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## Lawns and the New Watershed Law

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# LAWNS AND THE NEW WATERSHED LAW

ASMARA M. TEKLE\*

## I. INTRODUCTION

We Americans take pride in our forty million acres of national front lawn.<sup>1</sup> More likely than not, this front lawn is evergreen, crew-cut yet lush, and weed and pest free.<sup>2</sup> It is also unadorned, apart perhaps from a bed of ornamental flowers fronting the dwelling or an occasional tree or two.<sup>3</sup>

Turf influences our residential landscapes by unifying and defining

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\* Associate Professor of Law, Thurgood Marshall School of Law. The author thanks William T. Maule and Danyahel Norris for research assistance. The author is grateful also to Kali Murray, Robin Malloy, Tanya Marsh, Audrey McFarlane, Kenneth Stahl, and Sarah Schindler. This paper benefitted greatly from comments received at the 2010 meeting of the Lutie Lytle Black Women Law Faculty Writing Workshop, the 2011 Property Law section meeting at AALS, the 2011 meeting of the Association of Law, Property, and Society, and a faculty workshop at South Texas College of Law. This article was made possible, in part, by funding from a 2010 summer research stipend from Thurgood Marshall School of Law.

1. *Landscaping and Lawn Care*, U.S. EPA, OFFICE OF WASTEWATER MGMT., <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=97> (last visited Oct. 6, 2011).

2. F. HERBERT BORMANN ET AL., REDESIGNING THE AMERICAN LAWN: A SEARCH FOR ENVIRONMENTAL HARMONY 48–49 (Lisa Vernegaard & Sally Atkins eds., 2d ed. 2001). The quintessential suburban lawn has been referred to as the “Industrial Lawn”:

This is the lawn your neighbors expect to see on their trip home after battling the evening rush hour; the lawn created by what has come to be known as the lawn care industry. In fact, we might think of it as the ‘Industrial Lawn.’

The Industrial Lawn rests on four basic principles of design and management: (1) it is composed of grass species only; (2) it is free of weeds and other pests; (3) insofar as possible it is continuously green; and (4) it is regularly mowed to a low, even height. . . . The Industrial Lawn is not attuned to the peculiarities of place. Like energy-intensive agriculture it ignores microclimates and species diversity, and substitutes technology for natural processes.

*Id.* (reference to figure omitted).

3. Michael Pollan, *Why Mow? The Case Against Lawns*, N.Y. TIMES MAG., May 28, 1989, at 41 (quoting FRANK J. SCOTT, THE ART OF BEAUTIFYING SUBURBAN HOME GROUNDS OF SMALL EXTENT 105 (Am. Book Exch. ed. 1881) (1870)) (“Scott subordinated all other elements of the landscape to the lawn; flowers were permissible, but only on the periphery of the grass: ‘Let your lawn be your home’s velvet robe, and your flowers its not too promiscuous decoration.’”).

neighborhoods and communities in many American suburbs and cities.<sup>4</sup> This definition and unification is arguably facilitated through local official and unofficial codes of conduct. Irrespective of the source, the proof of our national love affair with the lawn is found on almost any given Saturday morning in America when we can see men and women attempting to tame the natural landscape in an expensive quest (from the viewpoint of time, energy, and resources) to achieve this herbaceous, aspirational ideal.<sup>5</sup>

Beauty comes neither free nor cheap, and the price exacted for this verdant, idyllic lawn is apparent in the time, resources, and labor personally expended by families around the nation to achieve it.<sup>6</sup> Broader, however, is the question of the lawn's costs to the environment, particularly to some of the nation's most cherished waterways, including the Puget Sound, the Great Lakes, and Chesapeake Bay.<sup>7</sup>

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4. BORMANN ET AL., *supra* note 2, at 9 fig.3 (“In suburbs and small towns throughout America, front lawns run together without interruption, giving a neighborhood a sense of unity and providing a source of community pride.”).

5. *Id.* at 3 (describing the relationship of Americans to their lawns as a “love affair”). Bormann describes this love affair as follows:

Americans' attachment to the lawn is a long and fond one. 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. The green blades feel good to the touch; the cut grass freshens the smell of the air. No other nation, except perhaps England, holds the lawn in such reverence. In passing through suburban neighborhoods where one landscaped lawn follows another, we can vividly see the pride Americans take in their lawns.

*Id.*

6. *Id.* at 49 (noting that there is an estimated thirty billion dollars a year turf-grass industry); TED STEINBERG, *AMERICAN GREEN: THE OBSESSIVE QUEST FOR THE PERFECT LAWN* 5 (2006) (stating that Americans spend an estimated forty billion dollars a year on lawn care).

7. Government agencies, organizations, and residents in the Puget Sound, Great Lakes, and Chesapeake Bay watersheds have recognized the impact that contaminated stormwater can have on our nation's water resources. For more information on Puget Sound, see the following: ELWAY RESEARCH, INC., *WATER POLLUTION IN PUGET SOUND: THE VIEW FROM THE BACK YARD* 5–6, 8, 11, 12–17 (2009), *available at* <http://www.wastormwatercenter.org/files/library/water-pollution-in-puget-sound-view.pdf> (discussing the lawn's effect on Puget Sound and consumer behavior); *Problem Below the Surface: Impacts on the Sound*, PUGET SOUND STARTS HERE, <http://pugetsoundstartshere.org/problem-below-the-surface/impacts-on-the-sound/> (last visited Oct. 6, 2011) (“Approximately 75% of all pollution in Puget Sound comes from stormwater runoff that starts in our neighborhoods. It comes from the water that passes over roads, sidewalks, driveways and yards—picking up oil, grease, metals, soaps and yard

In order to attain a lush, evergreen, weed and pest free, neatly-trimmed lawn, it often must be treated with artificial fertilizers, pesticides, and herbicides.<sup>8</sup> This kind of lawn has been termed the “Industrial Lawn.”<sup>9</sup> During heavy rains, however, excess fertilizer and pesticides that have not been absorbed by the shallow roots of turf, flow into storm sewers where the runoff remains untreated or minimally treated before entering waterways<sup>10</sup> (unlike the water that generally

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chemicals along the way.”); *Resources, Q&A*, PUGET SOUND STARTS HERE, <http://pugetsoundstartshere.org/resources/q-a/> (last visited Oct. 6, 2011) (notifying readers that stormwater impacts the health of waters and wildlife by carrying chemicals and waste improperly disposed of on lawns); *Stormwater: What You Need to Know. How You Can Help.*, PEOPLE FOR PUGET SOUND, <http://pugetsound.org/education/runoff> (last visited Oct. 6, 2011) [hereinafter *Stormwater: What You Need to Know*]; and *Think Twice About Pesticides*, SEATTLE PUB. UTILS., SEATTLE.GOV, [http://www.seattle.gov/util/Services/Yard/Natural\\_Lawn\\_&\\_Garden\\_Care/Natural\\_Lawn\\_Care/6\\_Steps\\_of\\_Natural\\_Lawn\\_Care/THIN\\_KTWIC\\_200311261653108.asp](http://www.seattle.gov/util/Services/Yard/Natural_Lawn_&_Garden_Care/Natural_Lawn_Care/6_Steps_of_Natural_Lawn_Care/THIN_KTWIC_200311261653108.asp) (last visited Oct. 6, 2011).

For more information on the Great Lakes, see MICHAEL KEATING, OUR GREAT LAKES 21–22 (2004), available at <http://binational.net/ourgreatlakes/ourgreatlakes.pdf>; Danielle Green & Dan Welker, U.S. EPA, Environmental Implications: The Hidden Impacts of Gardens, Presentation (2003), available at <http://www.epa.gov/greenacres/smithsonian.pdf>; and *Be Green in the Great Lakes Initiative*, N.Y. STATE DEP’T OF ENVTL. CONSERVATION, <http://www.dec.ny.gov/chemical/76234.html> (last visited Oct. 6, 2011).

For more information on Chesapeake Bay, see CHESAPEAKE BAY PROGRAM, BAY BAROMETER: A HEALTH AND RESTORATION ASSESSMENT OF THE CHESAPEAKE BAY AND WATERSHED IN 2009, at 11 (2010) [hereinafter 2009 BAY BAROMETER], available at [http://www.chesapeakebay.net/content/publications/cbp\\_50513.pdf](http://www.chesapeakebay.net/content/publications/cbp_50513.pdf); and *Help the Bay in Your Backyard*, CHESAPEAKE BAY PROGRAM, <http://www.chesapeakebay.net/inyourbackyard.aspx?menuitem=16888> (last visited Oct. 6, 2011) (advising residents in the watershed to use chemical lawn fertilizer prudently, or to use lawn clippings or organic fertilizers to prevent watershed harm during heavy rainfalls).

8. See BORMANN ET AL., *supra* note 2, at 54–55 (describing the need to use fertilizers and herbicides to combat insects and weeds in order to maintain a lush, evergreen lawn).

9. See *supra* note 2. A collaboration of faculty and students of the Yale University School of Faculty and Environmental Studies and the School of Art and Architecture proposed the term “Industrial Lawn.” BORMANN ET AL., *supra* note 2, at ix, 1.

10. See KEATING, *supra* note 7, at 7, 9 (noting that possible pollutants include automotive oils and chemicals, road salt, lawn and garden chemicals, pet waste, and broken septic systems); *Problem Below the Surface: Impacts on the Sound*, *supra* note 7 (“Throughout the 12 counties that border Puget Sound there are thousands of storm drains and streams pouring polluted water into the Sound’s delicate ecosystem.”); *Stormwater: What You Need to Know*, *supra* note 7. See generally ELWAY RESEARCH, *supra* note 7 (discussing lawn’s effects on Puget Sound and consumer behavior); *Salmon Friendly Gardening*, SEATTLE PUB. UTILS., SEATTLE.GOV, [http://www.seattle.gov/util/Services/Yard/Natural\\_Lawn\\_&\\_Garden\\_Care/Salmon\\_Friendly\\_Gardening/index.asp](http://www.seattle.gov/util/Services/Yard/Natural_Lawn_&_Garden_Care/Salmon_Friendly_Gardening/index.asp) (last visited Oct. 6, 2011); *Think Twice About Pesticides*, *supra* note 7. But see Tony H.F. Wong et al., *Modeling Urban Stormwater Treatment—A Unified Approach*, 27 ECOLOGICAL ENGINEERING 58, 58–59 (noting that in recent years many municipalities have placed an emphasis on reducing stormwater pollution through heavy investment in treatment measures).

flows out of most residential toilets and sinks).<sup>11</sup>

Untreated water has disastrous effects on the environment. For example, when introduced into bodies of water, lawn chemicals, especially phosphorous and nitrogen from lawn fertilizer, create “dead zones” where algae bloom in excess, making water murky and blocking sunlight to underwater grasses.<sup>12</sup> These grasses, in turn, provide habitat for bottom feeders, such as plankton, that feed fish and shellfish. The

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11. See KEATING, *supra* note 7, at 7, 9. The pollution comes

from many diffuse sources . . . washed into the Great Lakes by rainwater and snowmelt. In urban areas, such pollution includes spilled automotive oils and chemicals, road salt, lawn and garden chemicals, and pet waste. . . . The sanitary sewers take wastes away from our homes, while storm sewers carry rainwater and snowmelt from roofs, yards, parking lots, and streets.

