

**A SYMPHONIC APPROACH TO WATER MANAGEMENT:  
THE QUEST FOR NEW MODELS OF  
WATERSHED GOVERNANCE**

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Thirty-nine years after the passage of America’s Clean Water Act, the country still faces a monumental stumbling block in its quest “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”<sup>1</sup> This challenge is not that of managing water resources, as important as that may be. Rather, it is that of “managing ourselves,” to adopt a phrase from Richard N. L. Andrews’s history of American environmental policy.<sup>2</sup>

As Professor Andrews explains, “environmental issues are issues not just of science or economics but of governance. They concern problems that are not being solved by science and technology alone, nor by the ‘invisible hand’ of markets or individual actions, and for which advocates therefore seek collective solutions through government action.”<sup>3</sup>

For those who do prefer market-based approaches, be they the work of hands visible or invisible, Andrews is most certainly correct when he notes that while government action clearly compre-

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1. 33 U.S.C. §1251(a) (2006).  
 2. RICHARD N. L. ANDREWS, *MANAGING THE ENVIRONMENT, MANAGING OURSELVES: A HISTORY OF AMERICAN ENVIRONMENTAL POLICY* (1999).  
 3. *Id.* at x.

hends regulations, public investments, scientific research, technical assistance, and the like, “[g]overnment policies themselves, moreover, are often causes of environmental problems as well as solutions to them.”<sup>4</sup> *Quis custodiet ipsos custodes?*<sup>5</sup>

Issues of governance, therefore, involve the governors as much as the governed. To appreciate this last point, consider the negative environmental impacts caused by government subsidies for water development, agriculture, below-cost grazing, below-cost timber sales, fisheries exploitation, ethanol, and, of great concern here in Florida, sugar tariffs, which have probably contributed as much to the diminishment of the Everglades as any other federal policy.

This Article will describe why, at this juncture in our country’s environmental history, particularly at this moment in time under the legal regime established by the Clean Water Act, water managers are forced to grapple with issues of watershed governance.

It will also explain why the water sector has shifted from an almost exclusive focus on pipes in the water to a broader vision of watershed management, at the landscape scale, which brings with it the imperative to embrace a symphonic approach<sup>6</sup> to water management and to explore new models of watershed governance scaled to basins of varying size and social composition.

## I. PROGRESS TO DATE IN CLEANING UP THE WATERS OF THE UNITED STATES

Before discussing the present challenge and predicament, it is useful to recount our nation’s tremendous progress in cleaning up its waters. Americans have achieved great environmental success in the past several decades, which should inspire hope that such success can be emulated in the future.

One traditional baseline for assessing progress to date is the famous passage on Bubbly Creek that appears in Upton Sinclair’s muckraking novel, *The Jungle*, a scathing critique of social condi-

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4. *Id.*

5. “[W]ho will guard the guards themselves” or, for our purposes, who will regulate the regulators? The quote is from Juvenal’s *Satires*, in which he may have been more concerned with the problem of hiring guards to prevent infidelity among women whose husbands were out of town. See EUGENE EHRLICH, *AMO, AMAS, AMAT AND MORE: HOW TO USE LATIN TO YOUR OWN ADVANTAGE AND TO THE ASTONISHMENT OF OTHERS* 239 (1985).

6. My thoughts on this idea have evolved from a broader concern with ecosystem management (see G. Tracy Mehan, III, *Ecosystem Management in the Great Lakes Basin*, 21 *FISHERIES* 12 (1996)) to some preliminary ideas over the years. See G. Tracy Mehan, III, Luncheon Address at the Southern Lake Michigan Regional Water Supply Consortium: A Symphonic Approach to Watershed Management (Feb. 16, 2005); G. Tracy Mehan, III, *Working Together Holistically: A Symphonic Approach to Watershed Management*, *WATER RESOURCES IMPACT*, Nov. 2006, at 10, 10-11.

tions in the stockyards and packing houses of late-nineteenth century Chicago. Allowing for hyperbole, artistic license, and some questionable water chemistry, the book offers a vivid picture of just how bad things became in a young America single-mindedly building its economic base:

"Bubbly Creek" is an arm of the Chicago River, and forms the southern boundary of the yards; all the drainage of the square mile of packing-houses empties into it, so that it is really a great open sewer a hundred or two feet wide. One long arm of it is blind, and the filth stays there forever and a day. The grease and chemicals that are poured into it undergo all sorts of strange transformations, which are the cause of its name; it is constantly in motion, as if huge fish were feeding in it, or great leviathans disporting themselves in its depths. Bubbles of carbonic acid gas will rise to the surface and burst, and make rings two or three feet wide. Here and there the grease and filth have caked solid, and the creek looks like a bed of lava; chickens walk about on it, feeding, and many times an unwary stranger has started to stroll across, and vanished temporarily. The packers used to leave the creek that way, till every now and then the surface would catch on fire and burn furiously, and the fire department would have to come and put it out. Once, however, an ingenious stranger came and started to gather this filth in scows, to make lard out of; then the packers took the cue, and got out an injunction to stop him, and afterwards gathered it themselves. The banks of "Bubbly Creek" are plastered thick with hairs, and this also the packers gather and clean.<sup>7</sup>

These conditions no longer exist in Chicago, even on Bubbly Creek. Today you might even see a four-pound coho salmon in the Creek or consider buying a million-dollar home nearby.<sup>8</sup>

Chicago eventually started cleaning up,<sup>9</sup> as did the rest of the country long before the passage of the Clean Water Act in 1972, which accelerated the restoration of the waters of the United States. Considering either pounds of pollution abated, stream

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7. UPTON SINCLAIR, *THE JUNGLE* 92 (Heritage Press 1965) (1906).

8. Alby Gallun, *Flushing Out Bubbly Creek: Pricey New Homes Spur Cleanup of Dirty Bridgeport Waterway*, CHI. BUS., July 26, 2004.

9. Actually, Chicago changed the directions of its rivers, reversing the flow. Instead of flowing into Lake Michigan where waste and disease accumulated, the city sent the waste heading in the opposite direction, down the Illinois and Mississippi Rivers all the way to the Gulf of Mexico. That was state-of-the-art wastewater treatment in those days.

segments improved, or fisheries restored, America has made tremendous progress over the past decades. Former EPA administrator William Ruckelshaus has observed that, even if all of our waters are not swimmable or fishable, at least they are not flammable.<sup>10</sup>

In truth, America has done considerably better than the former Administrator's self-deprecating humor would indicate. Focusing on Detroit, Michigan, another community on the Great Lakes, hardly a Garden of Eden, there are more signs of significant environmental improvement over the past three and a half decades. In 2006, lake whitefish—the number-one commercial fish in the Great Lakes and a key indicator of water quality—were discovered spawning in the Detroit River in Michigan—the birthplace of the American auto industry—for the first time since 1916.<sup>11</sup> This fishery was lost to pollution from oil, phosphorus, mercury, and organochlorines over many years.<sup>12</sup> Since 1972, the year that the U.S. Clean Water Act (CWA) became law, pollution levels of some of these contaminants are down 95 to 98%.<sup>13</sup> Mercury contamination in fish tissue is down 70%, and PCB contamination is down 83% as measured in herring gulls from a nearby island.<sup>14</sup>

The essence of the Clean Water Act is its prohibition of the discharge of any pollutant into the waters of the United States from any point source except when specifically sanctioned in a permit.<sup>15</sup> It does not say anything about air deposition of mercury into a lake, habitat modification of a stream, or fertilizer running off a farmer's field. These are just some of the dogs that do not bark in the Clean Water Act. There are no provisions directly regulating these threats to water quality and aquatic resources in the law itself.

A crucial driver of the cleanup of America's waters since 1972 was the Clean Water Act's imposition of secondary treatment—a technology-based standard—on publicly-owned treatment works (POTWs) or municipal wastewater systems to control sewage. This

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10. I have been unable to find this remark in print, but several of the former Administrator's associates assured me of its veracity. It was usually an aside made in the course of a speech or congressional testimony.

11. Sandra Morrison, *Lake Whitefish Returning to the Detroit River to Spawn; Federal Scientists Document First Reproducing Population of Whitefish in the River Since 1916*, SOUND WAVES MONTHLY NEWSL., Aug. 2006, <http://soundwaves.usgs.gov/2006/08/research.html>. Of course, other environmental laws and regulations contribute to this progress such as the ban on PCBs and regulation of mercury from incinerators under the Clean Air Act.

12. *Id.*

13. *Id.*

14. *Id.*

15. 33 U.S.C. § 1311 (2006).

class of large “point sources”<sup>16</sup> discharges directly into the waters of the United States. Point sources are defined as any “discernible, confined and discrete conveyance.”<sup>17</sup> While the definition now includes “concentrated animal feeding operation[s],” it excludes “agricultural stormwater discharges.”<sup>18</sup>

Primary treatment is the use of screens and sedimentation tanks to remove most materials that float or settle. Secondary treatment is the use of bacteria and oxygen in trickling filters or in an activated sludge process to consume organic parts of the waste stream.<sup>19</sup>

As a result of the Clean Water Act, its ambitious wastewater grants program, and its regulatory provisions, the U.S. population served by POTWs with secondary or greater (i.e., enhanced) treatment almost doubled between 1968 and 1996—from 85.9 million people to 164.8 million people—notwithstanding exemptions then in effect for discharges to the ocean which encompassed another 17.2 million served by forty-five POTWs without secondary treatment.<sup>20</sup> Indeed, it was this regulatory intervention, with an assist from the U.S.-Canadian Great Lakes Water Quality Agreement, which restored the Great Lakes—including the once dying Lake Erie—by limiting discharges from point source dischargers *only*.

Moreover, categorical, technology-based effluent guidelines were also imposed on industrial point-source dischargers, sector by sector, for numerous parameters or pollutants. In total, the EPA concluded that sixty-five designated industries or categories qualified for such regulation.<sup>21</sup> It created over 360 industrial subcategories among just the first thirty industries alone.<sup>22</sup>

It is hard to appreciate how all-consuming this legislatively mandated task of developing technology-based standards for municipal and industrial point sources was. It, along with permitting and enforcement, monopolized the time, energy, personnel, and political capital of the Office of Water at EPA—just as Congress intended, given its concern with the difficulty of calibrating or tailoring control of a specific discharger to the precise ambient water

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16. 33 U.S.C. § 1362(14).

17. *Id.*

18. *Id.*

19. For the lay person’s, i.e., lawyer’s, definition of primary and secondary treatment, see ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY, 1168, 1170 (4th ed. 2003).

20. ANDREW STODDARD ET AL., MUNICIPAL WASTEWATER TREATMENT: EVALUATING IMPROVEMENTS IN NATIONAL WATER QUALITY 52 (2002).

21. Winston Harrington, *Regulating Industrial Water Pollution in the United States*, 5 n.6 (Apr. 2003) (unpublished manuscript) (on file with Resources for the Future), available at <http://www.rff.org/RFF/Documents/RFF-DP-03-03.pdf>.

22. *Id.* at 9.

quality of a particular receiving water. Such a water-quality approach requires a lot of data and analysis, sometimes leading to “paralysis by analysis” as was often the case prior to 1972. As early as 1976, over 250 lawsuits challenging specific guidelines were filed.<sup>23</sup>

While this writer served as Assistant Administrator at the EPA, a senior career manager in the Office of Water once observed that he could count on one hand the number of regulations promulgated *without* a court-ordered deadline, a comment which says a great deal about the density of the regulatory and political process as well as our national penchant for litigation.

For both industrial and municipal dischargers, technology-based permit requirements were to be augmented by additional water-quality based controls if the applicable water quality standards already in place for any given water body were not achieved after the imposition of the technology-based standards. Since permits roll over every five years, this could be accomplished over time as necessary.

Again, point sources were and still are the only sources regulated under the Clean Water Act.<sup>24</sup> By way of comparison, runoff from row crop agriculture is not, and is thus considered a nonpoint source, not a point source. As of 2007, under the Safe Drinking Water Act,<sup>25</sup> “92 percent of community [drinking] water system customers (262 million people) were served by facilities for which state[] [programs] reported no violations of the EPA’s health-based . . . standards.”<sup>26</sup> These sources are akin to point sources under the Clean Water Act and are also subject to regulation end-of-pipe, so to speak. The failure to reach 100% may be excused given that there are 52,000 community water systems in the United States, although just 8% of them (4,132) serve 82% of the population.<sup>27</sup> Compare this to England, Wales, and Scotland, which, together, have only eleven utilities.<sup>28</sup>

“The Clean Water Act has enjoyed considerable success in cleaning up the most obvious water quality problems,” writes Pro-

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23. *Id.* at 10.

24. Stormwater is regulated under the law, but that is a complex case and beyond the scope of our discussion here.

25. 42 U.S.C. §§ 300(f)-300(j) (2006).

26. U.S. ENVTL. PROTECTION AGENCY, EPA-260-R-08-002, EPA’S REPORT ON THE ENVIRONMENT: HIGHLIGHTS OF NATIONAL TRENDS 15 (2008), *available at* [http://www.epa.gov/roehd/pdf/roe\\_hd\\_layout\\_508.pdf](http://www.epa.gov/roehd/pdf/roe_hd_layout_508.pdf).

27. U.S. ENVTL. PROTECTION AGENCY, EPA 816-K-08-004, FACTOIDS: DRINKING WATER AND GROUND WATER STATISTICS FOR 2008 (2008), *available at* [http://www.epa.gov/safewater/databases/pdfs/data\\_factoids\\_2008.pdf](http://www.epa.gov/safewater/databases/pdfs/data_factoids_2008.pdf).

28. See MICHAEL ROUSE, INSTITUTIONAL GOVERNANCE AND REGULATION OF WATER SERVICES: THE ESSENTIAL ELEMENTS (2007).

fessor Robin Craig,<sup>29</sup> expressing a view widely shared. She cites EPA sources indicating that in 1972 “only a third of the nation’s waters were safe for fishing and swimming. Wetlands losses were estimated at about 460,000 acres annually.”<sup>30</sup> “In contrast, by the late 1990s, ‘two-thirds of the nation’s waters [were] safe for fishing and swimming.’”<sup>31</sup> Recent studies estimate the rate of wetlands losses at approximately 70,000 to 90,000 acres annually.<sup>32</sup>

The governance structure for the regulation of point sources under the Clean Water Act was pretty straightforward, even if difficult to implement in practice. Congress passed the law. The EPA issued regulations and guidance and delegated to qualifying states the authority over permitting, inspection, and enforcement subject to federal oversight. The state programs then issued permits to municipal and industrial sources, monitored discharges, and inspected and enforced against regulated entities as needed.

It was a linear, top-down system of command-and-control regulation of a large but discrete class of dischargers. While not terribly efficient, it has been effective. It was monophonic plainsong, hardly a symphony.

## II. REACHING THE APOGEE OF WATER QUALITY?

Despite the undeniable and tangible progress over the last thirty-eight years, water quality managers perceive that forward momentum has slowed considerably; the nation is treading water, so to speak. Moreover, they anticipate that a recovering, growing economy will present ongoing challenges as will the anticipated growth in U.S. population by more than 135 million over the next forty years.<sup>33</sup>

In January 2009, the EPA released its national report<sup>34</sup> to Congress on water quality for the 2004 reporting cycle, as required by Section 305(b)<sup>35</sup> of the Clean Water Act. This report summarizes water quality assessments from almost all of the states and territories. However, it draws its information from an admittedly

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29. ROBIN KUNDIS CRAIG, ENVIRONMENTAL LAW IN CONTEXT: CASES AND MATERIALS 751 (2005).

30. *Id.* (internal alteration omitted).

31. *Id.* (internal alteration omitted).

32. *Id.*

33. STATE-EPA NUTRIENT INNOVATIONS TASK GROUP, AN URGENT CALL TO ACTION 1 (2009), available at [http://water.epa.gov/scitech/swguidance/waterquality/standards/criteria/aqlife/pollutants/nutrient/upload/2009\\_08\\_27\\_criteria\\_nutrient\\_nitgreport.pdf](http://water.epa.gov/scitech/swguidance/waterquality/standards/criteria/aqlife/pollutants/nutrient/upload/2009_08_27_criteria_nutrient_nitgreport.pdf).

