking). However, lawns are more akin to nuisances than are most commercial buildings in residential neighborhoods.

<sup>316</sup> “Grandfathering existing uses can dramatically limit the effectiveness of new environmental regulations.” Serkin, *supra* note 110, at 1226, (citing Jonathan Remy Nash & Richard L. Revesz, *Grandfathering and Environmental Regulation: The Law and Economics of New Source Review*, 101 NW. U. L. REV. 1677 (2007)).

<sup>317</sup> See Susan Block-Lieb & Edward J. Janger, *The Myth of the Rational Borrower: Rationality, Behavioralism, and the Misguided "Reform" of Bankruptcy Law*, 84 TEX. L. REV. 1481, 1534 (2006) (“Cognitive research also finds that individuals are reluctant to walk away from sunk costs, irrationally ignoring the marginal costs and benefits of additional action.”). See also Serkin, *supra* note 110, at 1270 (explaining that a “regulation eliminating an existing use wipes out the money already expended in developing that use” but also recognizing an “unwarranted prioritization of out-of-pocket costs over foregone profits”).

<sup>318</sup> For example, if a commercial use is forced to cease, this raises concerns surrounding analysis of *Penn Central* factors such as the landowners’ reasonable investment-backed expectations and their primary use of the property. See *supra*, notes 272-275 and accompanying text.

<sup>319</sup> See *supra* part I, § (B).

privacy concerns or lead a court to apply heightened scrutiny to the ban. The lawn surrounds the home, which has received exceptional levels of protection under the law.<sup>320</sup> One reason for this heightened protection might be that expressed by Professor Radin, who views certain property, including the home, as part of a person's identity.<sup>321</sup> Generally, laws anger people when they are viewed as "infringing upon personal autonomy . . . by preventing the home from providing a space for unfettered thinking, reflection, and the development of personhood."<sup>322</sup> Thus, the closer a regulation is to the self or its extensions, the greater the level of resistance to it.<sup>323</sup> While front yards are visible to all passing by and thus lack a portion of the privacy, or the expectation of privacy, associated with the home's interior, the same cannot be said for backyards.<sup>324</sup> Thus, courts might be more willing to protect backyards for the same reasons they protect homes. Further, the intrusion objections against a ban on backyards would likely be stronger than if only front yards were banned.<sup>325</sup>

In contrast, a locality could decide only to ban front yards in residential areas or in front of commercial buildings or offices. Such an approach would raise fewer concerns with respect to issues surrounding privacy, intrusions, and takings, but it would also result in a smaller total benefit. Finally, a locality could simply ban "the industrial lawn," regardless of its location or use.<sup>326</sup> Thus, any playfield or green open space that, while perhaps non-native, did not need to be watered, fertilized, or mowed, could remain.

### C. Affirmative Lawn Removal and Replacement Requirements

One might wonder why a municipality would choose to ban lawns rather than the practices that contribute to lawn-related harms: watering, mowing, and fertilizing. If these practices were banned, lawns would surely die out in the regions where they are causing the greatest harm, and most of the aforementioned

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<sup>320</sup> Kuh, *supra* note 7, at 1169 (noting that "the home has long been afforded special status in a variety of legal context[s]"); *Payton v. New York*, 445 U.S. 573, 601 (1980) ("[An] overriding respect for the sanctity of the home . . . has been embedded in our traditions since the origins of the Republic."). The Bankruptcy Code, for example, provides debtors with a homestead exemption, exempting their interest in the value of their home, up to a certain dollar amount, from the estate. 11 U.S.C.A. § 522(d)(1). The Fourth Amendment's prohibition on unreasonable search and seizure also recognizes the sanctity of, and provides special protections for, the home. *Lewis v. U.S.*, 385 U.S. 206, 213 (1966). However, lawn is not the home itself, and is therefore likely due fewer protections.

<sup>321</sup> See generally Radin, *supra* note 13, at 991-92 (1982) (discussing the relationship between personhood and the privacy of the home).

<sup>322</sup> Kuh, *supra* note 7, at 1173 (internal citations omitted).

<sup>323</sup> *Id.* at 1160 (noting that "government restrictions on individual behaviors may arouse greater resistance when they apply to behaviors that occur in or near the home or that must be enforced in or near the home").