*Id.*; see also ELWAY RESEARCH, *supra* note 7, at 4, 5–7 (discussing lawn’s effects on Puget Sound and consumer behavior); Alexandra Dapolito Dunn & Nathan Gardner-Andrews, *Publicly Owned Treatment Works*, in THE CLEAN WATER ACT HANDBOOK 83, 84 (Mark A. Ryan ed., 3d ed. 2011) (stating that “[m]unicipal wastewater consists primarily of domestic wastewater from households and businesses and of industrial wastewater from manufacturing and commercial activities” that is processed through treatments to comply with federal regulations); *Resources, Q&A*, *supra* note 7 (“In most areas in the Puget Sound region, stormwater and sewer systems are not connected. Stormwater is rain that is not absorbed into the soil. It runs over paved and developed surfaces (including lawns) and flows into storm drains that do not route to wastewater treatment plants. These storm drains dump untreated, polluted stormwater directly into natural waterways such as lakes, rivers, streams, ponds and Puget Sound.”).

12. *Resources, Q&A*, *supra* note 7; see also CHESAPEAKE BAY PROGRAM, BAY BAROMETER: A HEALTH AND RESTORATION ASSESSMENT OF THE CHESAPEAKE BAY AND WATERSHED IN 2008, at 19 (2009) [hereinafter 2008 BAY BAROMETER], available at [http://www.chesapeakebay.net/content/publications/cbp\\_34915.pdf](http://www.chesapeakebay.net/content/publications/cbp_34915.pdf) (“While algae also make up the base of the food web in the Bay ecosystem, too much or the wrong type of algae can be detrimental to the overall health of the Bay by decreasing oxygen, blocking sunlight and harming aquatic life.”). The runoff from lawns has had a great effect on the Puget Sound:

Nutrients such as the phosphates and nitrates found in yard fertilizers can kill plants and animals. They feed the excessive growth of algae, which uses up oxygen needed for fish and other aquatic life.

....

Oxygen-starved dead zones occur in coastal waters such as Puget Sound when pollution disrupts natural oxygen-creating processes. Several oxygen-depleted dead zones have developed in Puget Sound’s Hood Canal, and signs indicate that new dead zones are emerging in other parts of the Sound. This dangerous phenomenon leads to the suffocation of important food sources for fish and shellfish, it creates hazardous conditions for both plant and animal life, and it has serious ecological and economic impacts on the region. Polluted stormwater runoff is one factor in the development of dead zones.

*Resources, Q&A*, *supra* note 7.

grasses also provide breeding areas and protective nurseries for aquatic life.<sup>13</sup> Additionally, when algae blooms decompose, they decrease oxygen levels in water, essentially suffocating aquatic life.<sup>14</sup> This dynamic can cause decreased and restricted commercial harvests (relative to years past), arguably affecting local economies dependent on wild commercial harvests, such as the Chesapeake Bay's famous blue crabs and the Pacific Northwest's shellfish and finfish.<sup>15</sup>

Moreover, stormwater runoff can impact fish and shellfish,<sup>16</sup> which are often consumed by larger predators in the aquatic food web, including humans.<sup>17</sup> This is especially of concern for people under the age of fifteen, nursing mothers, women of childbearing age, and fetuses in utero because these groups of people may be particularly susceptible to contaminants and chemicals found in seafood.<sup>18</sup>

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13. See, e.g., 2008 BAY BAROMETER, *supra* note 12, at 19 (underscoring the fundamental importance of Chesapeake Bay grasses); PUGET SOUND PARTNERSHIP, 2009 STATE OF THE SOUND 39, available at [http://www.psp.wa.gov/downloads/SOS09/09-04534-000\\_State\\_of\\_the\\_Sound-1.pdf](http://www.psp.wa.gov/downloads/SOS09/09-04534-000_State_of_the_Sound-1.pdf) (noting the fundamental importance of eelgrass (the "dominant seagrass in Washington") for the Puget Sound's marine life).

14. 2008 BAY BAROMETER, *supra* note 12, at 15; HEATHER DEWAR ET AL., URBAN FERTILIZERS AND THE CHESAPEAKE BAY: AN OPPORTUNITY FOR MAJOR POLLUTION REDUCTION 4-5 (2011), available at <http://www.environmentmaryland.org/uploads/74/a0/74a0d362c224312d6b7fad5ff6bb85e8/Environment-Maryland---Urban-Fertilizers--the-Chesapeake-Bay-WEB.pdf>; Darryl Fears, *State Urged to Curb Lawns' Pollution of Bay*, WASH. POST, March 29, 2011, at B.3.

15. 2009 STATE OF THE SOUND, *supra* note 13, at 18 ("What is the current status of commercial finfish and shellfish harvest? Significantly lower levels in recent years for all harvests except shellfish aquaculture."). But see 2009 BAY BAROMETER, *supra* note 7, at 5 (noting that the Bay's adult blue crab population in 2009 increased 70% from 2008, primarily because of an increase in the adult female blue crab population, but that there is still much more work to do to improve yields).

16. See, e.g., Stephen J. Gaffield et al., *Public Health Effects of Inadequately Managed Stormwater Runoff*, 93 AM. J. PUB. HEALTH 1527, 1527-28 (2003) ("Insecticides occur widely in sediment and fish in urban streams at levels considered harmful to wildlife."); Jeremy Wilkinson et al., *Processes Driving the Episodic Flux of Faecal Indicator Organisms in Streams Impacting on Recreational and Shellfish Harvesting Waters*, 40 WATER RES. 153, 153-54 (2006) (acknowledging the connection between stormwater pollutants and shellfish harvesting areas); *Salmon Friendly Gardening*, *supra* note 10.

17. Studies have shown that the older and bigger the fish, or the higher its placement on the food web, the higher its level of pollutant. KEATING, *supra* note 7, at 11-12 ("The chemicals found in fish do not cause immediate sickness, but they can accumulate in our bodies over time and affect our health and that of our children. . . . Species at the top of the aquatic food chain, such as trout, salmon, and walleye, can build up higher levels of pollutants than fish that are not top predators. Generally, bigger and older fish accumulate more chemicals in their flesh than do smaller and younger fish.").

18. See, e.g., *id.* ("Women of childbearing age, pregnant women, nursing mothers, and children under age 15 all face greater risk of harm from toxic substances and should be

Furthermore, there is concern that lawn pesticides and fertilizers may contaminate drinking water derived from the Great Lakes.<sup>19</sup> In addition, the United States Environmental Protection Agency (EPA) estimates that thirty percent of the nation's water is used for watering the lawns, thereby straining water resources—especially in areas of the country that lack water.<sup>20</sup>

To be sure, vehicles, industry, industrial agriculture, urban development, golf courses, and cemeteries play a role in the decline of these waterways,<sup>21</sup> yet we as individuals have little to no control over these devices or land uses.<sup>22</sup> On the other hand, the front lawn remains well within the individual's domain and control, underscoring the notion that, when it comes to lawn-care habits, the sum of our individual actions may have broad and beneficial impacts on waterways. Yet, unlike industry, vehicles, and industrial agriculture, our lawns (while regulated by local government to control for aesthetics) are largely

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careful to follow guidelines on what fish are safe for them to eat.”); Gaffield et al., *supra* note 16, at 1528 (discussing concerns that human consumption of contaminated seafood has carcinogenic effects and disrupts the hormonal system); Rebecca A. Reid & Timothy D. Durance, *The U.S. National Shellfish Sanitation Program*, in 4 *FOODBORNE DISEASE HANDBOOK: SEAFOOD AND ENVIRONMENTAL TOXINS* 321, 326 (Y. H. Hui et al. eds., 2d ed. 2001) (acknowledging that there is a risk of illness from consuming polluted shell fish and that medically compromised individuals face a broader risk of illness from polluted shellfish consumption).

19. KEATING, *supra* note 7, at 7 (noting that, each day, twenty-four million people drink water provided by the Great Lakes and that while the greatest contaminant is fecal matter, “[p]ollution from many diffuse sources is washed into the Great Lakes by rainwater and snowmelt. In urban areas, such pollution includes spilled automotive oils and chemicals, road salt, lawn and garden chemicals, and pet waste.”); WHITE HOUSE COUNCIL ON ENVTL. QUALITY ET AL., GREAT LAKES RESTORATION INITIATIVE: ACTION PLAN 4, 26–27 (2010) [hereinafter GREAT LAKES RESTORATION INITIATIVE], available at [http://greatlakesrestoration.us/pdfs/glri\\_actionplan.pdf](http://greatlakesrestoration.us/pdfs/glri_actionplan.pdf); Kimberly Hirai, *Attacking Nonpoint Pollution at Source*, GREAT LAKES ECHO (Feb. 20, 2011), <http://greatlakesecho.org/2011/02/20/attacking-nonpoint-pollution-at-source/>.

20. *Conserving Water*, U.S. EPA, <http://www.epa.gov/greenhomes/ConserveWater.htm#landscaping> (last visited Oct. 6, 2011).

21. See 2008 BAY BAROMETER, *supra* note 12, at 10 (“Everything that happens on land has an impact on the water. . . . Agriculture is the number one source of pollution to the Bay.”); GREAT LAKES RESTORATION INITIATIVE, *supra* note 19, at 26 (stating that development and agricultural practices are environmental stressors); *Cemeteries Pollute Water Supply*, BBC NEWS (Oct. 20, 1998), <http://news.bbc.co.uk/2/hi/health/197410.stm> (discussing a United Kingdom study on the effect of cemeteries on water).