34. U.S. ENVTL. PROTECTION AGENCY, EPA 841-R-08-001, NATIONAL WATER QUALITY INVENTORY: REPORT TO CONGRESS FOR THE 2004 REPORTING CYCLE (2009), available at [http://water.epa.gov/lawsregs/guidance/cwa/305b/upload/2009\\_01\\_22\\_305b\\_2004report\\_2004\\_305Breport.pdf](http://water.epa.gov/lawsregs/guidance/cwa/305b/upload/2009_01_22_305b_2004report_2004_305Breport.pdf) [hereinafter WATER QUALITY INVENTORY].

35. 33 U.S.C. § 1315(b)(1) (2006).

small subset of the nation's total waters and may not be representative of water bodies that are not assessed, which are actually the vast majority. Since reporting jurisdictions assessed only 16% of the nation's 3.5 million river and stream miles, 39% of its 41.7 million acres of lakes, ponds, and reservoirs, and 29% of its 87,791 estuary square miles, the statistical validity of the 305(b) reports is open to legitimate question.<sup>36</sup> It is all we have had to rely on until just recently. As Shakespeare wrote, "[a]n ill-favoured thing, sir, but mine own."<sup>37</sup>

The bottom lines from these reports are as follows:

- 44% of assessed river and stream miles were impaired, i.e., not meeting applicable water quality standards for one or more state-designated uses such as swimming, or fishing;
- 64% of assessed lake acres were similarly impaired;
- As were 30% of assessed estuary miles.<sup>38</sup>

The EPA reports that for rivers and streams, pathogens, habitat alterations, and organic enrichment/oxygen depletion were leading causes of impairment.<sup>39</sup> The top sources of impairment included agricultural activities, hydrologic modifications (e.g., water diversions and channelization), and other unknown or unspecified causes.<sup>40</sup>

For lakes and reservoirs, mercury, PCBs, and nutrients were leading causes and top sources of pollutants included atmospheric deposition, agriculture, and other unknown/unspecified sources.<sup>41</sup> For bays and estuaries, pathogens, organic enrichment/oxygen depletion, and mercury were the major reasons for impairments.<sup>42</sup> Interestingly, only in this category of waters were municipal/discharges, i.e., point sources, listed as top sources of impairment, along with atmospheric deposition and other unknown or unspecified sources.<sup>43</sup>

The EPA and the states have commenced a round of probability-based surveys to complement the 305(b) reports, which are of limited scope. These surveys select sites at random to provide estimates of the condition of a class of waters in a state or region. In

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36. WATER QUALITY INVENTORY, *supra* note 34, at 1-2.

37. WILLIAM SHAKESPEARE, AS YOU LIKE IT act 5, sc. 4 (William Aldis Wright ed., Clarendon Press 1877).

38. WATER QUALITY INVENTORY, *supra* note 34, at 1-2.

39. *Id.* at 1.

40. *Id.*

41. *Id.* at 2.

42. *Id.*

43. *Id.*



2006 the agency released its Wadeable Streams Assessment, the first statistically-valid survey of the biological condition of small streams throughout the country, conducted in 2004-2005.<sup>44</sup>

This assessment focused on streams that feed rivers, lakes, and coastal areas and was based on sampling of 1,392 sites representing similar ecological characteristics in various regions conducted by more than 150 field biologists.<sup>45</sup> It revealed that only 28% of the streams were in good condition, with 25% in fair condition and 42% in poor condition.<sup>46</sup> Again, even with the application of state-of-the-art sampling and surveying techniques, the findings as to water quality in this class of waters leaves much room for improvement.

One begins to sense that the nation has reached the apogee in its quest for water quality under the existing regulatory regime. A look at the most significant of the nation's watersheds offers more reasons to be concerned about the current state of our national water program in terms of overcoming contemporary challenges to water quality.

In its first of three committee reports, an expert panel of the National Research Council of the National Academies on the Mississippi River and the Gulf of Mexico noted that the hypoxic or "Dead Zone" in the Gulf is caused by polluted runoff from the Mississippi, Ohio, and Missouri River basins.<sup>47</sup> This hypoxic zone has been measured at various stages as the size of New Jersey or Massachusetts.<sup>48</sup> 90% of the nitrogen delivered to the Gulf—the primary cause of its over-enrichment and oxygen depletion—comes from unregulated, diffuse, and agricultural nonpoint sources of pollution, including approximately 58% from fertilizer and mineralized soil nitrogen.<sup>49</sup>

It is a measure of how small the relative contribution of traditional, regulated point sources (the pipes in the water) to the Gulf hypoxic problem that Chicago's wastewater system may be the single biggest point-source discharger of nutrients to that body of water—at least since the reversal of the flows of the local rivers to avoid polluting Lake Michigan at the end of the nineteenth centu-

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44. U.S. ENVTL. PROTECTION AGENCY, EPA 841-B-06-002, WADEABLE STREAMS ASSESSMENT: A COLLABORATIVE SURVEY OF THE NATION'S STREAMS 3 (Dec. 2006), available at [http://water.epa.gov/type/rs/monitoring/streamsurvey/upload/2007\\_5\\_16\\_streamsurvey\\_WS\\_A\\_assessment\\_May2007-2.pdf](http://water.epa.gov/type/rs/monitoring/streamsurvey/upload/2007_5_16_streamsurvey_WS_A_assessment_May2007-2.pdf).

45. *Id.* at i, ES-4.

46. *Id.* at ES-5

47. COMM. ON THE MISS. RIVER AND THE CLEAN WATER ACT, NAT'L RESEARCH COUNCIL, MISSISSIPPI RIVER WATER QUALITY AND THE CLEAN WATER ACT: PROGRESS, CHALLENGES, AND OPPORTUNITIES 40-41 (2008) [hereinafter MISSISSIPPI RIVER WATER QUALITY]. This writer is a member of this NRC panel or committee.

48. *Id.* at 56.

49. *Id.* at 40.

ry.<sup>50</sup> These waters now flow across the basin divide, down the Illinois River, into the Mississippi, and down to the Gulf.

In 2001 the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force submitted to Congress its first *Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico*.<sup>51</sup> Resources have been insufficient, but some observers believe an important reason for lack of action “is a lack of a central institution with the mandate and structure that match the scale of the problem.”<sup>52</sup> Robert Wayland, former director of the EPA’s Office of Wetlands, Oceans, and Watersheds and chair of the task force coordination committee argued that “[t]here is not a watershed-wide organization with the right mandate to pursue this work, but there has been no champion from Louisiana arguing for significant funding for EPA or any other agency to try to put the institutional framework in place. So it’s really been a shoestring effort.”<sup>53</sup>

The Chesapeake Bay presents another disturbing case study of the limits on our ability to protect and restore one of the world’s most significant estuaries, a watershed overlapping six states and Washington, D.C. The Bay “is home to almost 17 million people. About 150,000 people move to the area each year[,]” and the population is predicted to reach nearly twenty million by 2030, most of whom will live within a few minutes of one of 100,000 streams and rivers draining into the Bay.<sup>54</sup>

The Bay and its tributaries are suffering primarily from excess nitrogen, phosphorus, and sediment entering their waters.<sup>55</sup> The main sources are agriculture, urban and suburban runoff, wastewater, and airborne contaminants.<sup>56</sup> Assuming 100% represents a fully restored Bay ecosystem, the EPA’s Chesapeake Bay Program ranks its overall health at 38% with the water quality component coming in at a very poor 21% for 2007 and 2008.<sup>57</sup>

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50. I have made this assertion in the presence of officials with the Chicago Water Reclamation District several times, without eliciting any protests, just smiles.

51. MISS. RIVER/GULF OF MEX. WATERSHED NUTRIENT TASK FORCE, ACTION PLAN FOR REDUCING, MITIGATING, AND CONTROLLING HYPOXIA IN THE NORTHERN GULF OF MEXICO (2001), available at [http://www.epa.gov/owow\\_keep/msbasin/pdf/actionplan2001.pdf](http://www.epa.gov/owow_keep/msbasin/pdf/actionplan2001.pdf).

52. Rebecca L. Gruby & Larry B. Crowder, *Still Waters Run Deep*, THE ENVTL. FORUM, Nov.-Dec. 2009, at 24, 27.

53. *Id.*

54. CHESAPEAKE BAY PROGRAM, EPA-903-R-09-001, BAY BAROMETER: A HEALTH AND RESTORATION ASSESSMENT OF THE CHESAPEAKE BAY AND WATERSHED IN 2008 1 (2009) available at [http://www.chesapeakebay.net/content/publications/cbp\\_34915.pdf](http://www.chesapeakebay.net/content/publications/cbp_34915.pdf) [hereinafter BAY BAROMETER].

55. *Id.* at 4.

56. *Id.*

57. *Id.* at 4, 6.

“Agriculture is the number one source of pollution to the Bay[,]” according to the EPA.<sup>58</sup> It covers roughly 25% of the watershed, with 87,000 farms across 8.5 million acres.<sup>59</sup> While some large-scale livestock operations are regulated, the application of fertilizers—i.e., nutrients and pesticides—are not addressed by the Clean Water Act.

That said, urban and suburban stormwater runoff, another major source of pollution in the Bay watershed, “is the only source of pollution that is increasing.”<sup>60</sup> It is correlated with population growth, affluence, and, most directly, with impervious surfaces—roads, rooftops, parking lots, etc.—which prevent infiltration, retention of water on site, and evapotranspiration, which removes pollutants, reduces velocity, and avoids increases in water temperature.<sup>61</sup>

At a certain level of imperviousness in a watershed, a condition known as “urban stream syndrome” develops, characterized by flash flooding, elevated nutrient and contaminant levels, altered stream morphology, sedimentation from eroded stream banks, and loss of species diversity.<sup>62</sup> The stream ends up in a concrete box or channel.

The Potomac Conservancy,<sup>63</sup> a land trust and policy advocacy organization, publishes an annual *State of the Nation’s River Report* for the Potomac River—one of the top three tributaries to the Chesapeake Bay—delivering 19% of the flow.<sup>64</sup>

Its 2007 report indicates that “the amount of developed land in the watershed has doubled since 1970.”<sup>65</sup> In the next twenty years, the population of the Potomac watershed will likely grow by 10% per decade, adding one million inhabitants.<sup>66</sup> Fairfax County, Virginia, ground zero in the Washington suburban boom, lost 26% of its forest area between 1986 and 1999.<sup>67</sup> Between 2000 and 2030,

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58. *Id.* at 10.

59. *Id.*

60. *Id.*

61. *Id.* at 10, 13.

62. See Judy L. Myer et al., *Stream Ecosystem Function in Urbanizing Landscapes*, 24 J. N. AM. BENTHOLOGICAL SOC’Y 602 (2005); See also Christopher J. Walsh et al., *Stream Restoration in Urban Catchments through Redesigning Stormwater Systems: Looking to the Catchment to Save the Stream*, 24 J. N. AM. BENTHOLOGICAL SOC’Y 690 (2005).

63. See generally POTOMAC CONSERVANCY, [www.potomac.org](http://www.potomac.org) (last visited Feb. 18, 2011). This writer serves on the Conservancy’s board of directors.

64. BAY BAROMETER, *supra* note 54, at 1.

65. POTOMAC CONSERVANCY, STATE OF THE NATION’S RIVER: POTOMAC WATERSHED 2007 (2007), available at <http://www.potomac.org/site/wp-content/uploads/pdfs/SONR-2007.pdf>.

66. *Id.*

67. *Id.*

“models predict that developed land in the greater the Washington, D.C., area will increase by 80%[.]”<sup>68</sup>

The Conservancy’s 2007 report also cites the local Council of Governments for the fact that impervious cover in the Washington, D.C., area grew from 12.2% to 17.8% from 1986 to 2000.<sup>69</sup> “Consider that it took more than 200 years to cover the forests and fields with the 12.2%, and in 14 years we have watched [the] percentage of impervious surface increase by almost 50%[.]” the report states.<sup>70</sup>

Although stormwater is essentially a species of nonpoint source pollution, in 1987 Congress jammed it into the mold of a point-source pollutant when it wrote Section 402(p)<sup>71</sup> of the Clean Water Act, bringing it into the permitting program and empowering the EPA to regulate certain industrial activities and municipal separate storm sewer systems. This, of course, is dealing with the problem after the fact, given that land use, planning and zoning, building, and highway codes are all primarily controlled by local governments that have the capacity for dealing with the spread of impervious cover more effectively at the front end of development. In any event, the addition of these new sources to the permitting program expanded the EPA’s responsibilities “by almost an order of magnitude” according to a recent National Research Council report.<sup>72</sup>

The stormwater program has a long way to go to achieve the rigor of traditional point-source regulation. It may never quite get there, but it will most certainly improve over time. Yet, prevention is better than remediation; state and local governments ought to become involved in “building excellence in” rather than trying to regulate errors out, to take a line from the Total Quality Management movement. In other words, local governments can guide their communities to avoid or minimize impervious surfaces in the first place, protect green space, protect and expand urban tree cover, and create incentives for “green” infrastructure and low-impact development (LID) in the form of green roofs, rain gardens, rain barrels, green walls, vegetated bio-swales, and permeable pavement.

According to the National Research Council, citing data from the EPA’s 2002 305(b) report, urban stormwater was listed as the

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68. *Id.*

69. *Id.*

70. *Id.*

71. 33 U.S.C. § 1342(p) (2006).

72. COMM. ON REDUCING STORMWATER DISCHARGE CONTRIBUTIONS TO WATER POLLUTION, NAT’L RES. COUNCIL, URBAN STORMWATER MANAGEMENT IN THE UNITED STATES 1 (2008), available at <http://www.nap.edu/catalog/12465.html>.

primary source of water quality impairment for 13% of all rivers, 18% of all lakes, and 32% of all estuaries.<sup>73</sup> “Although these numbers may seem low, urban areas cover just 3 percent of all of the land mass of the United States, and so their influence is disproportionately large.”<sup>74</sup> Developing and developed areas contain some of the most degraded waters in the country, notes the Council.<sup>75</sup> One might add that stormwater flow is the underlying cause of one of the most significant, and certainly the most expensive, urban wet weather issue: Combined Sewer Overflows (CSOs).<sup>76</sup>

Connecting water quality managers and regulators with local or municipal officials who control roads, building codes, and development is a major challenge in terms of watershed governance. Unfortunately, in most communities these are parallel universes. There are outstanding exceptions to this state of affairs in cities such as Seattle, Portland (Oregon), Philadelphia, Cincinnati, Chicago, and Milwaukee, to name a few.

### III. THE SYMPHONIC APPROACH

Peter Drucker, the godfather of American management consulting, once said, “[h]e whom the Gods would destroy they first give forty years of success.”<sup>77</sup> While Drucker may have been thinking of General Motors, his comment also applies to America’s current predicament in terms of its water quality. Thirty-eight years after passage of the Clean Water Act, we are closing in on that forty-year mark. The gods have reason to be displeased:

There is a flattening out of the upward curve of progress towards better water quality in America. We confront seemingly intractable challenges, primarily stemming from our inability to grapple with diffuse, polluted runoff . . . most of which, like row crop agriculture and the expansion of impervious surfaces in rapidly urbanizing communities, are largely beyond the regulatory reach of the CWA.<sup>78</sup>

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73. *Id.* at 25.

74. *Id.* (citation omitted).

75. *Id.*

76. See Robert Harwood & Adrian J. Saul, *Combined Sewer Overflows*, FLUENT.COM, (2001), <http://www.fluent.com/solutions/articles/ja141.pdf>; see also ENVTL. PROTECTION AGENCY, NATIONWIDE EVALUATION OF COMBINED SEWER OVERFLOWS AND URBAN STORM-WATER DISCHARGES VOLUME II: COST ASSESSMENT AND IMPACTS (1977), available at <http://www.epa.gov/ednrmrml/publications/reports/epa600277064/epa600277064.htm>.