<sup>324</sup> *Id.* at 1170 ("The home is considered 'the most private of places,' and laws that would require 'police invasion' of the home for their enforcement are deemed particularly suspect.") (internal citations omitted).

<sup>325</sup> *Supra* Part II, § (D) (discussing the "intrusion objection").

<sup>326</sup> Tekle, *supra* note 12, at 215 (defining the industrial lawn as one that "must be treated with artificial fertilizers, pesticides, and herbicides").

takings concerns would be avoided. The problem is that if a locality only bans those behaviors, it misses out on the opportunity and benefits that might come from a ban that not only requires lawn removal, but also requires its replacement with landscaping that is more beneficial.

Lawn bans that are part of a broader sustainability plan can further ambitious community designs: the goal is not just to eliminate environmental externalities associated with lawns, but also to change the landscape into something more sustainable. Further, if a locality sought to alleviate lawn-related harms, but did not control what could be installed in their stead, the harms that the mandate sought to eliminate might not in fact be avoided. For example, if a locality forbade lawn maintenance, but did not require lawn replacement, a homeowner whose lawn died due to lack of water and fertilizer could simply install Astroturf, which may be less environmentally sound than a lawn. Thus, a lawn mandate that does not address subsequent replacement will not necessarily result in a net environmental benefit.

Although affirmative requirements do raise autonomy issues—and along with them, greater concerns about legal challenges under the First,<sup>327</sup> Fifth,<sup>328</sup> Fourteenth, and perhaps even Thirteenth Amendments<sup>329</sup>—municipalities have

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<sup>327</sup> One could argue that the law is a form of expressive speech that is “sufficiently imbued with elements of communication to fall within the scope of the First Amendment.” *Spence v. State of Washington*, 418 U.S. 405, 409 (1974). *See also* Rappaport, *supra* note 8, at 908-09 n. 129, n. 133 (arguing “the case for natural landscaping as art” and noting that a Rhode Island statute defines art to include “architectural landscaping”) (citing R.I. GEN. LAWS § 42-75.2-3 (1992)); JOHN J. COSTONIS, *ICONS AND ALIENS: LAW, AESTHETICS, AND ENVIRONMENTAL CHANGE* 94 (1989) (“For many, architecture and other environmental features communicate ideas more effectively than does language”); Smith, *supra* note 39, at 22 (“If planting endemic grasses was necessary for the [Audubon] Society to express its environmental ethic, then under First Amendment analysis the government cannot prohibit that conduct unless it articulates a compelling, or at least an important, reason.”). *See also* *City of Ladue v. Gilleo*, 512 U.S. 43, 48 (1994) (holding that city ordinance prohibiting all lawn signs except a limited few violated constitutional protection of content-based speech). Because the Supreme Court permits content-neutral regulations of lawn signs, perhaps this indicates that lawns can themselves be regulated, even if lawns are viewed as expressive. *See, e.g.*, Smith, *supra* note 39, at 223 (“Attaching First Amendment significance to certain landscape or yard elements doesn’t necessarily mean that the government is precluded from restricting that expressive behavior. The effect of finding First Amendment protection is to remove the normal presumption of legitimacy attached to the regulation.”). Although these scholars believe that natural landscaping is expressive, it is still prohibited by many ordinances. They believe that more should be permissible, and that weed ordinances are too restrictive. This Article approaches landscaping from the other direction. Lawns might be expressive, but could still be banned, and if cities can ban native plants—arguably merely for aesthetic preferences, with some tangential nuisance arguments—certainly they can ban lawns, which are environmentally harmful.

<sup>328</sup> *Supra* notes 272-282 and accompanying text.