22. 2008 BAY BAROMETER, *supra* note 12, at 10–11 (discussing the role of other pollutants of Chesapeake Bay); *What is Nonpoint Source Pollution*, U.S. EPA (Sept. 29, 2011), <http://water.epa.gov/polwaste/nps/whatis.cfm>.

unregulated to control pollution.<sup>23</sup>

Three bodies of law largely regulate the front lawn:<sup>24</sup> (1) formal public land use law such as municipal ordinances (e.g., limiting how high the lawn can grow); (2) formal private land use law such as restrictive covenants in many of the nation's suburbs and cities controlling, for example, what may be placed on the lawn; and (3) informal law such as neighborhood or community social norms. This Article contends that the latter sub-legal regime is likely the most stringent and consequential.<sup>25</sup>

This Article argues also that these legal and sub-legal codes historically have been used to “brown” the front lawn—that is, to make the lawn environmentally unsustainable. The Industrial Lawn has been codified to the virtual exclusion of any consideration for more “green” and permeable residential landscapes with respect to waterways, such as xeriscaping<sup>26</sup> or native planting,<sup>27</sup> wildflowers or meadow,<sup>28</sup> “working” or edible landscapes such as gardens or fruit trees, artificial turf,<sup>29</sup> micro-

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23. See, e.g., *Resources, Q&A, supra* note 7 (indicating that factory and industrial plant pollution is controlled through regulations, whereas stormwater runoff pollution from yards is unregulated).

24. This paper will concentrate on public land use law and social norms. A solid body of private land use covenants in the jurisdictions surrounding the relevant waterways was difficult to come by without exorbitant expense.

25. See MICHAEL POLLAN, *SECOND NATURE: A GARDENER'S EDUCATION* 20–21 (1991) (discussing the social consequences of breaching the social code governing the front lawn).

26. *Xeriscaping*, CALRECYCLE, <http://www.calrecycle.ca.gov/Organics/xeriscaping/> (defining xeriscaping as “landscaping with slow-growing, drought tolerant plants to conserve water and reduce yard trimmings”).

27. Lois Whyde, *Naturally Native: Shrubs Offer Vibrance to Any Landscape*, NEWARKADVOCATE.COM (Mar. 29, 2011), <http://www.newarkadvocate.com/article/20110526/TREND/110520012/-1/trend> (highlighting that native planting includes incorporating plant species that occur naturally in a particular region). Potentially, “[p]lanting natives will reduce water dependence [and the] need for fertilizer and pest control, all while creating a renewed sense of place for birds and other wildlife.” *Id.* See generally 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 (discussing the land ethic and the evolution of natural landscaping).

28. Audubon at Home, *Reducing the Lawn—Meadows . . . and Other Alternatives*, in GUIDE TO GARDENING FOR LIFE IN SOUTHERN PENNSYLVANIA 21, 22–23, available at [http://web4.audubon.org/bird/at\\_home/pdf/AAHPA-21-32-Lawn.pdf](http://web4.audubon.org/bird/at_home/pdf/AAHPA-21-32-Lawn.pdf) (“Wildflower or mixed meadows . . . are typically a mix of native wildflowers, such as butterfly-weed, asters, goldenrod, and black-eyed Susan, and grasses such as Indian grass, switchgrass, and little bluestem.”).

29. Marc Lacey, *Spraying to Make Yards Green . . . But with Paint, Not Water*, N.Y.

wetlands,<sup>30</sup> permaculture,<sup>31</sup> the less-is-more lawn<sup>32</sup> or freedom lawn,<sup>33</sup> or even a chicken or two.<sup>34</sup>

Yet, the law could be a force in making the residential lawn more environmentally sustainable, thus mitigating the lawn's role in waterway degradation. Essentially, "green" residential lawn law is one that recognizes and upholds a diversity of residential landscapes, in keeping with the environmental values of the twenty-first century and in lieu of

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TIMES, April 10, 2011, at A1.

30. See Clare Shine & Cyrille de Klemm, *Wetlands, Water and the Law: Using Law to Advance Wetland Conservation and Wise Use* 4 (IUCN Env'tl. Pol'y & L. Paper Ser. No. 38, 1999) (noting the existence of various sizes of wetlands including "micro-wetlands," which are the smallest form of wetlands).

31. Michael Tortorello, *Growing from Underground*, N.Y. TIMES, July 27, 2011, at D1 (defining permaculture as "a simple system for designing sustainable human settlements, restoring soil, planting year-round food landscapes, conserving water, redirecting the waste stream, forming more companionable communities and, if everything went according to plan, turning the earth's looming resource crisis into a new age of happiness"); see also PERMACULTURE INSTITUTE, <http://www.permaculture.org/nm/index.php/site/index/> (last visited Oct. 8, 2011) ("Permaculture is an ecological design system for sustainability in all aspects of human endeavor. It teaches us how [sic] build natural homes, grow our own food, restore diminished landscapes and ecosystems, catch rainwater, build communities and much more.").

32. Steinberg refers to Rossi's approach to the lawn as "less is more." STEINBERG, *supra* note 6, at 215. Professor Frank Rossi artfully describes the "less is more" approach to managing a lawn as follows:

Chances are you can grow a pretty good lawn without insecticides, fungicides, or herbicides. You may even be able to do it using little or no chemical fertilizer, if that's your goal. Will your lawn look like a putting green? No. Will it stand up to wear and tear like a professionally managed soccer field? Not a chance. Will it stay emerald green through the dog days of summer? Probably not. But if you arm yourself with an understanding of what grasses need to thrive—and commit to a long-term plan to meet those needs—you can grow a perfectly acceptable lawn while foregoing lawn chemicals.

Frank Rossi, *Lawn Care without Pesticides* 1 (Cornell Univ., Cooperative Extension Info. Bull. No. 248, 2005), available at <http://ecommons.cornell.edu/handle/1813/3574>. Professor Rossi also notes that lawns without the "overuse" of added chemicals are good for the environment, as "[t]hey can help protect and even improve water quality and control erosion," enhance property values, lower noise and air pollution by filtering sound and allergens, provide a safe place to play, and lower air conditioning bills. *Id.* at 7–8.

33. BORMANN ET AL., *supra* note 2, at 1. The "Freedom Lawn" differs from the "Industrial Lawn" described earlier: the Freedom Lawn represents one that is "mowed when needed, free of pesticides and fertilizers, and often designed to reduce the proportion of the yard maintained as lawn." *Id.*

34. The raising of urban and suburban chickens, however, appears to be more of an inside or backyard phenomenon. See Sarah E. Needleman, *Fowl Fans See Golden Eggs in Catering to Pet-Chicken Market*, WALL ST. J., July 8, 2010, at A1 (profiling urban and suburban chicken owners who raise their chickens either inside or in the backyard).

stubborn fealty to the nineteenth century aesthetic<sup>35</sup> of the Industrial Lawn.

By virtue of its effects on the watershed and marine ecosystems, the front lawn links water and land. This Article suggests that localities should consider the front lawn's effects on marine ecosystems and water management as a starting point for crafting land use law and policy. Arguably, land use law governing the front lawn has become part of the *new* watershed law.

## II. BACKGROUND AND HISTORY OF THE LAWN

Before one can discuss the law regulating the front lawn, it is important to understand its history. Arguably, derivations of nineteenth century landscape architecture have shaped heavily current law and sub-legal social norms governing the lawn. By this same logic, there is no reason to think that changing notions of what is beautiful—in terms of what may front the residential dwelling—may not similarly shape twenty-first century law and sub-legal social norms regulating the front lawn.

### A. *The Front Lawn Beautiful*

#### 1. Nineteenth Century Notions

When it comes to the front-lawn domestic landscape, what is beautiful? Certainly, the nineteenth century had one answer: the crew-

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35. For a description of the origins of the nineteenth century aesthetic in the United States, see A.J. DOWNING & HENRY WINTHROP SARGENT, *A TREATISE ON THE THEORY AND PRACTICE OF LANDSCAPE GARDENING ADAPTED TO NORTH AMERICA* (Orange Judd Co. ed. 1875) (1841). Michael Pollan credits Frank J. Scott for publishing a book that espoused the lawn as an aesthetic center piece and notes that

[i]n 1870, Frank J. Scott, seeking to make Olmsted's ideas accessible to the middle class, published the first volume ever devoted to "suburban home embellishment": "The Art of Beautifying Suburban Home Grounds," a book that probably did more than any other to determine the look of the suburban landscape in America. Like so many reformers of his time, Scott was nothing if not sure of himself: "A smooth, closely shaven surface of grass is by far the most essential element of beauty on the grounds of a suburban house."

Pollan, *supra* note 3, at 41 (referring to SCOTT, *supra* note 3, at 12, 107) ("Americans like Olmsted and Scott did not invent the lawn; lawns had been popular in England since Tudor times. But in England, lawns were usually found only on estates; the Americans democratized them, cutting the vast manorial greenswards into quarter-acre slices everyone could afford.").

cut, lush, verdant, weed and pest free, unembellished front lawn. This was a result of A.J. Downing's seminal book in landscape architecture, *A Treatise on the Theory and Practice of Landscape Gardening, Adapted for North America*.<sup>36</sup> Downing, one of America's preeminent landscape architects, advocated the more-ornate English lawn<sup>37</sup> in lieu of the bare-earth, utilitarian aesthetic fronting American home grounds prior to the Civil War.<sup>38</sup>

Downing argued that the unadorned, verdant, neatly-trimmed front lawn was beautiful<sup>39</sup> and that it provided an elegant setting to showcase

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36. DOWNING & SARGENT, *supra* note 35. "From its publication in 1841 until the end of the century, Downing's *Treatise* remained the average homeowner's standard reference. In it, the lawn is the unifying theme." BORMANN ET AL., *supra* note 2, at 22. On the other hand, Therese O'Malley disagrees. According to O'Malley, the American lawn dates back much further than Downing suggested:

The American Lawn has been described in scholarly literature as a mid-nineteenth-century, post-Civil War phenomenon, inspired by landscape writers such as Andrew Jackson Downing and embodied in the parks and suburban designs of Frederick Law Olmsted. However, recent research into the history of American gardens and designed landscapes has revealed ample evidence of the lawn as a pre-Revolutionary feature common to all the North American colonies and well established by the early national period in the United States. . . . The lawn was a design feature of public, private, and institutional landscapes, serving many purposes and appearing in various stylistic modes ranging from strictly geometric to the irregular and naturalistic.