77. RUSSELL L. ACKOFF & SHELDON ROVIN, *REDESIGNING SOCIETY* 165 (2003).

78. G. Tracy Mehan, III, *Establishing Markets for Ecological Services: Beyond Water Quality to a Complete Portfolio*, 17 N.Y.U. ENVTL. L.J. 638, 638 (2008).

For too long, water quality management has been characterized by compartmentalization and the creation of artificial boundaries among and between various aspects of what should be a unified approach to water quality in terms of the chemical, physical, and biological integrity of the nation's waters. It has tolerated—even encouraged—a bifurcated approach, allowing unnecessary polarities to dominate policy and practice: water quality versus quantity; land versus water; surface water versus groundwater; point versus nonpoint sources; energy versus water; and supply-side versus demand-side management.

The water policy community in America has struggled to implement the vision of John Wesley Powell, the great explorer of the Colorado River and second director of the U.S. Geological Survey, as articulated in his remarks to the Montana Constitutional Convention in 1889:

I want to present to you what I believe to be ultimately the political system which you have got to adopt in this country, and which the United States will be compelled sooner or later ultimately to recognize. I think each drainage basin in the arid land must ultimately become the practical unit of organization, and it would be wise if you could immediately adopt a county system which would be convenient with drainage basins.<sup>79</sup>

The watershed approach can be described as “a coordinating framework for environmental management that focuses public and private sector efforts to address the highest priority problems within hydrologically-defined geographic areas, taking into consideration both ground and surface water flow.”<sup>80</sup>

Arid or humid, west or east of the hundredth meridian, the watershed approach makes sense even if tradition and our constitutional system preclude the jurisdictional arrangements contemplated by Powell. So it is necessary to work over, under, around, and through the political boundaries that appear to constrain watershed perspective.

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79. DANIEL KEMMIS, *THIS SOVEREIGN LAND: A NEW VISION FOR GOVERNING THE WEST* 177 (2001). Evidently, the presentation did not go all that well according to the environmental historian, Donald Worster. See *A RIVER RUNNING WEST: THE LIFE OF JOHN WESLEY POWELL* 481 (2001).

80. NACWA STRATEGIC WATERSHED TASK FORCE, *RECOMMENDATIONS FOR A VIABLE AND VITAL 21ST CENTURY CLEAN WATER POLICY* 6 (2007) (quoting U.S. ENVTL. PROTECTION AGENCY, *WATERSHED PROTECTION APPROACH FRAMEWORK* (1996)), available at [http://www.eli.org/pdf/NACWA\\_WaterPolicy\\_2007.pdf](http://www.eli.org/pdf/NACWA_WaterPolicy_2007.pdf).

A 2009 report from the Aspen Institute on its recent sustainable infrastructure dialogue echoes Powell's plea.<sup>81</sup> The report sets out three principles as the basis for its many recommendations for redefining the nation's concept of infrastructure and putting it on the "Sustainable Path." First, "the traditional definition of water infrastructure must evolve to embrace a broader, more holistic definition of sustainable water infrastructure that includes both traditional man-made water and wastewater infrastructure *and* natural watershed systems."<sup>82</sup> Second, this principle "should be embraced by all public and private entities involved in water management, and these same entities have a shared role in ensuring their decisions consider and integrate a set of criteria that include environmental, economic and social considerations (the Sustainable Path)."<sup>83</sup> The third principle explicitly states "that a watershed-based management approach is required for drinking water, wastewater and stormwater services to ensure integrated, sustainable management of water resources."<sup>84</sup>

The Aspen report states that water and wastewater utilities

can lead the way by developing policies and practices that promote the preservation and restoration of water resources and by fostering strategic partnerships to collaboratively use integrated water resource planning and management as a tool to examine assumptions concerning supply, demand and alternative methods of meeting unmet future demand and social, economic and environmental challenges.<sup>85</sup>

Implementing the ideas of John Wesley Powell and the Aspen Institute across a span of 120 years has been daunting given the range of players a watershed manager has to engage if he or she is to address issues inherent in an authentic ecological or watershed approach. The water manager is truly "playing without the ball." Many other parties have the authority, the resources, the expertise, and the political capital required to achieve the goals of restoration and protection at the landscape scale.

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81. See generally THE ASPEN INST., SUSTAINABLE WATER SYSTEMS: STEP ONE—REDEFINING THE NATION'S INFRASTRUCTURE CHALLENGE (2009), available at [http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/water\\_infra\\_final.pdf](http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/water_infra_final.pdf) [hereinafter SUSTAINABLE WATER SYSTEMS]. This writer participated in the dialogue. See G. Tracy Mehan, III, *Redefining Water Infrastructure for the 21st Century*, ROLL CALL, July 20, 2009, available at <http://www.rollcall.com/news/36979-1.html>.

82. SUSTAINABLE WATER SYSTEMS, *supra* note 81, at 6.

83. *Id.*

84. *Id.* at 7.

85. *Id.*

Consider the numerous actors implicated in the agricultural sector who must be mobilized to achieve the nutrient reductions needed to achieve water quality standards—farmers, ranchers, concentrated animal feeding operations (CAFOs), processors, fertilizer companies and dealers, grocery chains, chemical companies and pesticide dealers, land grant universities, extension agents, trade associations, and federal and state agencies.

In the area of stormwater runoff and impervious surfaces, the roster of players includes, but is not limited to, mayors, city and county councils, township governments, planning and zoning departments, home builders, housing officials, real estate developers, homeowners, lawn fertilizer businesses, banks, public works and highway departments, parks and recreation officials, local land trusts, pavement manufacturers, and regional councils of governments.

If watershed management is going to be effective, it must address the human dimension as well as hydrology, soil science, biology, and water chemistry. For this reason, watershed governance requires reinventing the watershed as a social as well as a scientific reality.

A famous theologian said, “truth is symphonic.”<sup>86</sup> A symphony means “sounding together.”<sup>87</sup> There is sound, then “different sounds singing together in a dance of sound.”<sup>88</sup> All the instruments are different, even striking, not a bad thing, each with its own timbre. “[T]he composer must write for each part in such a way that this timbre achieves its fullest effect. . . . In the symphony, however, *all* the instruments are integrated in a whole sound.”<sup>89</sup> Yet, claims this theologian, “[t]he orchestra must be pluralist in order to unfold the wealth of the totality that resounds in the composer’s mind.”<sup>90</sup>

While the unity of the composition comes from the Divine, the purpose of the pluralism is to allow the members of the orchestra “symphonically to get in tune with one another and give allegiance to the transcendent unity.”<sup>91</sup> But it is important to keep in mind that “[s]ym-phony by no means implies a sickly sweet harmony

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86. See generally HANS URS VON BALTHASAR, TRUTH IS SYMPHONIC: ASPECTS OF CHRISTIAN PLURALISM (Ignatius Press 1987). The title of the German original is DIE WAHRHEIT IST SYMPHONISCH; ASPEKTE DES CHRISTLICHEN PLURALISMUS (Johannes Verlag, ed., Einsiedeln 1972).

87. VON BALTHASAR, *supra* note 86, at 7.

88. *Id.*

89. *Id.*

90. *Id.*

91. *Id.* at 9.



lacking all tension. Great music is always dramatic . . . . [D]issonance is not the same as cacophony.”<sup>92</sup>

It is no breach of the wall separating church and state to observe that the idea of symphonic truth provides some vivid insights into the essential requirements of watershed management, especially as it relates to managing the diverse and varied human activities across the landscape that threaten the integrity of streams, rivers, lakes, and estuaries. The idea of pluralism inherent in the symphonic approach is congenial to the idea of democracy, limited government, and a healthy, diverse civil society, all of which are implicated in issues relating to watershed governance.

The crucial question remains: what models of watershed governance align with this concept of symphonic truth, and its inherent pluralism, given the diversity, dispersion, and relative independence of so many of the actors in the watershed? As will become clear, various models of governance will exist contemporaneously with one another, implicating different levels of government, economic sectors, geographic areas, or civil society including the private and not-for-profit realms. They will embody concurrent, sometimes mutually reinforcing modes of regulation and collaboration.

#### IV. MODELS OF WATERSHED GOVERNANCE

There are a range of governance models for watershed management which span a continuum running from command-and-control to more collaborative models. The viability of these options is dependent upon constitutional, statutory, cultural, social, economic, and prudential limitations of each individual watershed community.

The Clean Water Act does not grant the EPA direct control over land-based activities, although Congress could extend direct regulation to individual farmers or communities if it so desired. For the foreseeable future, it appears to prefer extending conservation subsidies to agriculture to achieve water quality ends.<sup>93</sup>

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92. *Id.* at 15.

93. A recent example is the U.S. Department of Agriculture’s (USDA) new Mississippi River Basin Healthy Watersheds Initiative (MRBI) to be implemented by its Natural Resources Conservation Service (NRCS), which is designed to “help producers in selected watersheds in the Mississippi River Basin voluntarily implement conservation practices that avoid, control, and trap nutrient runoff; improve wildlife habitat; and maintain agricultural productivity.” NATURAL RES. CONSERVATION SERV., *MRBI Overview*, [http://www.nrcs.usda.gov/programs/mrbi/mrbi\\_overview.html](http://www.nrcs.usda.gov/programs/mrbi/mrbi_overview.html) (last visited Feb. 18, 2011). The MRBI will direct an additional \$80 million each fiscal year, FYs 2010-2013, into selected watersheds. Press release, United States Department of Agriculture, Agriculture Secretary Vilsack Announces Major Initiative to Improve Health of Mississippi River Basin (Sept.

States, as sovereign governments, cannot be required to do what the federal government wants or have their officials commandeered to do its bidding.<sup>94</sup> That said, most states have voluntarily taken on the responsibilities of carrying out and implementing federal environmental statutes, including the Clean Water Act, in order to gain some control over the regulatory apparatus, keep government closer to home, and garner at least some financial aid. In order to receive this delegation, states have put in place statutes, regulations, and enough capacity (money and personnel) to carry out these responsibilities subject to EPA oversight to ensure compliance with federal law.

### A. *The SIP Model*

States are free, say, to regulate row-crop agriculture, land use, and other activities using their independent sovereign powers presently not given to the EPA by Congress. It was originally proposed by the Clinton administration and now the Obama administration that the EPA require states to regulate sources that cannot presently be regulated by the EPA as a condition of its Clean Water Act delegation.<sup>95</sup> Thus, such an approach could be termed the *SIP model*, named after State Implementation Plans or SIPs utilized in the Clean Air Act,<sup>96</sup> the most prominent example in environmental law in which the federal government calls upon states to do that which it does not have the authority, political will, or resources to do itself.

Under the Clean Air Act, the EPA establishes nationally uniform ambient air quality standards and then requires states to develop and submit for approval SIPs specifying measures to assure that air quality within areas of non-attainment meet those standards.<sup>97</sup> The EPA cannot dictate the precise mix of control measures taken to accomplish the goal as long as the state program can credibly achieve the desired outcome.<sup>98</sup> The states can use a variety of

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4, 2009), available at <http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2009/09/0463.xml>.

94. See *New York v. United States*, 505 U.S. 144, 174-75 (1992) (holding that a “take title” provision requiring states to accept ownership of waste or regulate according to the instructions of Congress violates the Tenth Amendment and is not within Congress’ enumerated powers).

95. See Jonathan Cannon, *A Bargain for Clean Water*, 17 N.Y.U. ENVTL. L.J. 608, 623-25 (2008). Cannon served at EPA in the Clinton administration before it tried to require implementation of such an approach. He does, however, counsel trying again. As it turns out, the complexion of Congress is entirely different from then, at least for now.

96. Clean Air Act, 42 U.S.C. §§ 7401-7671(q) (2006).

97. 42 U.S.C. § 7410(a)(1).

98. See *Virginia v. EPA*, 108 F.3d 1397, 1409-10 (D.C. Cir. 1997) (holding that EPA’s provision authorizing the agency’s requirement that states revise their SIPs did not mean

regulatory and economic tools and legal authorities to accomplish the goal.

If the SIP does not pass muster with the EPA, it can impose a Federal Implementation Plan (FIP) to enforce air quality controls available under the law. It will, of necessity, focus on larger sources.

The SIP approach for water quality was tried once under the Clinton administration in the face of a hostile Congress which beat it back. The attempt was made in the context of something called the Total Maximum Daily Load (TMDL) program, a kind of pollution budget required under Section 303 of the Clean Water Act for impaired waters, or those not achieving water quality standards for the protection of various designated uses. Under a TMDL, the state establishes waste load allocations for regulated point sources, which are then incorporated into permits, as well as load allocations for even unregulated classes of nonpoint sources such as row-crop agriculture. Generally, states must demonstrate with reasonable assurance that TMDLs will achieve water quality standards.

While the federal Clean Water Act cannot reach nonpoint sources, states may do so, utilizing their own authorities or resources, be they regulatory or in the nature of subsidies for best management practices. In fact, some states such as California<sup>99</sup> require implementation of TMDLs already. Most do not. However, due to a unique set of circumstances on the Chesapeake Bay involving judicial consent decrees stemming from previous litigation and a motivated Obama administration, the SIP-like approach to TMDL implementation appears to be undergoing a revival.

In December the EPA wrote the states in anticipation of a court-ordered TMDL to go into effect in December 2010 requiring implementation plans and milestones for achieving water quality standards in the Chesapeake Bay.<sup>100</sup> The letter describes the establishment of “new accountability framework” regarding identified actions to be taken if either a state or Washington, D.C., “does not demonstrate satisfactory progress toward achieving nutrient and sediment allocations established by the EPA in the Chesapeake Bay TMDL.”<sup>101</sup> States are expected to do whatever it takes to get the job done using whatever tools are at their disposal, in-

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that the agency had the authorization to require that states include an EPA-specified control measure).

99. See *Pronsolino v. Nastro*, 291 F.3rd 1123 (9th Cir. 2002) (requiring the implementation of TMDLs in California).

100. Letter from Shawn M. Garvin, EPA Regional Administrator to the Hon. L. Preston Bryant, Secretary of Natural Resources (Dec. 29, 2009), available at [http://www.epa.gov/region3/chesapeake/bay\\_letter\\_1209.pdf](http://www.epa.gov/region3/chesapeake/bay_letter_1209.pdf).

101. *Id.*

cluding the development of “appropriate mechanisms to ensure that non-point source load allocations are achieved.”<sup>102</sup>

As to the “identified actions” the EPA might take if states do not meet the mark, the letter includes an enclosure outlining eight different options.<sup>103</sup> These options include expanding the Clean Water Act permitting program to previously unregulated storm-water or animal feeding operations by utilizing Residual Designation Authority in the regulations, objecting to proposed permits which the EPA deems inadequate, requiring net improvement offsets before new sources may be permitted, increasing federal enforcement, and conditioning and redirecting EPA grants.<sup>104</sup> The Washington Post expressed its support for the EPA’s new or updated and expanded approach in a recent editorial.<sup>105</sup>

Requiring state implementation of TMDLs as to nonpoint-source load allocations is akin to the SIP model under the Clean Air Act. It is controversial, in part, because it has never been done before, given the long-standing and mandated focus on regulating point sources under the Clean Water Act. SIPs largely impact large industrial organizations, although tail pipe regulation has experienced its share of flak over the years. On the other hand, TMDL implementation will impact residential development, farmers, local planning and zoning, and more distributed sources of pollution.

It is possible that the political culture of the Bay will enable states to comply with these demands. Whether or not such an approach will work in Illinois or Iowa or Colorado is an open question. The stick can shift to another hand. States always have the option of returning their delegated programs back to the EPA, a frightening prospect for budget managers at the agency.

### *B. Current Statutory Models*<sup>106</sup>

One of the reasons why previous administrations and the EPA have been driven to the SIP model is the inability to promote watershed governance effectively through many of the existing statutory provisions. These current statutory models have elicited only

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102. *Id.*

103. *Id.*

104. *Id.*

105. Editorial, *Bring on the Sticks—The EPA Outlines Consequences for Inaction on Chesapeake Bay Cleanup*, WASH. POST, Jan. 2, 2010, at A12.