<sup>329</sup> Although it would be a stretch, a homeowner who is forced to remove her lawn and replace it with a vegetable garden might argue that she is being forced to act in violation of the 13th Amendment. Certainly, it takes time, money, and often expertise for people to successfully grow vegetables. However, local governments regularly mandate individual action. *Infra* notes 330-332. Further, weed ordinances arguably exist for purely aesthetic purposes, unlike a mandate on productive landscaping, which has utility in that it can provide food in food insecure communities and foster social capital. *See generally* Schindler, *Of Backyard Chickens*, *supra* note 43 (discussing the benefits of front yard gardens). Moreover, the only reason that a person would be

historically regulated what individuals may plant on their property. For example, statutes in colonial Virginia prohibited people from overplanting tobacco and actually required them to grow crops other than tobacco.<sup>330</sup> Similarly, lawn maintenance is not always a personal choice. Weed ordinances, which require people to mow their lawn and remove native plants,<sup>331</sup> have been upheld despite the fact that some view them as “irrational.”<sup>332</sup>

Similarly, many historic preservation ordinances require landowners to maintain the historic features of their property, or to install new ones, often at great expense.<sup>333</sup> Although the affirmative requirement to install a certain type of landscaping might require the expenditure of money, that alone would not make it an unconstitutional taking of property.<sup>334</sup> However, there are political concerns associated with requiring individuals to spend money, and because many municipalities are facing severe budgetary shortages, it is unlikely that they could contribute funding for lawn replacements.<sup>335</sup> Thus, municipalities should think creatively about how to require replacement of lawns with sustainable alternatives that would not cost their citizens a great deal of money.<sup>336</sup>

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required to engage in landscaping is because he or she owns or leases a house. Thus, this argument would quite likely fail.

<sup>330</sup> ELLICKSON & BEEN, *supra* note 105, at 135.

<sup>331</sup> *See, e.g.*, LITTLE ROCK, ARK., CODE ch. 20, art. I, § 20-2 (2010) (making it unlawful to permit “[g]rass, weeds, or any other plant that is not cultivated, to grow to a height greater than ten (10) inches”). *See also* Rappaport, *supra* note 8, at 891 n. 81 (discussing a Natural Resources professional’s decision to landscape with native plants, and stating, “[a]fter several months, a Notice of Violation arrived . . . from the County Solid Waste Department. Her neighbor had filed a complaint. If her yard wasn’t mowed in 20 days, the County would mow it”) [citing Robin Hart, *Natural Landscapes vs. Mowing Ordinances*, THE PALMETTO (Spring 1993), at 8-9.]. *Id.* at 887 (describing officials who viewed a “wild fern garden as ‘weeds’ and cut it down. An enraged [homeowner] took up the fight and convinced village officials that a natural landscape was a public good and not a health hazard.”). While there is a sense that lawns maintain or even enhance property values, weed bans have been upheld even though there is not much basis for them.

<sup>332</sup> Rappaport, *supra* note 8, at 918 n. 165 (referring to weed laws as “generally irrational because enforcement of the prohibition does not further the articulated public safety and health goals”). *Cf.* *City of St. Louis v. Galt*, 77 S.W. 876, 880 (Mo. 1903), (holding that weeds can be regulated under the police power because they are known to cause health problems). However, one court struck down a weed ordinance, saying it violated the equal protection clause. *City of New Berlin v. Hagar*, No. 33582 (Wis. Cir. Ct. Waukesha Cty. Apr. 21, 1976).

<sup>333</sup> For example, homeowners in Portland, Maine’s historic district who seek to replace gutters that are “a significant and integral feature of the structure” may be required to use historic but expensive materials, such as wood. PORTLAND, ME., CODE §§ 14-634(b), 14-650(b), (e), (f) (2012).

<sup>334</sup> *See Maher v. City of New Orleans*, 516 F.2d 1051, 1067 (5th Cir. 1975) (“The fact that an owner may incidentally be required to make out-of-pocket expenditures in order to remain in compliance with an ordinance does not per se render that ordinance a taking.”).

<sup>335</sup> *But see supra* notes 178-180 and accompanying text (discussing ways for governments to generate money for lawn replacement).