Therese O'Malley, *The Lawn in Early American Landscape and Garden Design*, in THE AMERICAN LAWN 65, 65 (Georges Teyssot ed., 1999).

37. See DOWNING & SARGENT, *supra* note 35, at 21–23. Although he preferred the English lawns, Downing did not believe they could be achieved in the United States. Downing suggested that England's immaculate lawns were resultant, in part, from its law of primogeniture. *Id.* at 21–22 ("The law of primogeniture . . . contributes greatly to the continual improvement and embellishment of those vast landed estates, that remain perpetually in the hands of the same family."). In comparing the systems of England and other European countries to the United States, Downing insisted the following:

In the United States, it is highly improbable that we shall ever witness such splendid examples of landscape gardens as those abroad, to which we have alluded. . . .

The number of individuals [within the United States] . . . who desire in their private residences so much of the beauties of landscape gardening and rural embellishment as may be had *without any enormous expenditure of means*, is every day increasing.

*Id.* at 23 (emphasis added).

38. For discussion of the front home grounds prior to the Civil War, see *infra* note 43.

39. DOWNING & SARGENT, *supra* note 35, at 18 ("The development of the Beautiful is the end and aim of Landscape Gardening, as it is of all other fine arts."). Downing extolled the beautiful and characterized the concept of "beautiful" to mean "the simple and natural,"

the dwelling, much like a ring's setting highlights a jewel.<sup>40</sup> Subsequent landscape architects thought the endless stream of lush front lawns, unencumbered by even a fence or hedge, was a device to unite and define communities.<sup>41</sup> Arguably, the uniform tableau created a semi-public space belonging not only to the owner, but also to the public or the street.<sup>42</sup> By the end of the Second World War and the 1950's, front yards had been transformed from bare patches of earth<sup>43</sup> to urban and suburban showcases of the American dream: a home, a white picket fence, and a green, lush front lawn—proof that the inhabitants had “made it.”<sup>44</sup>

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which could be achieved through removing everything from the yard, save trees and grass. *Id.* at 63. Downing explained it as follows:

A soft verdant lawn, a few forest or ornamental trees, well grouped, walks, and a few flowers, give universal pleasure; they contain in themselves, in fact, the basis of all our agreeable sensations in a landscape garden (natural beauty, and the recognition of art); and they are the most enduring sources of enjoyment in any place.

*Id.* Downing contrasts the beautiful with the downright ugly or “rural bedlams” which mix “discordant forms, materials, ornaments, and decorations . . . full of all kinds of absurdities . . . cost their owners a vast deal of trouble and money, without giving a tasteful mind a shadow of the beauty.” *Id.* at 63–64.

40. *Id.* at 57 (“There are, however, certain subordinate expressions which may be considered as qualities of the Beautiful, and which may originally so prevail in natural landscape, or be so elicited or created by art, as to give a distinct character to a small country residence . . .”).

41. BORMANN ET AL., *supra* note 2, at 23 (citing Bruce Kelly, *Art of the Olmsted Landscape*, in *ART OF THE OLMSTED LANDSCAPE* 5 (Bruce Kelly et al. eds., 1981)) (highlighting that for Frederick Law Olmsted, the designer of New York's Central Park, “the front lawn of a house in a suburb unified the residential composition as one neighborhood, giving a sense of ampleness, greenness, and community”).

42. *Id.*

43. *Id.* at 19 (“Much more common than lawns were treeless, shrubless, rather unkempt[,] weedy properties whose front yards, especially in the South, were tidy patches of swept bare ground with occasional planting beds or shrubs.”); *see also* CHRISTOPHER GRAMPP, *FROM YARD TO GARDEN: THE DOMESTICATION OF AMERICA'S HOME GROUNDS* 6 (2008) (noting that prior to the Civil War, the front yards of America's dwellings, usually in rural, small towns, “often contained rough, grassy meadows with paths leading to the front doors, some flowers near the entries, and picket fences to mark the properties and to keep out wandering animals”).

44. *See* Beatriz Colomina, *The Lawn at War: 1941–1961*, in *THE AMERICAN LAWN* 135, 148–49 (Georges Teyssot ed., 1999). Colomina discusses the American vision as depicted in a notable *Life* magazine article:

In 1946, a double-page spread in *Life*, titled “Family Utopia,” presents “the dream to which all Americans aspire” displayed on the lawn. . . . Beginning with a suburban house and a lawn, what Americans wanted most was [among other things]

## 2. Twenty-First Century Notions

Although law and society have left the front lawn's hegemony relatively unchallenged, the twenty-first century's elevation of environmental values reveals chinks in its traditional aesthetic armor.<sup>45</sup> This notion is furthered by the scientific revelation that front lawns play an important role in degrading waterways such as the Chesapeake Bay, the Great Lakes, and Puget Sound.<sup>46</sup> Therefore, while nineteenth century notions of the front-lawn beautiful may have been grounded in Downing's aesthetic viewpoint that was shaped by the English manor, the twenty-first century's lawn preference may well be constrained and shaped by values emphasizing sustainability and science.

## 3. Talkin' About a Revolution<sup>47</sup>

For the moment, however, our lawns and law suggest that we are still firmly wedded to the nineteenth century convention that the lawn is the uniquely acceptable residential landscape that may front the dwelling.<sup>48</sup>

... a lawnsweeper [and] a power-mower . . . . The prototypical family stands on the lawn, surrounded by its gadgets.

The postwar dream was displayed on the lawn in the same way that advertisements for credit cards . . . still do today. . . . The display of dream objects on the lawn is the display of the victory of American consumer culture.

*Id.* (citing *Family Utopia*, LIFE, Nov. 25, 1946, at 58–59)). By the 1930s, the front lawn was well-established as a fixture of the “middle-class suburban residential landscape.” VIRGINIA SCOTT JENKINS, THE LAWN: A HISTORY OF AN AMERICAN OBSESSION 91 (1994).

45. See, e.g., Sindya N. Bhanoo, *Those Earth-Friendly Products? Turns Out They're Profit-Friendly as Well*, N.Y. TIMES, June 12, 2010, at B3 (outlining corporations' efforts to move toward environmentally-sound products and practices).

46. For a discussion on efforts to educate the public regarding pollution from front lawns and how it negatively impacts the respective bodies of water, see *supra* note 7 and sources cited therein.

47. THE BEATLES, *Revolution*, on THE WHITE ALBUM (EMI 2009) (1968) (“You say you want a revolution. . . . We all want to change the world.”).

48. See BORMANN ET AL., *supra* note 2, at 28–33; Lacey, *supra* note 29, at A1 (noting that some homeowners in Arizona have resorted to painting the front home grounds green in order to satisfy restrictive covenants demanding green space fronting the dwelling); Brian McGrory, *Man's Truest Measure . . . The State of His Lawn*, HOUS. CHRON., Aug. 7, 2010, at B7 (noting that after moving to the suburbs, he became “obsessed” with his front lawn); 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, [http://articles.latimes.com/1990-07-22/magazine/tm-932\\_1\\_bermuda-grass-lawn](http://articles.latimes.com/1990-07-22/magazine/tm-932_1_bermuda-grass-lawn) (discussing how many California residents have switched to gravel and ground covers during severe water crisis; however, recent studies have been used to argue that residential lawns should be maintained); James Thorner, *Critics Snip Away at Landscape Ordinance*, ST. PETERSBURG TIMES, Jan. 20, 2002, at 7 (proposed landscape ordinance which champions alternative landscape is criticized by citizens who feel alternative landscape is a burden). *But see* Richard

Indeed, countless stories abound involving resistance to neighbors who dare to stray from the Industrial Lawn in pursuit of alternative landscapes.<sup>49</sup> At first glance, the question of what landscape should front the dwelling may seem of little importance or relevance—after all, it is just a lawn.

On the other hand, 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. These new landscapes may appear to be too unconventional, lack aesthetic standards, or represent an underlying desire to revolt against the dictatorial diktats of the front lawn,<sup>50</sup> but they now may play an increasingly important role in society due to the growth of environmental awareness surrounding the relationship of lawns to watersheds.

This is not mere intellectual exercise. Viscerally, we respond favorably to the Industrial Lawn. It sells houses, makes us good neighbors, and keeps our property values high.<sup>51</sup> Grass is also highly

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Benke, *Dew Point*, CHICAGO TRIBUNE, Feb. 8, 1998, at 5Q (stating that the city restricts the cultivation of lawns and promotes xeriscaping or rocky desert landscaping); Jan Uebelherr, *Queen of the Prairie*, MILWAUKEE J. SENTINEL, Aug. 29, 1999, at L1 (noting that Lorrie Otto grows a prairie garden in place of a lawn and gives natural landscape tours to people from all over armed with notebooks and botanical guides).

49. See *supra* note 48 and sources cited therein; Robin Chotzinoff Chotz, *Give Him Liberty!*, DENVER WESTWORD, June 4, 1998, <http://www.westword.com/1998-06-04/news/give-him-liberty/> (reporting on an incident where a Denver man was markedly upset when told by officials that his grass was too long and neighbors had complained).

50. See Pollan, *supra* note 3, at 41–42; Asmara M. Tekle, *Law and the Authoritarian Aesthetic of the American Lawn*, ART LIES, Spring/Summer 2011, <http://www.artlies.org/issue.php?issue=68&s=1&p=staff>. Pollan explains the traditional “requirements” for lawn beauty in France, England, and America as follows:

France has its formal, geometric gardens, England its picturesque parks, and America this unbounded democratic river of manicured lawn along which we array our houses.

It is not easy to stand in the way of such a powerful current. Since we have traditionally eschewed fences and hedges in America (looking on these as Old World vestiges), the suburban vista can be marred by the negligence—or dissent—of a single property owner. This is why lawn care is regarded as such an important civic responsibility in the suburbs, and why the majority will not tolerate the laggard.

Pollan, *supra* note 3, at 25; see also BORMANN ET AL., *supra* note 2, at 29–30 (describing Pollan’s personal experience).