106. See Alan H. Vicory, Jr. & G. Tracy Mehan, III, *Look to the Watershed. A Broader Approach is Needed for U.S. Water Quality Management*, WATER ENV'T & TECH., June 2005, at 32 [hereinafter *Look to the Watershed*]; see also MISSISSIPPI RIVER WATER QUALITY, *supra* note 47, at 82-94 (detailing some of the current statutory models).

modest political will and little financial support from the federal government over the last few decades.

Take for instance Section 208<sup>107</sup> of the Clean Water Act relating to area-wide facilities planning, which envisioned regional water quality management planning and the establishment of an organization to accomplish this task. Under this section, each state was to identify the boundaries of areas with substantial water quality control issues and designate a single organization to formulate management plans. The plans were to include, *inter alia*, the identification and control of nonpoint source pollution from agriculture, silviculture, mining, construction, and other sources. Presently, Milwaukee is the only large city using this section of the Clean Water Act, as discussed below.

Section 319<sup>108</sup> covers nonpoint source management programs for the states. Under this section, states had to identify impaired waters due to nonpoint sources and describe a process and program to deal with them. This, in turn, made them eligible for a very small grant program which, while sometimes leveraging solid improvements, is simply too small to achieve critical mass relative to the size and scope of the challenge. Section 319 has demonstrated concrete results in terms of collaborative problem-solving at smaller geographic scales.<sup>109</sup>

Subsection (g) does authorize the EPA to convene a management conference of all states in a watershed where upstream sources impair downstream water quality.<sup>110</sup> If the states can reach an agreement, they must incorporate it into their nonpoint programs. This process has been used very infrequently. Therefore, its efficacy is still a matter of speculation.

A more robust program, at least in the collaborative if not regulatory sense, is the National Estuary Program (NEP) under Section 320.<sup>111</sup> This section applies to twenty-eight estuaries such as Tampa Bay and Puget Sound.<sup>112</sup> NEPs conduct long-term planning and management to address the myriad issues that contribute to the deterioration of estuaries such as development.<sup>113</sup> NEPs are nominated by state governors and accepted by the EPA if certain

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107. 33 U.S.C. § 1288 (2006).

108. 33 U.S.C. § 1329.

109. See U.S. ENVTL. PROTECTION AGENCY, *Section 319 Nonpoint Source Success Stories*, <http://www.epa.gov/nps/success/> (last visited Feb. 18, 2011) (outlining 215 such cases).

110. 33 U.S.C. § 1329(g).

111. 33 U.S.C. § 1330.

112. U.S. ENVTL. PROTECTION AGENCY, NAT'L ESTUARY PROGRAM, 2004-2006 IMPLEMENTATION REVIEW REPORT 1, 3 (2008), available at [http://water.epa.gov/aboutow/owow/upload/2004-2006\\_irreportfinal\\_6-19-08.pdf](http://water.epa.gov/aboutow/owow/upload/2004-2006_irreportfinal_6-19-08.pdf).

113. *Id.* at 1-2.

criteria are met which ensures local buy-in, thus making them operationally community-based.<sup>114</sup>

In a 2005 report the EPA documented the benefits of NEPs in terms of governing across political boundaries according to a watershed approach; “[u]sing science to develop and implement. . . [m]anagement [p]lan[s;]” “[f]ostering collaborative problem solving[;]” “[i]nforming and involving stakeholders to sustain commitment[;]” “[l]everaging limited funding resources to ensure implementation[;]” and “[m]easuring and communicating results to build support” in the community.<sup>115</sup>

At the scale they operate, NEPs appear to be viable models of symphonic governance, models that can complement regulatory or subsidy approaches by providing access and transparency to local citizens and stakeholders. However, NEPs do not seem to drive concentrated regulatory action or even critical mass in terms of funding broad-gauge programs. So scaling up such an approach would present challenges on large watersheds such as the Mississippi or Ohio River or Great Lakes.

The Clean Water Act also contains several sections by which the EPA can promote and fund, at a modest level, water quality and continuous planning processes with a percent of infrastructure loan and grant dollars as contemplated by Sections 604(b),<sup>116</sup> 205(j),<sup>117</sup> and 303(e).<sup>118</sup> If the recent uptick in Congressional funding for water infrastructure continues, this might be a promising development for the watershed approach, albeit at relatively modest funding levels.

Unlike the SIP model, none of these statutory approaches require states or private parties to do anything they do not want to do already. They are process-based but cannot compel action, say, with respect to presently unregulated sources of pollution or water quality impairments.

A recent variant of these statutory approaches, scaled up substantially, is a new Staff Discussion Draft of a “Sustainable Watershed Planning Act”<sup>119</sup> being circulated for comment by the House Subcommittee on Water Resources and Environment, Committee on Transportation and Infrastructure. This draft

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114. 33 U.S.C. § 1330(a)(1).

115. U.S. ENVTL. PROTECTION AGENCY, EPA-842-B-05-003, COMMUNITY-BASED WATERSHED MANAGEMENT: LESSONS FROM THE NATIONAL ESTUARY PROGRAM 75-76 (2005), available at <http://www.epa.gov/owow/estuaries/nepprimer/documents/NEPPrimer.pdf>.

116. 33 U.S.C. § 1384(b).

117. 33 U.S.C. § 1285(j).

118. 33 U.S.C. § 1313(e).

119. Sustainable Watershed Planning Act, 111th Cong. (2009)(Staff Discussion Draft) (unpublished manuscript) (on file with author).

is very much a work in progress and will be revised continually in the weeks ahead.

This draft legislation contemplates the establishment of an Office of Sustainable Watershed Management in the Executive Office of the President to oversee the establishment and partial funding of Regional Watershed Planning Boards for ten watersheds within states which voluntarily want to take advantage of this process and funding mechanism.<sup>120</sup> It is focused on large-scale watersheds the size of a portion of one of the Great Lakes or the entire Chesapeake Bay.<sup>121</sup> It takes a big-picture approach in terms of the scale of the watersheds targeted and is comprehensive in its approach to all aspects of watershed management (land, water, surface and groundwater, etc.). Finally, it seeks to align state, federal, private, and other interests in a consistent approach to watershed planning and management.<sup>122</sup>

This draft legislation also guarantees diverse representation on regional watershed planning boards co-chaired by one federal and one state representative with additional representatives for interstate agencies or compacts, Indian tribes, local governments and nongovernmental entities from a range of stakeholder interests, e.g., ranching and recreation, and geographic distribution.<sup>123</sup>

The legislation eschews any interest in overriding state control of water quantity and rights.<sup>124</sup> Whether this assurance, the voluntary nature of the process, and the promise of greater funding will generate sufficient political support remains to be seen.

### *C. The Interstate Compact Model*<sup>125</sup>

“Since 1936 states have entered into interstate compacts for joint basin management. . . [on] the Delaware, Susquehanna, Potomac, and Ohio basins, as well as those states sharing [the borders of] the Great Lakes and Lake Tahoe[.]”<sup>126</sup> Approximately half “of the contiguous states are signatories to a compact created for water quality or water resources management[.]”<sup>127</sup> Section 103 of the Clean Water Act requires the EPA Administrator to encourage

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120. *Id.* § 201(a)(1).

121. That is, “not be smaller than the boundaries defined by the 4-digit hydrologic unit code level, as defined by the United States Geological Survey.” *Id.* § 201(a)(2).

122. *Id.* § 2(b)(4).

123. *Id.* § 202.

124. *Id.* § 3.

125. See generally Vicroy, Jr. & Mehan, III, *supra* note 106; MISSISSIPPI RIVER WATER QUALITY, *supra* note 47, at 190-211 (detailing interstate collaboration and coordination of water quality improvement efforts).

126. Vicroy, Jr. & Mehan, III, *supra* note 106, at 34-35.

127. *Id.*

cooperative activities by the states and encourage compacts, but that is a provision “[m]ore honor[e]d in the breach than the observance.”<sup>128</sup>

For those commissions established prior to 1972, of which there are six, funding is available for various functions under Section 106 of the Clean Water Act just as if they were a delegated state program since they do such things as develop TMDLs, and carry out activities relating to water quality standards, monitoring, and the like.<sup>129</sup>

While these interstate commissions with Clean Water Act responsibilities are confined to the northeastern quadrant of the country, they may be a solid platform from which to build out more ambitious watershed-scale activities across political boundaries and societal sectors.

An exciting example of such an evolution is the collaboration between ORSANCO, the Ohio River Valley Water Sanitation Commission<sup>130</sup> and EPRI, the Electric Power Research Institute,<sup>131</sup> on regional water quality trading in the Ohio River basin for control of nitrogen, phosphorus, and greenhouse gases resulting from the power sectors’ air quality removal actions which, in turn, result in water discharges.<sup>132</sup> Both the EPRI and the EPA are providing financial support.<sup>133</sup> The American Farmland Trust is also participating as is a national law firm, a prominent consulting firm, and the University of California at Santa Barbara.<sup>134</sup>

Given the scale at which this trading project will operate, power companies, farmers, and other industrial dischargers will be participating in this cost-effective program which takes advantage of the differential control costs and multiple environmental benefits to be derived from point-to-nonpoint source trading.<sup>135</sup> The

128. WILLIAM SHAKESPEARE, *HAMLET*, act 1, sc. 4 (1603); see 33 U.S.C. § 1253 (2006).

129. See 33 U.S.C. § 1256 (2006); see also 33 U.S.C. § 1362(b).

130. OHIO RIVER VALLEY WATER SANITATION COMM’N, <http://www.orsanco.org> (last visited Feb. 18, 2011).

131. ELECTRIC POWER RES. INST., <http://www.epri.com> (last visited Feb. 18, 2011).

132. For details on this multi-credit trading program, see *Ohio River Basin Trading Project*, ELECTRIC POWER RESEARCH INSTITUTE, <http://www.epri.com/ohiorivertrading> (last visited Feb. 18, 2011).

133. ELECTRIC POWER RES. INST., *Ohio River Basin Trading Project: Funding Opportunities*, [http://my.epri.com/portal/server.pt?open=512&objID=423&&PageID=235465&mode=2&in\\_hi\\_userid=230564&cached=true](http://my.epri.com/portal/server.pt?open=512&objID=423&&PageID=235465&mode=2&in_hi_userid=230564&cached=true) (last visited Feb. 18, 2011).

134. ELECTRIC POWER RES. INST., *Ohio River Basin Trading Project: Collaborators*, [http://my.epri.com/portal/server.pt?open=512&objID=423&&PageID=235470&mode=2&in\\_hi\\_userid=230564&cached=true](http://my.epri.com/portal/server.pt?open=512&objID=423&&PageID=235470&mode=2&in_hi_userid=230564&cached=true) (last visited Feb. 18, 2011).

135. See U.S. ENVTL. PROTECTION AGENCY, EPA-833-R-07-004, WATER QUALITY TRADING TOOLKIT FOR PERMIT WRITERS (2007), available at <http://www.epa.gov/npdes/pubs/wqtradingtoolkit.pdf>; U.S. ENVTL. PROTECTION AGENCY, OFFICE OF WATER, FINAL WATER QUALITY TRADING POLICY STATEMENT (2003), available at <http://water.epa.gov/type/watersheds/trading/finalpolicy2003.cfm>.



eventual participation of POTWs would be a logical development if this project is actually implemented.<sup>136</sup>

The EPRI-ORSANCO effort also contemplates participation in emerging greenhouse gas markets since agricultural Best Management Practices (BMPs), which reduce nutrient runoff or non-point source pollution will likely reduce, say, nitrous oxide releases. One ton of nitrous oxide has the same warming impact of 310 tons of carbon dioxide.<sup>137</sup> A 2003 report from the World Resources Institute states that “[a]pproximately 74 percent of all U.S. nitrous oxide emissions come from agriculture, primarily from agricultural soil management activities such as commercial fertilizer application and other cropping practices.”<sup>138</sup>

Although the initial object of the Ohio River Basin Trading Program is to anticipate numeric water quality standards for nutrients on the Ohio itself, the long-term possibilities for addressing Gulf hypoxia are tantalizing indeed. The Ohio River accounts for approximately 28 to 30% of the total nitrogen ultimately heading south.<sup>139</sup>

#### V. COLLABORATION AS MODEL AND THEME: THE ROLE OF UTILITIES

No categorization of governance models is perfect. Such arrangements always partake in different modes of interaction in the real world. This is definitely true in the matter of watershed management at the local, regional, or interstate level. While the NEPs—or National Estuary Programs—discussed above are derived from the Clean Water Act, they are very collaborative in design and practice.

Interstate compact organizations or commissions, established by acts of state legislatures and Congress, must pursue collaboration in the setting of priorities and the implementation of programs simply by reason that all of their members are sovereign entities unto themselves.

Finally, a voluntary collaboration might come into existence due to the difficulties in complying with regulatory mandates. It

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136. While I was Assistant Administrator for Water at EPA, we looked at the Ohio River as an excellent opportunity for large-scale water quality trading because it had a good mix of point sources and agricultural nonpoint sources, allowing for cost-effective trading. At the time we were not even thinking of the role that power plants might play.

137. SUZIE GREENHALGH & AMANDA SAUER, WORLD RESOURCES INSTITUTE, AWAKENING THE DEAD ZONE: AN INVESTMENT FOR AGRICULTURE, WATER QUALITY, AND CLIMATE CHANGE 6 (Feb. 2003), available at [http://pdf.wri.org/awaken\\_dead\\_zone.pdf](http://pdf.wri.org/awaken_dead_zone.pdf) (citation omitted).

138. *Id.*

139. MISSISSIPPI RIVER WATER QUALITY, *supra* note 47, at 40.

may facilitate a smoother, more cost-effective means of compliance that minimizes cost while yielding multiple kinds of environmental benefits. Restoring a riparian corridor with trees and native grasses will not only improve water quality but also provide habitat, sequester carbon, and offer a pleasing aesthetic view.<sup>140</sup>

Collaboration as an element of symphonic watershed governance is really a theme or component which can be incorporated or integrated into various other models.

Given the difficulties of actualizing watershed governance at the regional and interstate levels, there is some evidence that water and wastewater utilities are well-suited to assume a leadership role in effectively organizing the diversity of stakeholders, the plurality of interests and the mobilization of resources in the service of successful—i.e., symphonic—watershed management.

#### *A. New York City Filtration Avoidance*

While not a purely collaborative undertaking, at least from the standpoint of many upstate citizens, New York City's filtration avoidance program, pursuant to the Safe Drinking Water Act,<sup>141</sup> illustrates the possibilities of the watershed approach in the service of a utility's mission. Driven by new regulatory requirements in the 1990s, New York pursued an alternative to spending six to eight billion dollars on a new filtration plant to protect the 1.5 billion tons of drinking water it supplies to nine million New Yorkers daily.<sup>142</sup> 90% of the water comes from the Catskill-Delaware watershed, 125 miles north and west of the city.<sup>143</sup>

The EPA gave its blessing to New York City to pursue a watershed management approach at a cost of only \$1.5 billion.<sup>144</sup> It effectively made the city responsible for restoring stream corridors, reforestation, buying land, paying for manure management techniques and fencing animals out of waterways, and other land or watershed-based BMPs. Instead of only managing its hard or grey water facilities, New York now is responsible for managing its im-

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140. A recent study documents the monetary benefits of "green" infrastructure or low-impact development (LID) approaches in the context of urban wet weather issues (CSOs, stormwater, etc.) in Philadelphia's proposed CSO plan. STRATUS CONSULTING, A TRIPLE BOTTOM LINE ASSESSMENT OF TRADITIONAL AND GREEN INFRASTRUCTURE OPTIONS FOR CONTROLLING CSO EVENTS IN PHILADELPHIA'S WATERSHEDS: FINAL REPORT (2009), available at [http://www.epa.gov/npdes/pubs/gi\\_phil\\_bottomline.pdf](http://www.epa.gov/npdes/pubs/gi_phil_bottomline.pdf).