<sup>336</sup> One possibility might be a co-op system. For example, in Austin, Texas, a “nonprofit neighborhood farm network” called Urban Patchwork is pioneering an interesting approach to urban gardening that combines features of community gardening with those of a Community Supported Agriculture (CSA). *See* URBAN PATCHWORK NEIGHBORHOOD FARMS, <http://www.urbanpatchwork.org> (last visited Feb. 26, 2013) [hereinafter URBAN PATCHWORK]. Under a standard CSA model, individuals buy “shares” in a farm or a group of farms, and then

Finally, because the removal of lawns might result in a decrease in social capital or in spaces where children can play, a locality requiring removal of lawns could commit to constructing additional public parks in their communities.<sup>337</sup> These could serve the role of third places, and would be more inclusive than front yards, as they would be truly public open space—a commons instead of private property.<sup>338</sup>

### CONCLUSION

Although lawns inflict numerous harms on the communities in which they are located,<sup>339</sup> most localities have not banned or even limited them.<sup>340</sup> However, water shortage is quickly becoming one of the most dire problems facing much of the country, and the world.<sup>341</sup> Limiting lawns, especially in parts of the country where water shortages or water pollution are most acute, is a direct way to reduce their harms while simultaneously providing an opportunity to improve food security and biodiversity.<sup>342</sup> Although the hurdles to implementing lawn bans are currently more political than legal, the changing climate might lead to changing attitudes.

Fifty years ago, if a city told a developer that her new homes had to be “green buildings,” which incorporate certain features to make them more sustainable and efficient than standard, more cheaply constructed homes, she would likely have been incredulous. However, green building ordinances are now quite common in many localities. In part, this legal change followed a shift in norms as growing builder interest in green development was evidenced through the use of voluntary market mechanisms like the Leadership in Energy and

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receive a portion of the harvest during the growing season. LOCAL HARVEST, <http://www.local-harvest.org/csa/> (last visited Feb. 26, 2013). Under Urban Patchwork’s model, people can volunteer to be “land hosts,” offering up their yard space and water, and the organization will turn their yard into an urban farm. URBAN PATCHWORK. In exchange, the homeowner gets a CSA share—some of the harvest from their yard and from others in the neighborhood—for free. *Id.* Although Urban Patchwork is a private nonprofit, a city could create a similar municipal entity in conjunction with a lawn ban in order to address potential criticisms about the time and money it would take for homeowners to replace their lawns with gardens.

<sup>337</sup> If the community were already built out, perhaps it could obtain vacant properties through tax foreclosure or eminent domain for this purpose.

<sup>338</sup> Aleksandra Kazmierczak, *The Contribution of Local Parks to Neighborhood Social Ties*, 109 LANDSCAPE & URB. PLANNING 31, 40 (2013) (“[S]ocial ties are...developed and strengthened in local parks.”).

<sup>339</sup> See *supra* part I, § (C).

<sup>340</sup> *But see* MORGAN HILL, CAL., CODE ch. 18.73 § 40 (2010) (requiring certain projects to meet landscape water-efficiency goals by conforming to a water budget or plant-type restriction; prohibiting total turf area from exceeding 25% of the landscape area; and requiring 80% of plants in non-turf areas to be native or low-water use); S.F., CAL., ADMIN. CODE, ch. 63, §§ 5-6 (2010) (requiring applicants for public, residential, and commercial landscapes greater than 1,000 square feet to use low water or climate appropriate plants, and restricting the turf areas of those projects to 25% of the total landscaped area).

<sup>341</sup> See generally, FISHMAN, *supra* note 73.

<sup>342</sup> Food security and biodiversity could be improved if individuals had to replace former lawns with productive or native plants.

Environmental Design (LEED) standards.<sup>343</sup> In sum, this Article suggests nothing more than an expansion of the notion that local governments appropriately can regulate the sustainability of the built environment; that principle simply needs to be taken beyond buildings and into the yard.

Although the idea of a local government ordering its citizens to tear up their lawns and replace them with vegetable gardens or xeriscaping seems far-fetched, norms are already moving in that direction in some communities. Residents are petitioning local governments to repeal outdated weed ordinances and allow them to plant front yard gardens.<sup>344</sup> Thus, as with green building, it is possible that as voluntary actions become more common, and as droughts lengthen and water and energy become more expensive, local politicians will become less wary of the concept of a lawn ban. And as far as trade-offs go, “[t]he lawn is an easy sacrifice, compared to trees and shrubs—or taking a shower.”<sup>345</sup>

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<sup>343</sup> Schindler, *Following Industry’s LEED*, *supra* note 209.

<sup>344</sup> Schindler, *Of Backyard Chickens*, *supra* note 43 (discussing petitions to get garden bans overturned).

<sup>345</sup> Smaus, *supra* note 2.