51. See BORMANN ET AL., *supra* note 2, at 11 (“Economics unquestionably plays a major

practical, providing health benefits by absorbing glare, allergens, and noise, guarding against fire, and providing the ultimate surface for recreational play and comfort.<sup>52</sup>

### B. Lawn Language

Downey's nineteenth century architectural innovations concerning the front lawn arguably have shaped our legal and sub-legal social norms regulating lawns to such a powerful degree that the lawn now symbolizes much more than an aesthetically pleasing architectural convention.<sup>53</sup> Burdening the front lawn with such powerful and diverse meaning perhaps explains society's current cultural and legal resistance to challenging its hegemony. Arguably, we are heavily invested in the front lawn's many meanings. Changing the landscape in essence means changing our front landscape language.

For instance, depending on the front lawn's upkeep or what is placed on it, it may be possible to infer a dwelling's inhabitants' race,<sup>54</sup> religion,<sup>55</sup> socio-economic status,<sup>56</sup> level of patriotism,<sup>57</sup>

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role in our 'love' of the lawn. A home is the cornerstone of many people's net worth—their primary asset. Great efforts are expended to maintain the home's value; because landscaping can add up to 15 percent of a home's worth, lawns contribute to resale value.”); WILLIAM H. WHYTE, JR., *THE ORGANIZATION MAN* 380 (1956) (noting that front lawns served as a type of social glue in the prototypical 1950s American suburb).

52. BORMANN ET AL., *supra* note 2, at 9–10 (citing WALT WHITMAN, *Leaves of Grass* (1855), in WALT WHITMAN: COMPLETE POETRY AND COLLECTED PROSE 1, 31 (Justin Kaplan ed., 1982)) (describing the health and safety benefits associated with grass).

53. See *supra* Part II.A.1.

54. See GREY GUNDAKER & JUDITH MCWILLIE, *NO SPACE HIDDEN: THE SPIRIT OF AFRICAN AMERICAN YARD WORK* 8 (2005) (describing unique features of some African-Americans' yards).

55. Depending on the religious symbols placed on a lawn, such as Catholic saints, a cross or manger, or a menorah, one may reasonably infer the religion of the dwelling's inhabitants.

56. See, e.g., Weiqi Zhou et al., *Can Money Buy Green? Demographic and Socioeconomic Predictors of Lawn-Care Expenditures and Lawn Greenness in Urban Residential Areas*, 22 *SOC'Y & NAT. RESOURCES* 744, 745 (2009), available at [http://www.nrs.fs.fed.us/pubs/jrnl/2009/nrs\\_2009\\_zhou-w\\_001.pdf](http://www.nrs.fs.fed.us/pubs/jrnl/2009/nrs_2009_zhou-w_001.pdf) (internal citations omitted) (“Researchers found that socioeconomic status was an important predictor of plant species composition, diversity, and richness.”).

57. See Colomina, *supra* note 44, at 149–50. Even the activities performed by families on their front lawns have been described as patriotic:

The lawn represents democracy, understood in [post-World War II] terms. Everybody can have a lawn. The lawn is a right, and, as such, a sign of postwar patriotism. “Meet a solid American citizen,” an advertisement for the American Trucking Industry in 1947, shows a man and a child watering flower pots in a lawn

morality,<sup>58</sup> attention to hygiene,<sup>59</sup> and adherence to conformity.<sup>60</sup> For instance, it would be surprising to see a lawn jockey on the front lawn of a house whose inhabitants are descended from enslaved Africans involuntarily brought to the United States, yet the same figurine may not cause quite the same level of confusion on the lawn of a household whose descendants fought on the secessionist's side in the Civil War. Similarly, if an old mattress, car, or even a set of pink plastic flamingoes were to be placed on the lawn, as opposed to a few trees and some flowers, we may make certain assumptions regarding the socioeconomic status of the home's inhabitants.

Moreover, when the front lawn is overgrown or marred by brown or dry patches, the neighbors may question whether illness, death, separation, divorce, or financial trouble have struck the residents; or, in a different light, whether they just moved out. If the front lawn is in a continuously-overgrown state, the neighborly questions and concerns may give way to almost moralistic judgments concerning the residents'

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while a women [sic] in the background reads a book on a lounge chair . . . . A "solid American citizen" stands on the lawn, or in suburban builder William Levitt's famous words, "No man who owns his own house and lot can be a communist. He has too much to do." Wartime propaganda also expressed these themes. One poster, from a 1942 series called "This is America," shows a family on their suburban lawn, the mother holding a baby, the father and the boy working on the finishing touches of the yard: "This is America . . . a nation with more homes, more motor cars, more telephones—more comforts than any nation on earth. Where free workers and free enterprise are building a better world for all people. This is your America . . . Keep it Free!"

*Id.* at 149 (citations omitted).

58. See Pollan, *supra* note 3, at 41 (noting "the unmistakable odor of virtue that hovers in this country over a scrupulously maintained lawn").

59. See Colomina, *supra* note 44, at 143 (noting that during the post-World War II era, "the lawn [meant] safety in medical terms: hygiene. . . . The care of the lawn [was] the care of a body, . . . whose outgrowths have to be kept in check: it has to be trimmed, like a man's hair, beard, or moustache—groomed, clipped, and manicured").

60. Arguably, through "our open-faced lawns we declare our like-mindedness to our neighbors." Pollan, *supra* note 3, at 41. Pollan suggests that the desire for conformity may be due to the unique history of egalitarianism in the United States:

Possibly because it is this common land, rather than race or tribe, that makes us all Americans, we have developed 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. 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.

*Id.*

level of cleanliness and industry.<sup>61</sup> We think to ourselves, perhaps self-satisfyingly, “Imagine what the inside looks like!” On the other hand, a home fronted by a clipped, verdant, and pristine Industrial Lawn is one to which many of us would welcome being invited: This front lawn unwittingly communicates that the residents are clean, ordered, and hard-working.

### C. Social Sanction

“What will the neighbors think?” This is likely the household refrain when our front lawns become a little too high. Implicit in this query is the notion that social norms, much as public law, regulating the front lawn essentially have codified the Industrial Lawn.<sup>62</sup> Further underlying this inquiry is a fear of social sanction as a result of social transgression—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.<sup>63</sup>

Michael Pollan recounts in his book, *Second Nature*, that his father was un-afflicted by the need to please the neighbors by mowing the Pollans’ Long Island, New York front lawn:

One summer he let the lawn go altogether. The grass grew tall enough to flower and set seed; the lawn rippled in the breeze like a flag. There was beauty here, I’m sure, but it was not visible in this context. Stuck in the middle of a row of tract houses on Long Island, the lawn said *turpitude* rather than *meadow*, even though that is strictly speaking what it had become. It also said to the neighbors, *f--- you*.<sup>64</sup>

Mr. Pollan’s laissez-faire, perhaps even insouciant, attitude toward the front lawn ultimately cost the family socially. Upon deciding it was too much work to mow the front lawn, Mr. Pollan let it grow to

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61. See *supra* text accompanying notes 48–49, 56, 58–59.

62. “Norms serve a basic human social function, helping us distinguish who is in the group and who is an outsider. Behaving in ways the group considers appropriate is a way of demonstrating to others, and to oneself, that one belongs to the group.” Shirley S. Wang, *Researchers Study What Gives Social Norms Their Power*, WALL ST. J., May 3, 2011, at D1.

63. POLLAN, *supra* note 25, at 20–21 (discussing the social consequences of breaching the social code governing the front lawn).

64. *Id.* at 19.

meadow, prompting stares and denigration from neighbors—sometimes to an extreme degree:

The summer he stopped mowing altogether, I felt the hot breath of a tyrannical majority for the first time. Nobody would say anything, but you heard it anyway: *Mow your lawn*. Cars would slow down as they drove by our house. Probably some of the drivers were merely curious: they saw the unmowed lawn and wondered if perhaps someone had left in a hurry, or died. But others drove by in a manner that was unmistakably expressive, slowing down as they drew near and then hitting the gas angrily as they passed—this was pithy driving, the sort of move that is second nature to a Klansman.<sup>65</sup>

The final straw came when the neighborhood sent an emissary, essentially the last neighbor still talking to the family, to communicate the neighbors' concerns regarding Mr. Pollan's disruption of the collective landscape.<sup>66</sup> Enraged by this, Mr. Pollan mowed his initials, "SMP," into the waist-high grass.<sup>67</sup> Shortly thereafter, the family moved out of the neighborhood, in a sort of self-imposed exile, to greener, less-authoritarian pastures.<sup>68</sup>

The Pollan story illustrates the heavy social price of opting out of the "brown" code of conformity regulating the front lawn. Fines levied by faceless, nameless bureaucrats in public legal regimes regulating the lawn are arguably no match for neighborhood humiliation, ostracization, or even exile. For this reason, it seems that the body of sub-legal social norms may be the most restrictive of the three regimes governing the front residential landscape.<sup>69</sup>

Ultimately, it is frightening to conceive of a replacement for the front lawn. Indeed, communities and neighborhoods depend on the front lawn to communicate neighborhood norms of class, race, ethnicity, and cohesion. Supplanting the front lawn with a "greener" vernacular means fundamentally that neighborhoods would need to find a new

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65. *Id.* at 20.

66. *Id.* ("George Hackett, our next-door neighbor and my father's only friend in the development, was charged by the neighbors with conveying the sense of the community to my father. George didn't necessarily hold with the majority on this question, but he was the only conceivable intermediary and he was susceptible to pressure.")

67. *Id.* at 21.

68. *Id.*

69. *See supra* text accompanying notes 24–25 (identifying the three regimes).

landscape idiom to convey their norms. On the other hand, the power of social norms suggests that real change concerning the front residential landscape benefitting waterways will take place only when “green” front-lawn social norms embracing diverse residential landscapes “go viral.”<sup>70</sup> These “green” social norms may then supplement or even replace the current “brown” social regulatory regime codifying the Industrial Lawn.

### III. “BROWN” REGIMES

Arguably, formal law and informal sub-legal social norms have endorsed the nineteenth century front lawn and its twentieth century variation, the Industrial Lawn, as the only permissible residential landscapes. The endorsement in “brown” regulatory regimes has come at the virtual expense of front landscapes with less environmental impact on waterways.