141. See generally U.S. ENVTL. PROTECTION AGENCY, *Filtration Avoidance*, <http://www.epa.gov/region2/water/nycshed/filtad.htm> (last visited Feb. 18, 2011) (detailing the history of New York City's filtration avoidance program).

142. James Salzman, *Creating Markets for Ecosystem Services: Notes from the Field*, 80 N.Y.U. L. REV. 870, 878-879 (2005).

143. *Id.* at 878.

144. *Id.*

mense watershed as well. With the February 2010 purchase of 685 acres of upstate land for \$3.1 million under its Land Acquisition Program, New York City has now protected over 105,000 acres of watershed land in parts of eight counties.<sup>145</sup> The City only acquires land from willing sellers, and it usually keeps the properties open for public access and recreational use.<sup>146</sup> Some purchases are by way of conservation easements in addition to fee simple acquisitions.<sup>147</sup>

Water and wastewater utilities, if empowered by their boards, political leaders, ratepayers, and executive leadership, are well-suited to the task of collaborative governance within their own watersheds. They bring unique expertise to the table on a variety of water management matters. While facing their fair share of financial challenges, they are blessed with a steady stream of income from ratepayers as well as government loans and grants. Given that most of the American sector is municipally owned, utilities are experienced and knowledgeable in the delicate dance of inter-governmental relationships since they simultaneously fill the roles of regulator and regulated. They also understand the need to be responsive to the broader community that makes up their ratepayer base.

### *B. Milwaukee's "Sweetwater Trust"*

The Milwaukee Metropolitan Sewerage District (MMSD)<sup>148</sup> provides a useful case history of the potential of utility leadership in leading a symphonic approach to watershed governance to address urban wet weather issues under the Clean Water Act. It is not only an example of a utility pursuing a collaborative model but also an instructive, if paradoxical, case. MMSD's long-term success may depend on an entirely new nongovernmental organization, a public-private-not-for-profit partnership, a kind of voluntary association, with a life all its own.<sup>149</sup>

MMSD provides wastewater and flood management services to 1.1 million customers in 28 communities, serving 411 square miles

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145. Press Release, New York City Environmental Protection, New York City to Acquire 685 Acres of Land for Watershed Protection (Feb. 28, 2010), *available at* [http://www.nyc.gov/html/dep/html/press\\_releases/10-20pr.shtml](http://www.nyc.gov/html/dep/html/press_releases/10-20pr.shtml).

146. *Id.*

147. *Id.*

148. MILWAUKEE METRO. SEWERAGE DIST., <http://v3.mmsd.com> (last visited Feb. 18, 2011).

149. What follows is based, in part, on numerous conversations with Kevin Shafer, Executive Director of MMSD, over the past three years, as well as his PowerPoint presentation. Kevin Shafer, *The Milwaukee Regional Partnership Initiative PowerPoint* (2008) (unpublished manuscript) (on file with author).

on the shore of Lake Michigan.<sup>150</sup> As with many older communities in the northeast, midwest and west coast, MMSD had to respond to urban wet weather issues, especially Combined Sewer Overflows (CSOs), or releases of massive amounts of wastewater during big-storm events resulting from an infrastructure design in which sewage and stormwater were conveyed in the same pipes to treatment plants. When the pipes overflow, and to avoid disrupting biological treatment processes, the wastewater is allowed to overflow into receiving waters.<sup>151</sup> CSOs make up approximately 5% of MMSD's service area, but bring with them tremendous financial and environmental consequences.<sup>152</sup>

As a result of federal policy and regulation, MMSD invested \$3 billion in "grey" infrastructure through the 1990s as part of its Water Pollution Abatement Program (WPAP) for structural work, i.e., large underground deep tunnels to hold overflows for treatment after the storm event subsided.<sup>153</sup> It is currently finishing another \$1 billion investment.<sup>154</sup>

Before WPAP came on line, MMSD experienced between fifty and sixty overflows per year "with an annual average volume of 8 billion to 9 billion gallons of overflow."<sup>155</sup> Presently, it has only two overflows per year "with an annual average of one billion gallons of overflow."<sup>156</sup>

Unfortunately, within the six sub-watersheds in MMSD's service area and tributary to Lake Michigan, 37% of the annual bacteria load comes from rural nonpoint sources and 56% from urban stormwater.<sup>157</sup> Beach closings still occur after significant storm events. These challenges now eclipse CSOs as the main obstacle to further gains in water quality.

In addition, University of Wisconsin researchers are predicting that extreme precipitation events will become 10 to 40% stronger in southern Wisconsin due to climate change and variability.<sup>158</sup>

150. MILWAUKEE METRO. SEWERAGE DIST., FRESH COAST GREEN SOLUTIONS: WEAVING MILWAUKEE'S GREEN & GREY INFRASTRUCTURE INTO A SUSTAINABLE FUTURE 3, available at <http://v3.mmsd.com/AssetsClient/Documents/sustainability/sustainbookletweb1209.pdf> [hereinafter FRESH COAST GREEN SOLUTIONS].

151. U.S. ENVTL. PROTECTION AGENCY, EPA 833-R-04-001, REPORT TO CONGRESS: IMPACTS AND CONTROL OF CSOs AND SSOs, at ES-2 (2004), available at [http://cfpub.epa.gov/npdes/cso/cpolicy\\_report2004.cfm](http://cfpub.epa.gov/npdes/cso/cpolicy_report2004.cfm).

152. FRESH COAST GREEN SOLUTIONS, *supra* note 150, at 4.

153. *Id.* at 3.

154. *Id.*

155. *Id.*

156. *Id.*

157. Timothy Bate et al., Water Env't Fed'n, Milwaukee's Next Step: Watershed Restoration Plans (Instead of TMDLs) Figure 1 (2008) (unpublished manuscript) (on file with author). The authors include members of MMSD staff and outside consultants.

158. Jonathan A. Patz et al., *Climate Change and Waterborne Disease Risk in the Great Lakes Region of the U.S.*, 35 AM. J. PREVENTIVE MED. 451, 451 (2008); see also *Great Lakes'*

CSO events, with resultant overflows into Lake Michigan, will rise by 50 to 120% by the end of this century.<sup>159</sup>

While MMSD already used the Clean Water Act's Section 208 planning process, it has decided to pursue a collaborative approach to watershed management, focusing on flow reduction from stormwater and nonpoint sources that are either insufficiently regulated or not regulated at all. As part of this effort, it invests heavily in regional water quality monitoring on a watershed basis. It is also developing watershed restoration for its six sub-watersheds. Ultimately, MMSD hopes to incorporate at least some of these areas into a watershed-based permit to control all point and nonpoint sources across numerous municipal jurisdictions.<sup>160</sup>

MMSD is already promoting watershed-based, distributed, "green" infrastructure approaches such as disconnection of downspouts, use of rain barrels, vegetated swales, cisterns, installation of green roofs, and urban reforestation to supplement grey infrastructure by reducing flow through infiltration, retention, and evapotranspiration at the site level.<sup>161</sup> Subject to design, scaling and management, MMSD has documented capital cost savings from pursuing this approach.<sup>162</sup>

MMSD is already working with the Conservation Fund, the second largest land conservancy in the nation, to buy and restore floodplains to manage flooding and reduce stormwater flows. This "Greenseams" program has already acquired over 2,000 acres since 2002 and has identified a total of 15,000 acres for purchase.<sup>163</sup> MMSD has spent \$13.4 million from its capital improvements budget and has also received some grants for the program.<sup>164</sup>

Kevin Shafer, the Executive Director of MMSD, came to realize that suburban communities, business, agriculture, environmental groups, universities, and a range of stakeholders will have to be brought into the watershed process if the goal of transforming the

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*Study Ups Chances for Waterborne Disease*, ENVTL. PROTECTION, Oct. 10, 2008, available at <http://eponline.com/articles/2008/10/10/great-lakes-study-ups-chances-for-waterborne-disease.aspx> (detailing the relationship between intense weather and public health risk).

159. Platz, *supra* note 158, at 451.

160. Watershed-based permits are (1) "[i]ssued on a watershed basis[.]" (2) "[f]ocused on multiple pollutant sources[.]" (3) "[t]argeted to achieve watershed goals[.]" and (4) "[i]ntegrate permit development among monitoring, water quality standards, TMDL, non-point sources, source water protection, and other programs[.]" Patrick Bradley, LimnoTech, NPDES Watershed-Based Permitting PowerPoint (2009) (unpublished manuscript) (on file with author). Bradley was the leading EPA expert on this subject before joining LimnoTech in 2008.

161. FRESH COAST GREEN SOLUTIONS, *supra* note 150, at 12-15.

162. *See id.* at 16.

163. MILWAUKEE METRO. SEWERAGE DIST., *Greenseams*, <http://v3.mmsd.com/greenseams.aspx> (last visited Feb. 18, 2011). The 15,000 figure is based on conversations with MMSD's executive director, Kevin Schafer.

164. Based on conversations with Kevin Schafer.

landscape, in both its urban and rural aspects, is to be attained. This will be accomplished by means of “green” infrastructure for stormwater control and BMPs for agricultural nonpoint sources. Shafer eventually came upon Chicago Wilderness<sup>165</sup> as a prototype of the kind of collaborative model MMSD needed to engage the larger community, including numerous local jurisdictions with a particular interest in stormwater compliance.

Chicago Wilderness is an alliance of organizations interested in protecting and restoring biodiversity in urban, suburban, and rural areas in and around the Chicago metropolitan region.<sup>166</sup> With its more than 250 members, this organization seeks to raise awareness and knowledge about nature, healthy ecosystems, and biological resources, especially prairie landscapes; increase public participation and stewardship; build alliances among diverse constituencies; and facilitate applied natural and social science research, BMPs, and the sharing of information.<sup>167</sup> It also seeks to generate broad-based public and private support and attract resources to achieve its goals.<sup>168</sup> Shafer and other leaders in Milwaukee’s water community were able to initiate an extended process of consultation and deliberation among interested stakeholders with funding from a local foundation and facilitated by a local university professor.

MMSD, working with the Southeastern Wisconsin Regional Planning Commission (SEWRPC),<sup>169</sup> had already revised its Section 208 and resolved on a regional partnership, the Milwaukee Regional Partnership Initiative, to develop restoration plans for each of its six sub-watersheds. As originally conceived, it included an Executive Steering Council with various policy, legal, technical, and scientific advisory committees with direct oversight of plan development. The Council was fairly representative of the community if limited in number.

In time, something like a consensus was realized on a new entity akin to Chicago Wilderness: the Southeast Wisconsin Watersheds Trust (SWWT),<sup>170</sup> popularly known as the “Sweet Water Trust.” Formed in 2008, it sought to focus on “integrated water resources management” across political boundaries and engage in “second level planning” to fulfill the regional plan previously de-

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165. CHICAGO WILDERNESS, <http://www.chicagowilderness.org> (last visited Feb. 18, 2011).

166. *Id.*

167. *Id.*

168. *Id.*

169. SOUTHEASTERN WIS. REG’L PLAN. COMM’N, <http://www.sewrpc.org> (last visited Feb. 18, 2011).

170. SOUTHEASTERN WISCONSIN WATERSHEDS TRUST, <http://www.swwtwater.org> (last visited Feb. 18, 2011).

veloped and in conjunction with the individual “watershed restoration plans” to be undertaken in each sub-watershed.<sup>171</sup> To that end, it has established “Watershed Action Teams” under the direction of an expanded Executive Steering Council.

One of its key goals is to “[i]dentify and support land use practices and designs that enhance and improve water resources and promote and restore ecological benefits.”<sup>172</sup> It also aims to “[f]orge and strengthen relationships to leverage funding and recommend policies to assist in the implementation of projects to produce lasting water resource benefits and cost savings throughout the Greater Milwaukee watersheds and nearshore Lake Michigan.”<sup>173</sup>

Among its primary purposes is “[t]o build partnerships and enhance collaborative decision-making and joint project implementation, engaging government, business, the building industry, agriculture, environmental, and other stakeholder organizations to obtain broad agreement and recommend where to invest funds to get the greatest benefit.”<sup>174</sup>

SWWT’s membership includes individuals, units of government, non-profit organizations, and the business community.<sup>175</sup> It is hiring staff and has received a \$1.9 million grant from the Joyce Foundation.<sup>176</sup> It also convenes a well-attended annual conference.<sup>177</sup>

## VI. CONDUCTING A WATERSHED SYMPHONY

Alternative forms of watershed governance are not mutually exclusive. In the complex political, legal, and social realities of American communities and their watersheds can be found a mix of top-down, bottom-up, command-and-control, and collaborative approaches necessary to managing water resources and the citizens

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171. SOUTHEASTERN WISCONSIN WATERSHEDS TRUST, BACKGROUND SUMMARY 1-3, available at <http://www.swwtwater.org/home/documents/Background.pdf>.

172. *Id.* at 2.

173. *Id.*

174. *Id.*

175. *About Sweet Water*, SOUTHEASTERN WISCONSIN WATERSHEDS TRUST, [http://www.swwtwater.org/home/about\\_swwt.cfm](http://www.swwtwater.org/home/about_swwt.cfm) (last visited Feb. 18, 2011).

176. Press Release, Sweet Water Trust, Sweet Water Trust and Its Environmental Partners Get Boost to Improve Water Quality in the Milwaukee River Basin (July 7, 2009), available at <http://www.reuters.com/article/idUS136348+07-Jul-2009+PRN20090707>. In a complementary move, Joyce is also providing the national environmental organization, American Rivers, a \$375,000 grant, with a \$150,000 match from MMSD, to work with Milwaukee communities to adopt sustainable “green” infrastructure solutions to wet weather problems. Press Release, American Rivers, Milwaukee’s Communities and Clean Water Benefit from Grant Awarded to American Rivers (May 1, 2009), available at <http://www.americanrivers.org/newsroom/press-releases/2009/milwaukees-communities-and.html>.

177. For details on the success of the latest conference, see SOUTHEASTERN WISCONSIN WATERSHEDS TRUST, <http://www.swwtwater.org> (last visited Feb. 18, 2011)).

who reside there. But the centrality of the land-water nexus, the overarching challenge of land-based pollution, and the various and sundry physical alterations, all of which impair the chemical, physical, and biological integrity of the nation's waters, make it imperative that water managers take a symphonic approach to watershed governance. In this way they can account for the diversity and pluralism of human activities across the landscape while attending to their paramount mission of watershed protection and restoration.

While the largest of the nation's watersheds will be governed according to their own tailor-made ways, the most common, logical means of effectuating a symphonic watershed governance model across the country is through the instrumentality of water, wastewater, and stormwater utilities that need to assume a greater leadership role in their respective home watersheds. This requires that utility managers redefine their roles in terms of watershed protection, community involvement, and facilities management.

Water managers, especially those in the utility sector, must engage, educate, enlist, and motivate many different citizens and economic sectors in the cause of water quality. They will have to become composers, conductors, and active members of a symphonic orchestra of restoration. They cannot escape this responsibility if they hope to achieve their ultimate aims in service to their customers, citizens, and the environment. Simply managing a facility is no longer sufficient. The problem extends far beyond their immediate service area to the entire basin, catchment, drainage, or watershed.

Fortunately, Americans have a knack for the kind of collaboration or partnerships that can bring success by means of a symphonic approach to watershed management and governance.

In his 1835 masterpiece, *Democracy in America*, Alexis de Tocqueville reported on his observations of the American scene after an extensive tour of the new Republic. Of special interest to our discussion is the following passage:

Americans of all ages, all conditions, and all dispositions constantly form associations. They have not only commercial and manufacturing companies, in which all take part, but associations of a thousand other kinds, religious, moral, serious, futile, general or restricted, enormous or diminutive. The Americans make associations to give entertainments, to found seminaries, to build inns, to construct churches, to diffuse books, to send missionaries to the an-



tipodes; in this manner they found hospitals, prisons, and schools. If it is proposed to inculcate some truth or to foster some feeling by the encouragement of a great example, they form a society. Wherever at the head of some new undertaking you see the government in France, or a man of rank in England, in the United States you will be sure to find an association.<sup>178</sup>

Tocqueville saw voluntary, intermediate associations that mediate between individuals and government as unique institutions that—even in the early nineteenth century—flourished among Americans.