#### A. *Public Law*

There are two broad sets of public ordinances that “brown” the front residential landscape in jurisdictions within the watersheds of Chesapeake Bay, Puget Sound, and the Great Lakes: (1) how high grass or “weeds” on the front lawn may grow (weed or grass height ordinances); and (2) how far the dwelling must be set back from the public right of way (setbacks or building-line rules).<sup>71</sup>

#### 1. Weed Height Ordinances

Weed height ordinances govern how high the grass or “weeds” may grow on the front lawn. In the jurisdictions of the Chesapeake Bay, Puget Sound, and the Great Lakes watersheds, the general limitation is that grass or weeds may grow no longer than six to twelve inches before fines are assessed.<sup>72</sup> A landowner’s failure to remedy the ordinance

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70. Researchers explain that social norms can change. The more emotion the norm arouses, particularly if the norm invokes happiness, the more likely a new or changed social norm is to go “viral.” Moreover, “[t]he more public the norm or behavior, the more likely it is to spread.” Wang, *supra* note 62. Therefore, in order to overcome the entrenched “brown lawn” norm, the “green lawn” movement must “go viral.”

71. See *infra* Part III.A.1–2.

72. See, e.g., 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 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

violation after prior notice results in fines; and penalties generally include the cost of cleanup, an administrative charge, and possibly a lien on the property.<sup>73</sup> For example, the relevant ordinance of the city of Virginia Beach, Virginia, in the Chesapeake Bay watershed, states that landowners who receive notice from the city that their grass exceeds ten inches in height<sup>74</sup> and fail to remedy the violation within seven days are charged with a misdemeanor and subject to legal action to enjoin the infraction.<sup>75</sup> After seven days, the city may cut the grass, charge the landowner with the costs and expenses of removal and an administrative fee of \$150.00.<sup>76</sup> Upon non-payment of the aforementioned charges, a lien will be placed on the property.<sup>77</sup> Similarly, in the Great Lakes watershed, Bay City, Michigan's height regulations mandate that overgrown grasses—those that are six inches or more in height—on land that is next to a residence are a public nuisance.<sup>78</sup> Finally, the ordinances of the Puget Sound watershed city of Tacoma, Washington, state that “overgrown, uncultivated, unkempt, or potentially hazardous vegetation of any type, including, but not limited to, shrubs, brush, trees, weeds, blackberry vines, and grasses over one foot in height or length,” are nuisances.<sup>79</sup>

Why do weed height ordinances “brown” the front residential landscape and thereby help to degrade these waterways? Weed ordinances arguably are the gateway laws endorsing the Industrial

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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”).

73. See, e.g., KALAMAZOO, MICH., CODE §§ 1-7(A), 17-131(B); ANNAPOLIS, MD., CODE §§ 10.20.010, .030; TACOMA, WASH., CODE §§ 8.30.040(C)(2), 8.30.060.

74. See VIRGINIA BEACH, VA., CODE § 23-50(b) (2010).

75. *Id.* § 23-50(d).

76. *Id.* § 23-50(b), (d).

77. *Id.* § 23-50(d). Virginia recently passed legislation regulating fertilizers containing phosphorous. H. 1831, 2011 Leg., 1st Sess. (Va. 2011) (enacted).

78. BAY CITY, MICH., ORDINANCES art. II, §§ 110-26 to -29 (2010) (declaring noxious weeds a public nuisance and outlining that the consequence for violation include the payment of the city's expenses for cutting or destroying the overgrown grass and an “administrative service charge of \$110.00 per parcel, per cutting or destroying”). For Bay City, in case of non-payment, the charges and expenses may be transformed into liens on the real property. *Id.* § 110-30.

79. TACOMA, WASH., MUN. CODE § 8.30.040(C)(2) (2010). For a similar provision, see LYNNWOOD, WASH., CITY CODE § 10.08.200(B)(12)(c), which states that weeds or grass are public nuisances if more than eight inches in height and if on residential property.

Lawn. First, in mandating that the grass fronting the dwelling can grow only a certain length, these laws implicitly codify the Industrial Lawn as the only permissible landscape fronting the home grounds (in lieu of shaggier landscapes such as wildflowers, edible landscapes, or low-impact lawns). Second, weed ordinances' preference for trimmed grasses, as indicated by their grass height restrictions, explicitly codifies one element of the Industrial Lawn: crew-cutness.<sup>80</sup> As a gateway element, social norms dictate that the desire for crew-cutness is part and parcel to most other attributes of the Industrial Lawn: its being weed and pest free, evergreen, and unadorned.<sup>81</sup> Once the lawn is closely shorn, it is but a short step in the Industrial Lawn neighborhood ethos to chemical warfare.

## 2. Setbacks

If weed ordinances are the gatekeepers of most other aspects of the Industrial Lawn, front setback and building-line rules for single-family detached residences are their midwives—effectively birthing the lawn in the law and on the street.<sup>82</sup> Culturally and socially, we have been conditioned to believe that the *de facto* filler of the front setback—i.e., the space between the right of way and the dwelling in many of America's urban and suburban neighborhoods<sup>83</sup>—is a crisp, green carpet of Kentucky Bluegrass. Obviously, the larger the setback, the larger the lawn must be, and the larger the lawn, the more legal and social pressure there will be to conform to the demands of the Industrial Lawn.

For instance, in Seattle, Washington, in the Puget Sound watershed,

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80. See BORMANN ET AL., *supra* note 2, at 48–49.

81. *Id.*

82. See *id.* at 23 (citing KENNETH T. JACKSON, CRABGRASS FRONTIER: THE SUBURBANIZATION OF THE UNITED STATES 59 (1985)) (“In New York and other large cities, zoning laws made their appearance and twenty-five-foot setbacks from the street became standard . . . . On the city outskirts, legal covenants requiring structures to be set back from the street by a minimum number of feet were written into many property deeds from the 1880s on.”). True, the long-distance setback, “a uniquely American residential form, was first proposed by and built for an industrialist by Andrew Jackson Davis in his suburb Llewellyn, twelve miles west of Manhattan,” becoming, arguably, the “archetype of [the] American suburb.” See *id.* at 23–24. *But cf.* GRAMPP, *supra* note 43, at 8. Gramp states that in the latter part of the nineteenth century, many urban dwellings in America's big cities such as New York City, Philadelphia, and Boston “were European style, brick row houses sitting on twenty-five-foot-wide lots. Row houses typically sat shoulder to shoulder, with facades abutting the sidewalk and little or no side yard or back yard space.” *Id.* at 8.

83. See BLACK'S LAW DICTIONARY 1496 (9th ed. 2009) (defining setback as “[t]he minimum amount of space required between a lot line and a building line”).

there is a front setback of twenty-five feet for real property zoned single-family residential.<sup>84</sup> Also, in Buffalo, New York, in the Great Lakes watershed, setbacks range up to twenty-five feet, depending on the residential lot size.<sup>85</sup>

### B. Social Norms

Current “brown” social norms in many ways center on landscape practices that endorse the Industrial Lawn aesthetic—shorn, weed and pest free, largely unadorned, and evergreen.<sup>86</sup> The brown landscaping practices detrimental to waterways such as the Chesapeake Bay, Puget Sound, and the Great Lakes include the excess use of chemical pesticides, herbicides, and artificial fertilizer so that the front lawn will conform to the Industrial Lawn model. Because the normative consequences of defying the “brown” front lawn social code are so severe—including isolation and even exile<sup>87</sup>—it is social norms that give the front lawn its current hegemonic power over more environmentally-sustainable landscapes.<sup>88</sup>

## IV. “GREEN” REGIMES

Discussion of “green” regimes regulating the lawn focuses on formal public land use law as well as social norms. It is probably safe to say that both types of “green” regimes currently are more aspirational than real. Still, there are encouraging signs that decision makers are acting to make “green” public landscape law more than merely aspirational.

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84. SEATTLE, WASH., MUN. CODE § 23.44.014(A)(1) (2009) (requiring a minimum setback of either the average of the contiguous front yards or twenty feet, whichever is less, on land zoned single-family residential); *see also* TACOMA, WASH., MUN. CODE § 13.06.100 (2011) (stating that the minimum front yard setback for many districts zoned for residential use may be the lesser of the “average of front yard setbacks provided on either side [of the structure]” or the minimum mandate for the particular district—the minimum district requirements range from ten to twenty-five feet, with most being twenty feet).

85. BUFFALO, N.Y., CODE § 511-10 (2009). The City of Milwaukee presents a similar setback arrangement. *See* MILWAUKEE, WIS., CODE OF ORDINANCES §§ 295-501, 295-503 & tbl.295-505-2 (2011) (noting that residential districts having a more suburban character marked by mostly single-family residences and mandating a minimum setback of the lesser of the area’s average or twenty-five feet).

86. *See supra* notes 2–3 & 8 and accompanying text.

87. *See supra* text accompanying notes 64–70; *see also* BORMANN ET AL., *supra* note 2, at 29–30 (describing Pollan’s personal experience); POLLAN, *supra* note 25, at 19–21.

88. *See supra* text accompanying notes 64–70.

### A. Public Law

“Green” public law governing the lawn is characterized by limitations to key elements of the Industrial Lawn and not by what is permitted. This section will focus on several different limits on chemicals, water use, and lawns generally.

#### 1. Pesticides

The District of Columbia in the Chesapeake Bay watershed has a rather broad-reaching pesticide limitation that specifically refers to the link between pesticides and waterways. The ordinance states that “[n]o person shall transport, store, or dispose of any pesticide or pesticide container in such a manner as to cause injury to humans, vegetation, crops, livestock, wildlife, beneficial insects, or as to pollute *any* waterway in a way harmful to *any* wildlife therein.”<sup>89</sup> In addition, the ordinance authorizes municipal government to sample, inspect, and observe public or private land for violations of the pesticide limitations “in a reasonable and lawful manner during normal business hours.”<sup>90</sup> Similarly, in the Great Lakes watershed, the city of Owen Sound, Ontario, Canada, has a general ban on pesticides.<sup>91</sup> Owen Sound does not appear to grant exceptions for front lawns, though it does for other outdoor uses, such as golf courses and nurseries.<sup>92</sup>

#### 2. Phosphate Bans

Phosphates contained in many lawn fertilizers are implicated in the degradation of waterways.<sup>93</sup> As a result, a few forward-thinking

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89. D.C. CODE § 8-414 (2011) (emphasis added). *But see* D.C. CODE § 8-411(b)–(c) (2011) (granting the mayor discretion to use pesticides on “any insect, rodent, nematode, fungus, weed, or any other form of terrestrial or aquatic plant or animal life or virus, bacteria, or other microorganism . . . which is injurious to the environment or the health of man or other animals . . . to protect the public health and safety”); *id.* § 8-410(a) (permitting and licensing regime for pesticide operations and commercial operators).