This American genius for voluntarism and collaboration is a strength which water managers need to draw upon as they reach out to their watershed communities and orchestrate a symphonic approach to watershed governance. If truth is symphonic, a symphony is what they must compose.

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178. 2 ALEXIS DE TOCQUEVILLE, *DEMOCRACY IN AMERICA* 106 (10th prtg. 1966) (1840).



# THE LEGALITY OF FORM-BASED ZONING CODES

RICHARD S. GELLER\*

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## I. INTRODUCTION

A growing number of land planners, architects, and local government officials are seeking to dramatically improve zoning laws in Florida and throughout the United States. New Urbanism, a movement which advocates pedestrian-friendly, mixed-use communities, would replace conventional zoning with form-based zoning. Form-based zoning focuses on the physical appearance of streets and buildings to achieve a predictable, aesthetic result. Conventional zoning, by comparison, focuses on the segregation of land uses, which contributes to sprawl.<sup>1</sup>

The City of Miami replaced its zoning code with a form-based system.<sup>2</sup> St. Lucie County, Florida adopted form-based zoning so that new development resembles small towns.<sup>3</sup> Form-based codes are helping revitalize downtown districts in Fort Myers, Kendall, Naples, West Palm Beach, and Sarasota.<sup>4</sup> Form-based zoning provides a means for local governments to comply with the Florida Growth Management Act's mandates to discourage sprawl and incorporate energy efficient land use patterns.<sup>5</sup>

This article will review New Urbanism's principles, disadvantages of conventional zoning codes, historical precedents for

1. CHRISTOPHER B. LEINBERGER, *THE OPTION OF URBANISM: INVESTING IN A NEW AMERICAN DREAM* 151 (2009) (conventional zoning codes "generally outlaw mixed use development, mandate setbacks from the property lines, require huge amounts of parking, put height limits on construction, and set many other requirements that practically allow only driveable sub-urban development."); *City of Cape Canaveral v. Mosher*, 467 So. 2d 468, 470 n.4 (Fla. 5th DCA 1985) (Coward, J., concurring specially) ("the better practice is to restrict each different use and each different intensity to its own zone . . .").

2. ABOUT THE MIAMI 21 ZONING CODE, [http://www.miami21.org/zoning\\_code.asp](http://www.miami21.org/zoning_code.asp) (last visited Feb. 18, 2011).

3. DANIEL G. PAROLEK, KAREN PAROLEK & PAUL C. CRAWFORD, *FORM-BASED CODES: A GUIDE FOR PLANNERS, URBAN DESIGNERS, MUNICIPALITIES, AND DEVELOPERS* 280 (2008); *See also* ST. LUCIE COUNTY, FLA., *LAND DEVELOPMENT CODE*, ch. 4, §§ 4.04.00-.01 (2010), available at [http://library4.municode.com/default-now/home.htm?infobase=14641&doc\\_action=whatsnew](http://library4.municode.com/default-now/home.htm?infobase=14641&doc_action=whatsnew) (last visited Feb. 18, 2011).

4. *See SMARTCODE COMPLETE*, <http://www.smartcodecomplete.com/learn/links.html> (last visited Feb. 18, 2011) (listing local governments that have adopted or are in the process of adopting a form-based code). Over two dozen local governments in the United States have adopted form-based codes. Orlando and Winter Springs, Florida have also adopted form-based codes. *See* ORLANDO, FLA., *BALDWIN PARK PD ORDINANCE* (1998), available at [http://www.cityoforlando.net/planning/cityplanning/bp\\_regplan.htm](http://www.cityoforlando.net/planning/cityplanning/bp_regplan.htm); WINTER SPRINGS, FLA., *TOWN CTR. DIST. CODE* (1998), available at <http://www.winterspringsfl.org/EN/web/find/codes/DocsFormsPubs/43915/towncentercode.htm>.

5. *See* The Community Renewal Act, ch. 2009-96, § 13, 2009 Laws of Fla. (exempting "Dense Urban Living Areas" from State transportation concurrency requirements and proposing a "mobility fee to replace the existing transportation concurrency system. The fee should "promote compact, mixed-use, and energy-efficient development."); *See also* STATE OF FLA DEPT OF COMTY. AFFAIRS, *ENERGY EFFICIENT LAND USE, ENERGY CONSERVATION, AND REDUCTION OF GREENHOUSE GASES—HOUSE BILL 697*, <http://www.dca.state.fl.us/fdcp/dcp/EnergyGHG/index.cfm> (last visited Feb. 18, 2011) (providing a summary of the 2008 mandate to incorporate energy efficient land use patterns in comprehensive plans).

form-based systems, how form-based zoning operates, legal bases for its adoption, and arguments for thwarting potential legal challenges. The justifications for form-based zoning include: improved aesthetics, better public health and safety, more efficient traffic management, lower government expenditures, economic benefits, and environmental protection. When form-based zoning adheres to New Urbanism's principles, the codes reduce dependence on cars, disperse traffic, and replace strip shopping centers with Main Streets. The aesthetic predictability of development, regardless of use, assures compatibility between adjacent building forms, which protects the property rights of nearby residents.

Inordinate burden claims under Florida's Bert Harris Private Property Rights Protection Act may pose the most serious legal challenges to application of a form-based code.<sup>6</sup> However, by deregulating zoning use classifications, onerous parking requirements, and density constraints, form-based codes give landowners additional rights and flexibility. Damage claims under the Bert Harris Act must prove decreased market value. However, because walkable development is scarce, form-based zoning typically results in increased property values. When a property owner claims otherwise (such as due to new height limitations), the Bert Harris Act requires compatibility between the proposed development and existing, adjacent land uses. This constraint reduces the risk of unreasonable judicial results.

## II. PRINCIPLES OF NEW URBANISM

New Urbanism has grown out of widespread dissatisfaction with suburban sprawl. The automobile distorted centuries-old development patterns. Garages dominate the fronts of houses.<sup>7</sup> Subdivisions spread aimlessly into rural areas with traffic forced to use collector and arterial roadways. The arterials provide the only access to strip shopping centers, office parks, and schools, with none planned or integrated into efficient multi-use development. This makes traffic congestion inevitable.<sup>8</sup>

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6. FLA. STAT. § 70.001(2) (2010); discussed *infra* section VII.B.

7. See JAMES HOWARD KUNTLER, *THE GEOGRAPHY OF NOWHERE: THE RISE AND DECLINE OF AMERICA'S MAN-MADE LANDSCAPE* 129 (1993) ("As a matter of design, the garage in front of the house is a disaster . . . [W]hen you consider that every house on the street has a similar gaping blank façade, you end up with a degraded street as well as a degraded architecture.").

8. ELLEN DUNHAM-JONES & JUNE WILLIAMSON, *RETROFITTING SUBURBIA: URBAN DESIGN SOLUTIONS FOR REDESIGNING SUBURBS* 82 (2009) ("So how does a high-speed suburban arterial become a clogged commercial strip? It usually begins with the transportation engineers laying out what they consider to be a rural road. . . . The assumption is that rural

Conventional zoning codes separate uses stringently, placing everyday needs beyond reasonable or safe walking distance and making mass transit less practical. Arterial roads, engineered with the width and design speeds of interstate highways, discourage walking and bicycling. High travel speeds contribute to tens of thousands of driver, passenger, and pedestrian deaths annually.<sup>9</sup> Conventional zoning codes *create* traffic by forcing exclusive dependence on cars for commuting to work, school, dining, entertainment, groceries, and other daily needs. Those who cannot drive—children, seniors, and the disabled—find themselves trapped in subdivisions.

Sprawl development often fails aesthetically. Gigantic signs directed to high-speed traffic dominate commercial roadways.<sup>10</sup> Set-back lines encourage developers to place massive, often half-empty parking lots alongside the roads, creating an auto-centric landscape without the architectural definition of adjacent buildings.<sup>11</sup> This visually-chaotic and unappealing development pattern, whether in Orlando, Phoenix, or Cincinnati, has no sense of place or uniqueness.<sup>12</sup>

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roads between urban centers should be designed to maximize traffic flow, so speeds are high and regulations limit intersection intervals and curb cuts. Walkability is not a factor . . . . However, the new road's access to cheap land builds development pressures and the prospect of tax revenues. These in turn prompt local governments to grant commercial and subdivision rezoning requests . . . . Designed for through traffic and mobility but zoned for uses requiring access, it no longer functions well for either.”)

9. In some years, more than 40,000 people die in traffic accidents in the United States. See NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., FATALITY ANALYSIS REPORTING SYSTEM ENCYCLOPEDIA (2010), available at <http://www-fars.nhtsa.dot.gov/Main/index.aspx>; See also MICHELLE ERNST & LILLY SHOUP, SURFACE TRANSPORTATION POLICY PARTNERSHIP, DANGEROUS BY DESIGN: SOLVING THE PROBLEM OF PREVENTABLE PEDESTRIAN DEATHS (AND MAKING GREAT NEIGHBORHOODS) 8-9 (2009) (ranking Orlando-Kissimmee, Tampa-St. Petersburg, Miami-Ft. Lauderdale-Pompano Beach, and Jacksonville the nation's most dangerous metropolitan areas for pedestrians in 2007-2008), available at [http://t4america.org/docs/dangerouslybydesign/dangerous\\_by\\_design.pdf](http://t4america.org/docs/dangerouslybydesign/dangerous_by_design.pdf).

10. STEVEN A. MOUZON, THE ORIGINAL GREEN: UNLOCKING THE MYSTERY OF TRUE SUSTAINABILITY 131 (2010) (“So is there any shadow of a doubt why poor Waffle House has such ugly buildings? Of course not! They’ve completely blown their budget on the sign and the parking lot!”).

11. See KUNSTLER, *supra* note 7, at 131 (“The road is now like television, violent and tawdry. The landscape it runs through is littered with cartoon buildings and commercial messages. We whiz by them at fifty-five miles an hour and forget them, because one convenience store looks like the next. . . . There is little sense of having arrived anywhere, because everyplace looks like noplac[e] [sic] in particular.”).

12. However, Cincinnati councilwoman and former mayor Roxanne Qualls is leading an effort to adopt a form-based code in Cincinnati. Laura Baverman, *New Zoning Method Could Rewrite Local Development*, BUS. COURIER, Sept. 26, 2008, <http://cincinnati.bizjournals.com/cincinnati/stories/2008/09/29/story11.html>; See also Randy A. Simes, *Cincinnati's Form-Based Code Effort to Take City Leaders Back to Nashville*, SOAPBOX CINCINNATI (Feb. 10, 2009), <http://www.soapboxmedia.com/devnews/fbc0210.aspx> (reporting that the city council approved \$50,000 to advance form-based codes). The official website on Cincinnati's form-based codes effort is at <http://www.cincycharacter.com/> (last visited Feb. 18, 2011). Phoenix, too, is developing a form-based code, but limited to its down-

The transformation of Main Streets into commercial arterials, like in Apopka, Florida, destroys many of the attributes and charm one finds in historic business districts that preserved a pedestrian orientation, like St. Augustine, Mt. Dora, Key West, Naples, Palm Beach, and Winter Park. Land planners, therefore, are looking to historic examples to guide future development, paying close attention to roadway design, the mixing of uses, and reasonable densities sufficient to create aesthetically-pleasing and economically sustainable communities. Seaside, in Florida's Panhandle, and Celebration, near Disney World, pioneered New Urbanism. More than three hundred fifty New Urbanist projects throughout the United States followed, with more than forty in Florida alone.<sup>13</sup>

New Urbanism's guiding principle is to provide the pedestrian with an attractive and safe environment.<sup>14</sup> To encourage pedestrian travel, New Urbanism mixes and locates residential, office, and commercial uses within reasonable walking distances. Streets with narrow lanes, lined with shade trees, and with on-street parking, reduce traffic speeds. Ample parks and open space compensate for smaller front yards. Instead of cul-de-sacs, streets lay-out on informal grids, which disperse traffic and lessen the cost of installing sewer lines and other infrastructure. Buildings hide parking lots. The technique of hiding garages in rear alleys makes homes appear inhabited by people, instead of cars. Apartments over businesses provide more opportunities for affordable housing and add people, vibrancy, and customers to business districts. Conventional zoning codes, however, either disallow or discourage New Urbanist development patterns.

### III. DISADVANTAGES OF CONVENTIONAL ZONING CODES

The complexity and length of conventional zoning codes make them difficult to understand and implement. The Orange County, Florida, Zoning Code, for example, spans over three hundred total pages, including ninety pages of Subdivision Regulations.<sup>15</sup> Only

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town. See *Downtown Phoenix Urban Form Project: Project Description and Scope*, CITY OF PHOENIX, <http://phoenix.gov/urbanformproject/abtproj.html> (last updated Dec. 5, 2008).

13. For a listing of neo-traditional neighborhoods, see *TND Neighborhoods*, THE TOWN PAPER, <http://www.tndtownpaper.com/neighborhoods.htm> (last visited Feb. 18, 2011), but note that not every project necessarily contains all elements of New Urbanism or employs a form-based code.

14. PETER CALTHORPE, *THE NEXT AMERICAN METROPOLIS: ECOLOGY, COMMUNITY, AND THE AMERICAN DREAM* 17 (1993) ("At the core of this alternative, philosophically and practically, is the pedestrian. Pedestrians are the catalyst which makes the essential qualities of communities meaningful.")

15. See ORANGE CNTY., FLA., CODE OF ORDINANCES ch. 9, 34, 38 (2010). The zoning code includes disconnected chapters governing: Architectural Standards and Guidelines for Commercial Buildings, Exterior Lighting Standards, Landscaping Buffering and Open

those who study and work with such complex provisions—local government staff, as well as private sector land planners, land use attorneys, and traffic and civil engineers—can hope to grasp the details, and not everyone comprehends the overall impact on larger scale planning.

Andres Duany and Elizabeth Plater-Zyberk, who planned Seaside and sparked the New Urbanism movement, criticize conventional zoning ordinances because “[t]hey do not emanate from any physical vision. They have no images, no diagrams, no recommended models . . . . They are not imagining a place that they admire, or buildings that they hope to emulate.”<sup>16</sup> Instead of focusing on desired form, conventional codes emphasize “permitted use” and numbers, such as floor area ratios and dwelling units per acre, which provide little assurance of the physical outcome.

In Florida, the local governing body normally does not regulate the physical form of development when considering whether to amend the comprehensive land use plan.<sup>17</sup> The absence of an intended physical outcome causes considerable angst among nearby residents. After amendment of the comprehensive plan, the analysis shifts to the proposed zoning’s consistency with the new land use (usually a foregone conclusion) and consistency and compatibility with adjacent areas’ development and zoning.<sup>18</sup> The latter analysis, however, normally evaluates compatibility between uses (low density residential next to low density residential, commercial next to commercial or office on high speed roads, and block walls separating different uses) rather than compatibility between building forms and the appropriate benefits of mixing uses.<sup>19</sup> The opportunity for a local government to require an improved physical form dissipates.<sup>20</sup>

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Space, Planning and Development, and Signs. Orange County staff hopes to replace these disjointed provisions with a Unified Land Development Code, intended as a hybrid ordinance with form-based provisions governing areas intended for development based on urbanism.

16. ANDRES DUANY ET AL., *SUBURBAN NATION: THE RISE OF SPRAWL AND THE DECLINE OF THE AMERICAN DREAM* 19 (2000).

17. PETER CALTHORPE & WILLIAM FULTON, *THE REGIONAL CITY* 186 (2001) (Florida’s Growth Management Act “did not directly address the physical form of metropolitan growth—a deficiency that became all too apparent as sprawl became more important in the 1990s.”).

18. *See, e.g., Dade Cnty. v. Inversiones Rafamar, S.A.*, 360 So. 2d 1130, 1132 (Fla. 3d DCA 1978).

19. In contrast, form-based codes de-emphasize use segregation. *See Peter Katz, Eight Advantages of Form-Based Codes*, FORM-BASED CODES INST., [http://www.tampagov.net/dept\\_land\\_development/files/Eight\\_Advantages\\_to\\_Form.pdf](http://www.tampagov.net/dept_land_development/files/Eight_Advantages_to_Form.pdf) (last visited Feb. 18, 2011); *See also Definition of a Form-Based Code*, FORM-BASED CODES INSTITUTE (Feb. 17, 2009), <http://www.formbasedcodes.org/what-are-form-based-codes>.

20. As amended in 2009, the Growth Management Act now allows simultaneous consideration of Comprehensive Plan and zoning change applications. FLA. STAT. § 163.3184(3)(e) (2010) (“At the request of an applicant, a local government shall consider an



A big-box commercial building with a massive parking lot in front is incompatible with a residential neighborhood. Conventional codes rightly separate them. However, a more traditional, mixed-use street achieves compatibility between myriad buildings of similar size, regardless of whether they house apartments, stores, or offices. Most jurisdictions, however, have made Main Street illegal. As Duany, Plater-Zyberk, and Jeff Speck explain:

The problem is that one cannot easily build Charleston anymore, because it is against the law. Similarly, Boston's Beacon Hill, Nantucket, Santa Fe, Carmel—all of these well-known places, many of which have become tourist destinations, exist in direct violation of current zoning ordinances. Even the classic American main street, with its mixed-use buildings right up against the sidewalk, is now illegal in most municipalities. Somewhere along the way, through a series of small and well-intentioned steps, traditional towns became a crime in America.<sup>21</sup>

Most conventional codes require variances or a cumbersome and time-consuming Planned Development zoning process to build traditional neighborhoods. The additional time adds to a developer's financing burden. Developers typically find drive-only sprawl development—readily allowed—faster, easier, and ostensibly cheaper than walkable development. Bankers, investors, and land use attorneys reinforce this conclusion, perpetuating drive-only sprawl despite market data showing considerable unmet demand for walkable development.<sup>22</sup>

Setback laws and onerous parking requirements suburbanize and degrade the urban environment in and near city cores.<sup>23</sup> Parking requirements that never existed before World War II often make development of small businesses unaffordable and prevent

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application for zoning changes that would be required to properly enact the provisions of any proposed [comprehensive] plan amendment transmitted pursuant to this subsection. Zoning changes approved by the local government are contingent upon the comprehensive plan or plan amendment transmitted becoming effective.”)

21. DUANY ET AL., *supra* note 16, at xi; *See also* Chad D. Emerson, *Making Main Street Legal Again: The SmartCode Solution to Sprawl*, 71 MO. L. REV. 637, 637 (2006); Andres Duany & Emily Talen, *Making the Good Easy: The Smart Code Alternative*, 29 FORDHAM URB. L.J. 1445, 1445 (2002).

22. *See* LEINBERGER, *supra* note 1, at 172.

23. *See* JAMES H. KUNSTLER, *HOME FROM NOWHERE: REMAKING OUR EVERYDAY WORLD FOR THE TWENTY-FIRST CENTURY* 91-94 (1998) (using example of the suburban strip grocery store that replaced the architecturally magnificent Grand Union Hotel, degrading Saratoga, New York's historic business district).

revitalization of old urban commercial areas.<sup>24</sup> The properties remain eyesores, abandoned and in disrepair.

One observer charged, “The congested, fragmented, unsatisfying suburbs and the disintegrating urban centers of today are not merely products of laissez-faire or the inevitable result of mindless greed. They are thoroughly planned to be as they are: the direct result of zoning and subdivision ordinances zealously administered by planning departments.”<sup>25</sup> Drive-only sprawl is, in fact, extremely planned, but poorly conceived as an ideal and worse as an outcome. New Urbanists seek to transform existing zoning ordinances to correct planning missteps going back decades.

#### IV. PRECEDENTS FOR FORM-BASED CODES

The United States has a long history of mandated urban design. In 1683, William Penn decreed Philadelphia’s city design—four quadrants of gridded, tree-lined streets, public squares, and a commercial center at a harbor on the Delaware River.<sup>26</sup> John Ogelthorpe’s plan in 1770 of blocks, public squares, and uniform-sized lots shaped quaint development in Savannah, Georgia.<sup>27</sup> Pierre L’Enfant planned Washington, D.C.’s broad avenues so that important government buildings would sit at the end of vistas.<sup>28</sup> During the 1700 and 1800s, few municipalities regulated building form.<sup>29</sup> However, builders of numerous small towns used “pattern books” with three-dimensional images to achieve desired appearances.<sup>30</sup>

Walton County, in Florida’s Panhandle, went through the

24. See DONALD C. SHOUP, THE HIGH COST OF FREE PARKING 154-56 (2005); ENVTL. PROT. AGENCY, EPA 231-K-09-003, ESSENTIAL SMART GROWTH FIXES FOR URBAN AND SUBURBAN ZONING CODES 14 (2009), available at [http://www.epa.gov/smartgrowth/pdf/2009\\_essential-fixes.pdf](http://www.epa.gov/smartgrowth/pdf/2009_essential-fixes.pdf) (“In many communities, the effect of conventional parking requirements is to make redevelopment of smaller parcels in older, mature areas infeasible . . .”); Donald Shoup & Vinit Muhkija, *Quantity versus Quality in Off-Street Parking Requirements*, 72 J. AM. PLAN. ASS’N 296, 296 (2006) (removing minimum parking requirements in urban areas encourages revitalization).

25. William Lennertz, *The Codes*, in TOWNS & TOWN-MAKING PRINCIPLES 102 (Alex Krieger & William Lennertz eds., 1991).

26. *Philadelphia’s Zoning History*, PHILADELPHIA ZONING CODE COMMISSION, <http://www.zoningmatters.org/issues/history> (last visited Feb. 18, 2011); BILL HARRIS, PHILADELPHIA: A PICTURE MEMORY 7 (1990).

27. Beth Reiter, *Savannah City Plan*, THE NEW GEORGIA ENCYCLOPEDIA (Jan. 23, 2004), <http://www.georgiaencyclopedia.org/nge/Article.jsp?id=h-2547>.

28. See LEWIS MUMFORD, THE CITY IN HISTORY 404 (1961); See also PIERRE CHARLES L’ENFANT, *PLAN FOR WASHINGTON, D.C.*, THE CODES PROJECT, <http://codesproject.asu.edu/node/15> (last visited Feb. 18, 2011).

29. Emily Talen, *Design by the Rules: The Historical Underpinnings of Form-Based Codes*, 75 J. AM. PLAN. ASS’N 144, 153 (2009).

30. See, e.g., MICHAEL LASSELL, CELEBRATION: THE STORY OF A TOWN 44-45 (2004).

sprawl-dominated decades after World War II without a building code or building officials. Developer Robert Davis and planners Duany and Plater-Zyberk used this freedom to create the first form-based development standards for a new, neo-traditional town: Seaside.<sup>31</sup> The standards fit on a single page.<sup>32</sup>

Architects and planners hired by Disney studied old pattern books and developed their own to govern building elevations, landscaping, roofing, fencing, mass, and setbacks for another new town: Celebration, Florida.<sup>33</sup> They achieved a variety of building structures within a pre-World War II architectural milieu.<sup>34</sup> Celebration and Seaside demonstrated that developers could still create meaningful and desirable places, but their laudable results required deed restrictions or other private means.<sup>35</sup>

The City of Orlando, however, took a revolutionary approach. In 1998, Orlando adopted a form-based code to govern redevelopment of its former Naval Base into the mixed-use neighborhood of Baldwin Park.<sup>36</sup> The form-based code allowed flexibility for locating apartments, townhomes, and single family homes as market conditions changed.<sup>37</sup>

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31. Elizabeth Plater-Zyberk, *Foreword* to PAROLEK, ET AL., *supra* note 3, at ix, xi; KUNSTLER, *supra* note 7, at 256.

32. See Lennertz, *supra* note 25, at 97; SEASIDE: MAKING A TOWN IN AMERICA 99-104 (David Mahoney & Keller Easterling, eds. 1991) (The *Zoning Code—Town of Seaside* consists of building types for eight zones, with different combinations of retail, residential, office, and lodging uses. For each zone, the code establishes standards for yards, front porches, out-buildings, parking, and building height.); SEASIDE, FLA., SEASIDE URBAN CODE, available at [http://codesproject.asu.edu/sites/default/files/code\\_pdfs/Seaside-Urban-Code.pdf](http://codesproject.asu.edu/sites/default/files/code_pdfs/Seaside-Urban-Code.pdf). Developer Robert Davis says they “reverse engineered” small town features. THE SEASIDE STORY: 30 YEARS OF NEW URBANISM, <http://seasidedocumentary.com/> (last visited Feb. 18, 2011).

33. LASSELL, *supra*, note 30, at 45 (“In order to prepare the Pattern Book, we studied pattern books from the eighteenth and nineteenth centuries, visited and analyzed a number of small towns in the Southeastern United States, and applied the lessons learned to current development practices.”).

34. *Id.* at 40 (“Everything in Celebration would look as if it could have been built (at least in the imagination) before World War II and the subsequent upending of America’s long town-planning tradition.”). Many often describe Celebration as “neo-traditional” development. New Urbanism is far broader than neo-traditionalism, accommodating myriad architectural styles. See also THE DISNEY COMPANY, CELEBRATION PATTERN BOOK A-7, (URBAN DESIGN ASSOCIATES) (1997), portions available at <http://codesproject.asu.edu/node/67>. (The *Celebration Pattern Book* is far more detailed and intrusive in mandating architectural elements than *SmartCode*, discussed *infra* note 38.).

35. See Robert J. Sitkowski & Brian W. Ohm, *Form-Based Land Development Regulations*, 38 URB. LAW. 163, 163 (2006) (“The form-based approach to new urbanist land use regulation has, up until recently, been applied mainly in private-covenanted regimes . . .”) (footnote omitted).

36. ORLANDO, FLA., BALDWIN PARK PD ORDINANCE (1998), available at [http://www.cityoforlando.net/planning/cityplanning/bp\\_regplan.htm](http://www.cityoforlando.net/planning/cityplanning/bp_regplan.htm).

37. Interview with Jim Sellen, AICP, MSCW, Inc. (Apr. 2009).

## V. SMARTCODE: HOW A FORM-BASED CODE OPERATES

Drawing on his experiences with Seaside and projects that followed, Duany co-authored *SmartCode*, a model form-based code at “the intersection of law and design.”<sup>38</sup> The City of Miami is the first major city to comprehensively model its zoning laws from *SmartCode*.<sup>39</sup> The following sections explain how *SmartCode*’s key provisions work.

## A. Community Level Transects

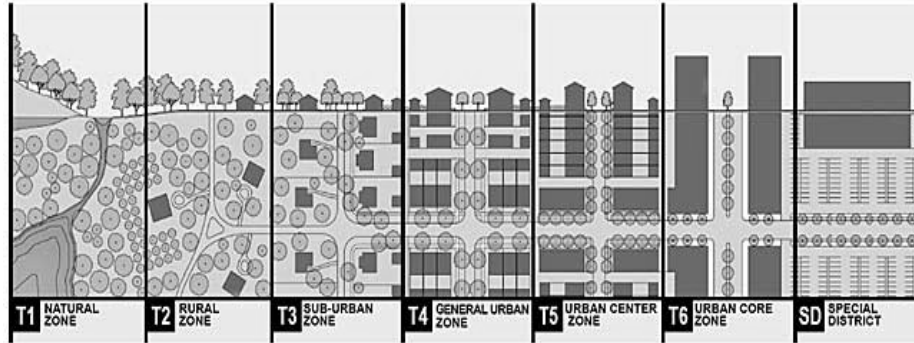
Conventional zoning separates land solely by use, whether agriculture, residential, office, commercial, or industrial. *SmartCode* discards this stiff approach and instead, to create a sense of place, establishes zones by intended environments. *SmartCode* organizes land into six such environments, called “transects.” They are: T-1 Natural Zone; T-2 Rural Zone; T-3 Sub-Urban Zone; T-4 Urban Zone; T-5 Urban Center Zone; and T-6 Urban Core Zone, in addition to Civic Zones and Special Districts.<sup>40</sup> A chart from *SmartCode* best illustrates the continuum, from natural and sparsely populated rural areas to a high-rise downtown business district:

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38. ANDRES DUANY ET AL., SMARTCODE VERSION 9.2 v (2009), available at [http://smartcodecentral.com/smartfilesv9\\_2.html](http://smartcodecentral.com/smartfilesv9_2.html). See also KUNSTLER, *supra* note 7, at 258 (Duany and Plater-Zyberk refined their form-based system when planning Kentlands, a neo-traditional town in Gaithersburg, Maryland).

39. See Charles Rabin, *Pedestrian-friendly Miami 21 Zoning Code Approved*, MIAMI HERALD, Oct. 23, 2009, at B1 (Miami commissioners voted four to one to approve the new form-based code, called *Miami 21*, on October 22, 2009). Plater-Zyberk, Dean of the University of Miami School of Architecture, served as the City’s consultant. Andres Viglucci & Charles Rabin, *Miami 21 Finally Gets Approval of City Commission*, MIAMI HERALD, Sept. 5, 2009, at A1.

40. SMARTCODE, *supra* note 38, at vii (“One of the principles of Transect-based planning is that certain forms and elements belong in certain environments. For example, an apartment building belongs in a more urban setting, a ranch house in a more rural setting. Some types of thoroughfares are urban in character, and some are rural. A deep suburban setback destroys the spatial enclosure of an urban street; it is out of context.”).

Figure 1: “A Typical Rural-Urban Transect, with Transect Zones”<sup>41</sup>

A local government creates a regulating plan, mapping out transect zones.<sup>42</sup> Low density residential subdivisions fall generally into the T3 Sub-Urban Zone. Communities such as Seaside, Celebration, and Baldwin Park fall into the T4 General Urban Zone, which consists of “mixed use but primarily [a] residential urban fabric.”<sup>43</sup> The T5 Urban Center zone would encompass more urbanized areas, with commercial buildings from two to five stories.<sup>44</sup> The T6 Urban Core Zone would include downtown skyscrapers. Finally, accommodating the economics of retail, big box stores and shopping malls belong in Special Districts. *SmartCode* describes the characteristics of each Transect Zone in the following Table:

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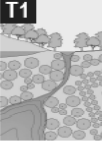


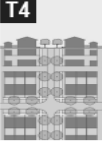
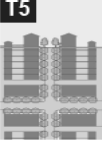
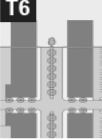
41. SMARTCODE, *supra* note 38, at vii.

42. Bob Sitkowski & Bill Spikowski, *Form-Based Codes*, in DANIEL K. SLONE & DORIS S. GOLDSTEIN, A LEGAL GUIDE TO URBAN AND SUSTAINABLE DEVELOPMENT FOR PLANNERS, DEVELOPERS, & ARCHITECTS 111,115-16 (2008).

43. SMARTCODE, *supra* note 38, at SC27.

44. *Id.* at SC45, Table 15C (defining heights under “Building Configuration”).