90. *Id.* § 8-412.

91. OWEN SOUND, ONT., CAN., BY-LAW NO. 2008-079, § 3.1 (“No person shall discharge or cause or permit the discharge of a pesticide or any substance or thing containing a pesticide on any horticultural landscape or residential, commercial or industrial use lands in the City of Owen Sound.”).

92. *Id.* § 4 (outlining exemptions to the pesticide ban).

93. *See, e.g.*, CITY OF ANN ARBOR, MICH., CITY CODE 1-06, ch. 70, § 6:401 (1) (“City Council finds that certain compounds containing phosphorus, which are contained in manufactured fertilizer, when used in the City of Ann Arbor, enter into the City’s and neighboring communities’ water resources, including wetlands and watercourses, resulting in excessive and accelerated growth of algae and aquatic plants which is detrimental to these

jurisdictions have enacted bans on the use of fertilizers containing phosphates. For instance, Ann Arbor, Michigan, and Annapolis, Maryland, in the Great Lakes and Chesapeake Bay watersheds, respectively, instituted blanket prohibitions on the use of phosphorous-containing manufactured lawn fertilizer on turf in the cities, with few exceptions.<sup>94</sup> Additionally, in Annapolis (Maryland), Minnesota, and, shortly, Michigan, any seller of phosphate-containing lawn fertilizer must clearly identify that the fertilizer contains phosphorous and must provide notice to customers that the use of the fertilizer is prohibited within the city.<sup>95</sup> A phosphorous ban of this kind is extraordinary, given that very unscientific research at the local Wal-Mart and Home Depot in metropolitan Houston revealed that almost all of the lawn fertilizers on the shelf contained phosphorous.<sup>96</sup> The lone brands containing no phosphates appeared to be collecting dust. There is no reason to think that what is on the retail shelves at national chain stores in Houston, the fourth largest city in the United States, is not replicated in the retail aisles of many places in the nation. On the other hand, the market for phosphate-free brands may reflect consumer perception that this type of fertilizer is not as good a value as brands containing phosphates because it may be more expensive and also may be perceived as less effective.<sup>97</sup>

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resources.”); *see also supra* notes 12–15 and accompanying text.

94. ANNAPOLIS, MD., CITY CODE §§ 10.34.040, .050 (stating “no person shall apply on any lawn fertilizer that is labeled as containing more than zero percent phosphorous or other compound containing phosphorous, such as phosphate” and exempting new lawns, gardens, organic fertilizers, and lawns with low phosphorous levels); ANN ARBOR, MICH., CITY CODE 1-06, ch. 70, §§ 6:404, :405 (2007) (banning “any amount of phosphorous or a compound containing phosphorous, such as phosphate” and providing exceptions for new turf or turf that has insufficient phosphorous levels to support turf growth). The Great Lakes states of Minnesota and Michigan also have enacted statewide limitations on phosphorous-containing lawn fertilizer. *See* 2011 Mich. Pub. Acts 151 (being implemented Jan. 1, 2012); MINN. STAT. ANN. § 18C.60(2) (West 2010).

95. 2010 Mich. Pub. Acts 151; MINN. STAT. ANN. § 18C.60(3) (West 2010); ANNAPOLIS, MD., CITY CODE §§ 10.34.060, .050.

96. Based on the personal observations of the author; *see also* STEINBERG, *supra* note 6, at 212 (noting that “trying to find a phosphorous-free lawn-care fertilizer (the ‘P’ in the N-P-K formulation on the bag) at the store is like hunting for Jimmy Hoffa’s body”).

97. This was noted anecdotally at the 2011 annual meeting of the Association of Law, Property, and Society, March 5, 2011. *Cf.* Mireya Navarro, *Cleaner for the Environment, Not for the Dishes*, N.Y. TIMES, Sept. 18, 2010, <http://www.nytimes.com/2010/09/19/science/earth/19clean.html> (reporting about personal, and arguably national, perception of the ineffectiveness of phosphate-free automatic dishwashing detergent); Elizabeth Shogren, *Dishes Still Dirty? Blame Phosphate-Free Detergent*, NPR (Dec. 15, 2010), <http://www.npr.org/2010/12/15/132072122/it-s-not-your-fault-your-dishes-are-still-dirty> (stating that phosphate-free automatic dishwashing detergent was expensive and ineffective). *But see* PESTICIDE

### 3. The Lawn Itself

Perhaps the furthest-reaching ban is one that occurred far from the jurisdictions surrounding the Chesapeake Bay, the Puget Sound, and the Great Lakes, but may forecast the future. Las Vegas, Nevada, has banned front lawns for any new home.<sup>98</sup> This restriction was forced by strict federal limits on how much water Nevada may obtain from Lake Mead, its only source of water.<sup>99</sup> In addition, the city's Water Authority will pay a rebate of approximately \$40,000 per acre to landowners who replace their lawns with xeriscaping or with plants native to the desert.<sup>100</sup> The end result is that, while Las Vegas' population grew by fifty percent from 1999 to 2009, its actual water use has not budged.<sup>101</sup>

#### *B. Social Norms*

Given the stranglehold of the Industrial Lawn, front landscape social norms generally have not gone "green"—i.e., mainstream culture has not accepted alternative landscapes to the front lawn. Therefore, this Part is almost exclusively aspirational, yet hope perhaps lies in the small pockets of national resistance to the lawn's dominance, whether due to market incentives (like a local government paying owners to uproot a front lawn), limited water or finances, or a deep-rooted desire for

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AND FERTILIZER MGMT. DIV., MINN. DEPT. OF AGRIC., REPORT TO THE MINNESOTA LEGISLATURE: EFFECTIVENESS OF THE MINNESOTA PHOSPHORUS LAWN FERTILIZER LAW 3, 10–11 (2007), available at <http://www.mda.state.mn.us/en/sitecore/content/Global/MDADocs/protecting/waterprotection/07phoslawreport.aspx> (reporting that since legislature passed a phosphorus lawn fertilizer regulation, phosphorus-free fertilizer was widely available to consumers, overall fertilizer use did not appear to go down, and the cost to consumers did not increase); John Hogan, *No Phosphorus for Us—Most Yards Can Do without It; By Law, Many May Have to*, GRAND RAPIDS PRESS, May 16, 2008, at A1 (noting that phosphate-free fertilizer is cheaper than its phosphate alternative, becoming increasingly available, and as effective as fertilizers with phosphate).

98. See CHARLES FISHMAN, *THE BIG THIRST: THE SECRET LIFE AND TURBULENT FUTURE OF WATER* 71 (2011).

99. *Id.* at 54.

100. See *Water Smart Landscapes Rebate*, S. NEV. WATER AUTH., <http://www.snwa.com/rebates/wsl.html> (paying property owners \$1.50 per square foot of "grass removed and replaced with desert landscaping up to the first 5,000 square feet converted per property, per year. Beyond the first 5,000 feet, SNWA will provide a rebate of \$1 per square foot") (last visited Oct. 6, 2011).

101. See FISHMAN, *supra* note 98, at 58. There is a similar water conservation movement in Arizona, which consists of homeowners exploring water-less lawn maintenance options in order to reduce water consumption. See Lacey, *supra* note 29, at A1 (relating, that to conserve money and water, some homeowners in Phoenix, Arizona, have turned to painting their front lawns green or installing artificial turf to comply with deed restrictions on lawn aesthetics).

something new to front the home grounds.

At the risk of indulging in more than a bit of futuristic fantasy, “green” front landscape social norms may look very different from today’s “brown” ones. Let’s start with language. “Landscape” might replace “lawn” as the *de facto* space provided by the front setback. While the lawn is but one expressive iteration, landscape implies diversity. Landscape diversity arguably includes, *inter alia*, the following forms: wildflowers, “natural” landscapes, working spaces such as gardens, fruit trees, or chicken-coops, micro-marshes or wetlands, or the low-impact freedom lawn.

Pushing the envelope even further, society may one day come to view the front home grounds as a space not just for landscape, but also for an ecosystem.<sup>102</sup> “Landscape” emphasizes aesthetics that are pleasing to humans, whereas “ecosystem” emphasizes sustainability and ecology. Still, a more radical vision is to eliminate the front home grounds entirely and the front lawn with it, à la Manhattan, Paris, Buenos Aires, and other highly dense cities that favor multi-family units as opposed to the single-family, detached dwelling. Such a move would entail the uprooting of the decidedly less dense suburban–urban lifestyle and culture enjoyed by Houston, Atlanta, Los Angeles, and a number of other American cities. Consequently, changing or replacing the singular front lawn with a diversity of front landscapes seems to be a reasonable middle-ground.

However, this position of landscape compromise, emphasizing both diversity and individuality, is perhaps itself problematic from the viewpoint of neighborhood unity. But for the rolling uniform landscape of trim, green, and unadorned lawns, what will aesthetically and visually frame our neighborhoods? Will aesthetic celebration of the individual

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102. See Joel Henning, *A Big Fish in Many Ponds*, WALL ST. J., May 17, 2011, at D5. Henning’s article reflects discussions he had with Jeanne Gang, a world-renowned architect who transformed Chicago’s Lincoln Park Zoo. *Id.* Henning reflected that,

Before Ms. Gang’s overhaul [of the Lincoln Park Zoo], South Pond was a shallow water hole that couldn’t sustain fish through Chicago’s winters and was fed by costly city drinking water. . . . Her redesign uses rain runoff that filters through the natural plantings now surrounding the pond. A new boardwalk made of recycled milk cartons and other plastics takes strollers through various educational zones around the pond, and signs describe the animals, plants and habitat found in each.

*Id.* Ms. Gang commented, “We transformed th[e] area into an ecosystem, not just another urban garden.” *Id.*

sacrifice the community? The nineteenth century forefathers of the American front lawn probably would have answered the latter question with a resounding “Yes,”<sup>103</sup> but the twenty-first century answer may well be, “So what?”

Prodded by heightened environmental awareness and increased knowledge of the damage wrought on waterways by the Industrial Lawn, there may come a time when neighbors will look sideways and gawk at the house with the crew-cut, evergreen Industrial Lawn. No longer when people view a *natural* lawn will they contemplate, “What will the neighbors think?”;<sup>104</sup> rather, a new query will emerge upon the antiquated sight of a trim, green front lawn: “Are these people still stuck in the twentieth century?”

These new questions will force a new landscape language to emerge, one that is not defined by the Industrial Lawn but by environmental values and individual expression. The Pollan family arguably presaged the future.<sup>105</sup>

## V. TURNING “BROWN” INTO “GREEN”

Culturally, how may “green” front landscape social norms replace their “brown” front lawn analogues? The answer is nuanced and likely involves several paths.

### A. *Land Use Law as the New Watershed Law*

A good starting point for norm change is likely the official recognition, especially from local decision makers, that land use law and policy governing the front residential landscape also govern the watershed. Given the linkages between front lawn landscapes and waterways such as Chesapeake Bay, Puget Sound, and the Great Lakes,<sup>106</sup> little distinction should exist between land use law and water law. Ultimately, local decision makers and stakeholders, such as developers, builders, business owners, and financiers, may want to craft an integrated approach to land use law, planning, and policy that also considers the watershed and the impacts on it.

To be sure, other aspects of land use that have traditionally been

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103. *See supra* text accompanying notes 39–44.

104. *See supra* text accompanying notes 62–63.

105. *See supra* text accompanying notes 64–69.

106. *See supra* text accompanying note 7.

seen as exclusively affecting the land also have an impact on water.<sup>107</sup> For instance, rules regulating urban development—heretofore thought of as almost exclusively governing land use law—have a tremendous impact and govern the watershed.<sup>108</sup> Just as the short roots of lawn vegetation are unable to absorb the toxins that flow into storm water, impermeable surfaces—such as the concrete roads, driveways, and parking lots resulting from urban development—are similarly unable to absorb pollutants.<sup>109</sup> Moreover, impervious surfaces are unable to absorb water from rainstorms and enable urban flooding.<sup>110</sup> When drains are overwhelmed, the storm water collects in the streets, sidewalks, and homes above ground.<sup>111</sup> Therefore, an integrated approach to land use—addressing front lawns and landscapes—and watershed law would likely better reflect the natural linkages between land and water.

### *B. Law is Not the Immediate Answer*

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<sup>112</sup> 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.

This interim pre-legal period will also permit opportunity for experiment and testing for unintended consequences. Just because a landscape form is “green,” does not mean that it is “good.” For instance, the current unintended consequence of phosphate-free fertilizers is that they are more costly than their “brown” counterparts,<sup>113</sup>

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107. See *supra* text accompanying notes 12–13.

108. Interview by WATERLAWS with Tom Scheuler, Exec. Dir., Ctr. for Watershed Prot., Silver Springs, Md., available at [http://www.waterlaws.com/commentary/interviews/scheuler\\_interview.html](http://www.waterlaws.com/commentary/interviews/scheuler_interview.html) (last visited Nov. 4, 2011) (“We have met the enemy—imperviousness.”).

109. *Id.*

110. *Id.*

111. See, e.g., *Why is this House Wearing Stilts?*, U.S. GEOLOGICAL SURV., <http://ga.water.usgs.gov/edu/impervious.html> (last visited on Sept. 23, 2011).

112. See *supra* Part II.A.1–2.

113. For authorities both supporting and opposing the statement, see *supra* note 97.

arguably placing this relatively easy and “green” solution out of reach for many working families. This interim, pre-legal period may allow the market to adjust as front-landscape cultural change slowly takes root.

### *C. The Importance of Drain Ranger Badges*

Campaigns designed to raise public awareness concerning the front lawn’s negative consequences on waterways have been mounted in the Chesapeake Bay, Puget Sound, and Great Lakes regions. Some, as in the case of Puget Sound, where children can sign up to be neighborhood “Drain Rangers” in the fight against stormwater pollution,<sup>114</sup> appear to border on the hokey. Others provide educational opportunities. For example, in the Chesapeake Bay area, high school students are encouraged to visit the bay in a guided tour, called “Meaningful Watershed Experiences,” to learn about the bay and the life it supports.<sup>115</sup>

Hokiness aside, the real value from these campaigns is in seeding cultural change in younger generations. The genius of these programs is that they arm children with information about new, eco-friendly lawn care practices. Children can use that information to badger their parents and neighbors about the effects of their current practices and to suggest new landscape practices that are less harmful to the watershed.

### *D. Market Subsidies and Incentives*

Another path, in the transformation of “brown” front lawn norms and law into “green” front landscape analogues, involves harnessing the power of the private market using public incentives and subsidies. These market incentives may shift, in part, the culture more rapidly than government mandates in law. Las Vegas appears to have cornered the market on this strategy. Spurred to change lawn care practices because of the rising population and increasing development in an arid climate with limited water, Las Vegas’ water agency pays owners of existing residential lawns and those on golf courses approximately \$40,000 an acre to rip it up and replace it with native desert plants.<sup>116</sup>

Others have suggested removing any subsidies from water rates so

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114. *Be a Drain Ranger*, PUGET SOUND STARTS HERE, <http://pugetsoundstartshere.org/drain-rangers/be-a-drain-ranger/> (last visited Oct. 6, 2011).

115. 2008 BAY BAROMETER, *supra* note 12, at 33.

116. *See supra* note 100 and accompanying text.

that users are charged true market rates for water.<sup>117</sup> Higher rates for water may have the effect of limiting its use for watering the front lawn and keeping it evergreen, a crucial practice and component of the Industrial Lawn.<sup>118</sup> Still others have suggested subsidizing phosphate-free lawn fertilizers or subsidizing the teaching of owners to safely make compost, nature's original fertilizer.<sup>119</sup>

*E. A Change is Gonna Come*<sup>120</sup>

Though seemingly necessary because of the damage done to at least some waterways, is large-scale change in the home grounds almost impossible? Are we as Americans simply too rooted in our front lawns to make way for front landscape? The example of Las Vegas, Nevada, in which front lawn gave way to desert landscaping in little more than twenty years, is perhaps indicative of what may soon happen on a broader scale.<sup>121</sup> Undoubtedly, however, landscape change in Las Vegas was not entirely volitional. It was prompted and incentivized by a growing population, a lack of water, a committed local government that was creative enough to install a water chief, market incentives, and the force of the law.<sup>122</sup>

Considering norms and culture, however, it is not clear that overthrowing the dominance of the front lawn will be at all easy. Reforming more than a century and a half of front lawn norms will

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117. See generally NORMAN MYERS & JENNIFER KENT, *PERVERSE SUBSIDIES: HOW TAX DOLLARS CAN UNDERCUT THE ENVIRONMENT AND THE ECONOMY* (2001); Robert Glennon, *Water Scarcity, Marketing, and Privatization*, 83 TEX. L. REV. 1873, 1882–84 (2005) (encouraging a reform of the present system by eliminating subsidies as a strategy that “would gain people's attention about their water use through their pocketbooks” and noting that “the price of water in the United States is ridiculously low”); see also Barton H. Thompson, *Water as a Public Commodity*, 95 MARQ. L. REV. 17, 24–25 (2011) (discussing the removal of water subsidies as one option for treating water as a commodity).

118. Suggested at the 2011 annual meeting of the Association of Law, Property, and Society, March 5, 2011, and the faculty workshop, South Texas College of Law, April 19, 2011; see also, STEPHANIE DAVIES, *COMPOSTING INSIDE AND OUT: 14 METHODS TO FIT YOUR LIFESTYLE* 70 (2011) (stating that many municipalities are subsidizing compost bins to encourage composting).

119. Suggested at the 2011 annual meeting of the Association of Law, Property, and Society, March 5, 2011, and the faculty workshop, South Texas College of Law, April 19, 2011.

120. SAM COOKE, *A Change is Gonna Come*, on SAM COOKE: PORTRAIT OF A LEGEND (Abkco 2003); see also *Sam Cooke's Swan Song of Protest*, NPR, Dec. 17, 2007, <http://www.npr.org/templates/story/story.php?storyId=17267529>.

121. See FISHMAN, *supra* note 98, at 70–71.

122. See *id.*

undoubtedly encounter resistance, given the meanings invested in our front lawns and the signals that they unwittingly transmit. At bottom, the aesthetic messages transmitted by front lawns are translated into property values assigned by the market to the lot or neighborhood.<sup>123</sup> Markets value the Industrial Lawn because the culture values it.<sup>124</sup> The home is likely the single largest investment of many Americans, so it would be a mistake to underestimate both the market-value of the front lawn and the considerable effort that would likely be needed for reform.<sup>125</sup>

Society can change, however, when the cultural and normative environment demands it. For instance, five or ten years ago, it would have been unimaginable for many Americans to use re-usable grocery bags in lieu of plastic bags, save for those who regularly frequented Whole Foods or farmers markets. Now, re-usable grocery bags arguably have been co-opted by Wal-Mart.<sup>126</sup> Furthermore, residential recycling was almost unheard of twenty years ago in many parts of the country. Now, it is almost unthinkable to not recycle in one's own home. In both contexts, it became "cool" in the culture to reuse and recycle rather than to waste and sully the environment.

## VI. CONCLUSION

The degradation of waterways such as Chesapeake Bay, Puget Sound, and the Great Lakes requires reinvention of the nineteenth century front Industrial Lawn—and the "brown" law and social norms regulating it—in favor of a more sustainable twenty-first century. Acceptance of a diversity of more sustainable landscapes is part and parcel of this reinvention. Moreover, the current century calls for local government to revisit the sharp distinctions previously made between

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123. BORMANN ET AL., *supra* note 2, at 11 ("Economics unquestionably plays a major role in our 'love' of the lawn. A home is the cornerstone of many people's net worth . . . . Great efforts are expended to maintain the home's value; because landscaping can add up to 15 percent of a home's worth, lawns contribute to resale value."); *see also supra* text accompanying notes 50–52.

124. *See* BORMANN ET AL., *supra* note 2, at 11.

125. *See id.*

126. *See* Steve Painter, *Three Wal-Marts Testing Purge of Plastic Bags: California Option is Fifteen Cents Resuable Model*, ARK. DEMOCRAT-GAZETTE, Jan. 24, 2010, available at <http://www6.lexisnexis.com/publisher/EndUser?Action=UserDisplayFullDocument&orgId=2708&topicId=100019774&docId=l:1119226856>; *Wal-Mart Aims to Curb Plastic Bag Use*, REUTERS, Sept. 25, 2008, available at <http://www.reuters.com/article/2008/09/25/us-walmart-bagsenv-idUSTRE48O7TY20080925>.

land use and watershed law and to adopt a more integrated approach to both. As the front lawn demonstrates, what happens on land often drains into the water.