Table 1: Transect Zone Descriptions<sup>45</sup>

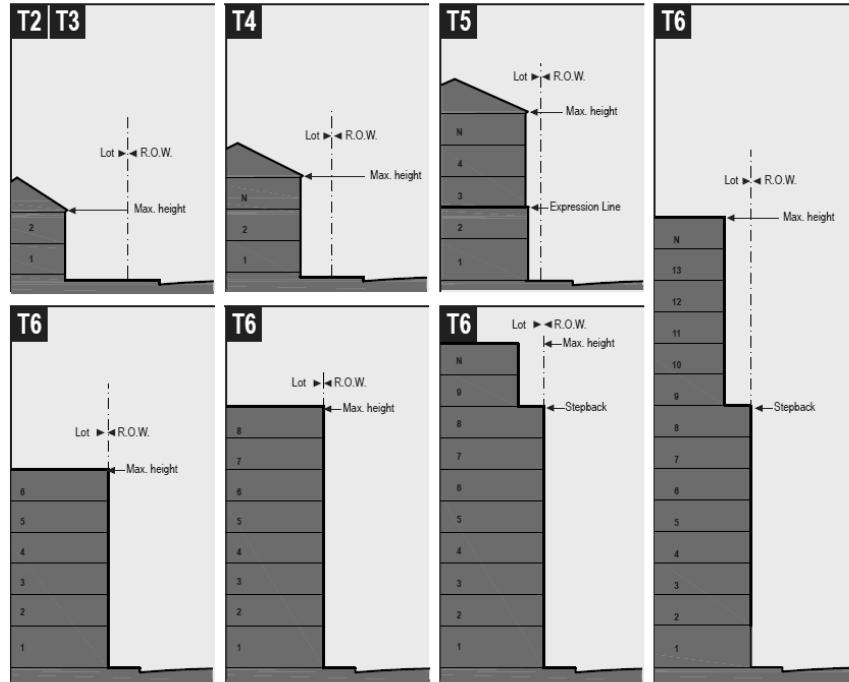
	<p><b>T-1 NATURAL</b> T-1 Natural Zone consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.</p>	<p><b>General Character:</b> Natural landscape with some agricultural use <b>Building Placement:</b> Not applicable <b>Frontage Types:</b> Not applicable <b>Typical Building Height:</b> Not applicable <b>Type of Civic Space:</b> Parks, Greenways</p>
	<p><b>T-2 RURAL</b> T-2 Rural Zone consists of sparsely settled lands in open or cultivated states. These include woodland, agricultural land, grassland, and irrigable desert. Typical buildings are farmhouses, agricultural buildings, cabins, and villas.</p>	<p><b>General Character:</b> Primarily agricultural with woodland &amp; wetland and scattered buildings <b>Building Placement:</b> Variable Setbacks <b>Frontage Types:</b> Not applicable <b>Typical Building Height:</b> 1- to 2-Story <b>Type of Civic Space:</b> Parks, Greenways</p>
	<p><b>T-3 SUB-URBAN</b> T-3 Sub-Urban Zone consists of low density residential areas, adjacent to higher zones that some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.</p>	<p><b>General Character:</b> Lawns, and landscaped yards surrounding detached single-family houses; pedestrians occasionally <b>Building Placement:</b> Large and variable front and side yard Setbacks <b>Frontage Types:</b> Porches, fences, naturalistic tree planting <b>Typical Building Height:</b> 1- to 2-Story with some 3-Story <b>Type of Civic Space:</b> Parks, Greenways</p>
	<p><b>T-4 GENERAL URBAN</b> T-4 General Urban Zone consists of a mixed use but primarily residential urban fabric. It may have a wide range of building types: single, sideyard, and rowhouses. Setbacks and landscaping are variable. Streets with curbs and sidewalks define medium-sized blocks.</p>	<p><b>General Character:</b> Mix of Houses, Townhouses &amp; small Apartment buildings, with scattered Commercial activity; balance between landscape and buildings; presence of pedestrians <b>Building Placement:</b> Shallow to medium front and side yard Setbacks <b>Frontage Types:</b> Porches, fences, Dooryards <b>Typical Building Height:</b> 2- to 3-Story with a few taller Mixed Use buildings <b>Type of Civic Space:</b> Squares, Greens</p>
	<p><b>T-5 URBAN CENTER</b> T-5 Urban Center Zone consists of higher density mixed use building that accommodate retail, offices, rowhouses and apartments. It has a tight network of streets, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.</p>	<p><b>General Character:</b> Shops mixed with Townhouses, larger Apartment houses, Offices, workplace, and Civic buildings; predominantly attached buildings; trees within the public right-of-way; substantial pedestrian activity <b>Building Placement:</b> Shallow Setbacks or none; buildings oriented to street defining a street wall <b>Frontage Types:</b> Stoops, Shopfronts, Galleries <b>Typical Building Height:</b> 2- to 3-Story with some variation <b>Type of Civic Space:</b> Parks, Plazas and Squares, median landscaping</p>
	<p><b>T-6 URBAN CORE</b> T-6 Urban Core Zone consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; streets have steady street tree planting and buildings are set close to wide sidewalks. Typically only large towns and cities have an Urban Core Zone.</p>	<p><b>General Character:</b> Medium to high-Density Mixed Use buildings, entertainment, Civic and cultural uses. Attached buildings forming a continuous street wall; trees within the public right-of-way; highest pedestrian and transit activity <b>Building Placement:</b> Shallow Setbacks or none; buildings oriented to street, defining a street wall <b>Frontage Types:</b> Stoops, Dooryards, Forecourts, Shopfronts, Galleries, and Arcades <b>Typical Building Height:</b> 4-plus Story with a few shorter buildings <b>Type of Civic Space:</b> Parks, Plazas and Squares; median landscaping</p>

The classification of land into transects ensures the correct building types and roads fit their environment. A six story building, for example, does not fit visually in a T3 Sub-urban Zone. *SmartCode* uses graphics to limit building heights by transect:<sup>46</sup>

45. *Id.* at SC 27.

46. *Id.* at SC 37.

Figure 2:<sup>47</sup>



Officials may “calibrate” heights to local conditions and preferences. For example, Miami’s T6 Urban Core Transect has sub-transects for twenty-four, thirty-five, sixty, and eighty story buildings.<sup>48</sup>

*SmartCode* regulates the relationship between buildings, streets, and pedestrians. Large front yards in the T3 Sub-urban Zone do not belong in the T4 General Urban Zone. Graphics show “build-to” lines moving closer to the street in each succeeding, more intense transect:

47. *Id.*

48. MIAMI, FLA., MIAMI 21 ZONING CODE, art. 4, table 2, IV.4-IV.5 (2010), available at <http://miami21.org/pdfs/finaldocumentsmay2010/fulldocument-may2010.pdf> (Miami 21 calls the additional transects “T6-24,” “T6-36,” “T6-60,” and “T6-80”). However, skyscrapers stretch, if not deviate from the New Urbanist ideal. LÉON KRIER, THE ARCHITECTURE OF COMMUNITY 99, 294 (2009) (criticizing skyscrapers as vertical “mono-functional overexpansion.”).

Table 2: Private Frontages<sup>49</sup>

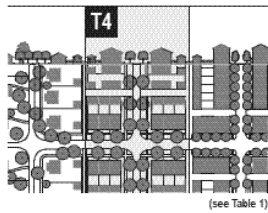
	SECTION	PLAN
	LOT PRIVATE FRONTAGE   R.O.W. PUBLIC FRONTAGE	LOT PRIVATE FRONTAGE   R.O.W. PUBLIC FRONTAGE
<p><b>a. Common Yard:</b> a planted Frontage wherein the Facade is set back substantially from the Frontage Line. The front yard created remains unfenced and is visually continuous with adjacent yards, supporting a common landscape. The deep Setback provides a buffer from the higher speed Thoroughfares.</p>		 T2 T3
<p><b>b. Porch &amp; Fence:</b> a planted Frontage wherein the Facade is set back from the Frontage Line with an attached porch permitted to Encroach. A fence at the Frontage Line maintains street spatial definition. Porches shall be no less than 8 feet deep.</p>		 T3 T4
<p><b>c. Terrace or Lightwell:</b> a Frontage wherein the Facade is set back from the Frontage line by an elevated terrace or a sunken Lightwell. This type buffers Residential use from urban Sidewalks and removes the private yard from public Encroachment. Terraces are suitable for conversion to outdoor cafes. Syn: Dooryard.</p>		 T4 T5
<p><b>d. Forecourt:</b> a Frontage wherein a portion of the Facade is close to the Frontage Line and the central portion is set back. The Forecourt created is suitable for vehicular drop-offs. This type should be allocated in conjunction with other Frontage types. Large trees within the Forecourts may overhang the Sidewalks.</p>		 T4 T5 T6
<p><b>e. Stoop:</b> a Frontage wherein the Facade is aligned close to the Frontage Line with the first Story elevated from the Sidewalk sufficiently to secure privacy for the windows. The entrance is usually an exterior stair and landing. This type is recommended for ground-floor Residential use.</p>		 T4 T5 T6
<p><b>f. Shopfront:</b> a Frontage wherein the Facade is aligned close to the Frontage Line with the building entrance at Sidewalk grade. This type is conventional for Retail use. It has a substantial glazing on the Sidewalk level and an awning that may overlap the Sidewalk to within 2 feet of the Curb. Syn: Retail Frontage.</p>		 T4 T5 T6
<p><b>g. Gallery:</b> a Frontage wherein the Facade is aligned close to the Frontage line with an attached cantilevered shed or a lightweight colonnade overlapping the Sidewalk. This type is conventional for Retail use. The Gallery shall be no less than 10 feet wide and should overlap the Sidewalk to within 2 feet of the Curb.</p>		 T4 T5 T6
<p><b>h. Arcade:</b> a colonnade supporting habitable space that overlaps the Sidewalk, while the Facade at Sidewalk level remains at or behind the Frontage Line. This type is conventional for Retail use. The Arcade shall be no less than 12 feet wide and should overlap the Sidewalk to within 2 feet of the Curb. See Table 8.</p>		 T5 T6

The following matrix/graphic allows a closer examination of the T4 General Urban Zone:

49. SMARTCODE, *supra* note 38, at SC36.



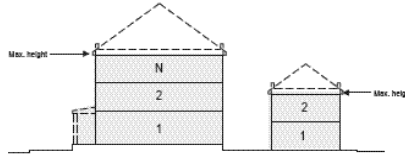
Table 3<sup>50</sup>



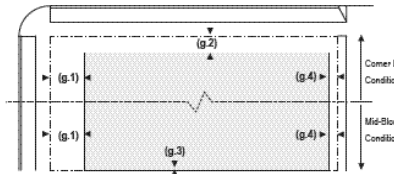
I. BUILDING FUNCTION (see Table 10 & Table 12)	
Residential	limited use
Lodging	limited use
Office	limited use
Retail	limited use
k. BUILDING CONFIGURATION (see Table 8)	
Principal Building	3 stories max, 2 min
Outbuilding	2 stories max.
f. LOT OCCUPATION (see Table 14f)	
Lot Width	18 ft min 96 ft max
Lot Coverage	70% max
i. BUILDING DISPOSITION (see Table 9)	
Edgeyard	permitted
Sideyard	permitted
Rearyard	permitted
Courtyard	not permitted
g. SETBACKS - PRINCIPAL BUILDING (see Table 14g)	
(g.1) Front Setback Principal	6 ft. min. 18 ft. max.
(g.2) Front Setback Secondary	6 ft. min. 18 ft. max.
(g.3) Side Setback	0 ft. min.
(g.4) Rear Setback	3 ft. min.*
Frontage Buildout	60% min at setback
h. SETBACKS - OUTBUILDING (see Table 14h)	
(h.1) Front Setback	20 ft. min. + bldg. setback
(h.2) Side Setback	0 ft. min. or 3 ft. at corner
(h.3) Rear Setback	3 ft. min.
j. PRIVATE FRONTAGES (see Table 7)	
Common Lawn	not permitted
Porch & Fence	permitted
Terrace or L.C.	permitted
Forecourt	permitted
Scoop	permitted
Shopfront & Awning	permitted
Gallery	permitted
Arcade	not permitted
Refer to Summary Table 14	
PARKING PROVISIONS	
See Table 10 & Table 11	

\*or 15 ft. from center line of alley  
 \*N stands for any Stories above those shown, up to the maximum. Refer to metrics for exact minimums and maximums

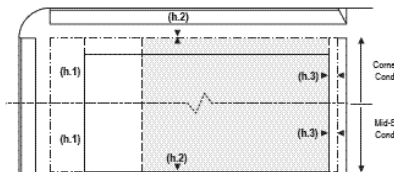
**BUILDING CONFIGURATION**  
 1. Building height shall be measured in number of Stories, excluding Attics and raised basements.  
 2. Stories may not exceed 14 feet in height from finished floor to finished ceiling, except for a first floor Commercial function which must be a minimum of 11 ft with a maximum of 25 ft.  
 3. Height shall be measured to the eave or roof deck as specified on Table 6.



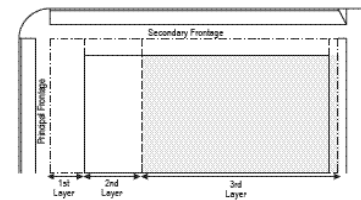
**SETBACKS - PRINCIPAL BLDG**  
 1. The Facades and Elevations of Principal Buildings shall be distanced from the Lot lines as shown.  
 2. Facades shall be built along the Principal Frontage to the minimum specified width in the table.



**SETBACKS - OUTBUILDING**  
 1. The Elevations of the Outbuilding shall be distanced from the Lot lines as shown.



**PARKING PLACEMENT**  
 1. Uncovered parking spaces may be provided within the third Layer as shown in the diagram (see Table 17d).  
 2. Covered parking shall be provided within the third Layer as shown in the diagram (see Table 17d).  
 3. Trash containers shall be stored within the third Layer.



The T4 General Urban Zone requires construction of buildings within a zone of six to eighteen feet from the front lot line. This allows room for porches, fences, stoops, shop fronts, and awnings. Building heights range from two to three stories, in contrast to the mostly single-story strip shopping centers of drive-only sprawl. *SmartCode* replaces the convoluted floor area ratio, found in conventional codes, with a simple lot coverage requirement—70% in

50. *Id.* at SC44.

the T4 General Urban Zone.<sup>51</sup> In order to bring buildings closer to where people would walk, *SmartCode* confines off-street parking to the property's rear, called the "Third Layer."<sup>52</sup> These elements focus on creating an extremely desirable built environment for pedestrians.

### *B. Parking, Driveways, and Thoroughfares*

Sprawl development often eliminates on-street parking to increase traffic speed and road capacity.<sup>53</sup> New Urbanists favor on-street parking because it offers convenience, it can buffer pedestrians and outdoor café patrons, and it can slow traffic to speeds conducive for pedestrian crossings. *SmartCode*, therefore, counts on-street parking towards meeting parking space requirements.<sup>54</sup> Developers may also purchase or lease parking spaces within walking distance from a "Civic Parking Reserve."<sup>55</sup>

Conventional zoning codes often require an oversized parking lot, a large portion of which remains empty most of the year. *SmartCode* encourages adjacent and nearby businesses, offices, and residences to share parking lots. Combined with on-street parking, this further reduces the size of parking lots, eliminates unnecessary impervious surfaces, and improves aesthetics. *SmartCode* provides the following tables to determine parking requirements:

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51. For comparison, the sprawl-favoring Orange County, Florida Code allows as little as 8% lot coverage in C-1 Retail commercial districts. ORANGE CNTY., FLA., CODE OF ORDINANCES § 38-830 (2010) (based on minimum floor area of 500 feet on a minimum 6,000 square foot lot).

52. SMARTCODE, *supra* note 38, at SC43-46, Table 15A-15D.

53. FLA. DEP'T. OF TRANSP., PLANS AND PREPARATION MANUAL: DESIGN CRITERIA AND PROCESS 2-41 (2003), available at <http://www.pbcgov.com/mpo/library/fdot/pdf/2003PlansandPreparationManual.pdf> ("Parking that adversely impacts capacity or safety is to be eliminated whenever practical."); FLA. DEP'T. OF TRANSP., MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS 3-25 (2007) [hereinafter GREENBOOK], available at <http://www.dot.state.fl.us/rddesign/FloridaGreenbook/Greenbook2007.pdf> ("It can generally be stated that on-street parking decreases through capacity, impedes traffic flow, and increases crash potential.").

54. SMARTCODE, *supra* note 38, at SC23-24. Expansive suburban parking lots offer more convenience to drivers than on-street parking, while offering virtually no convenience to pedestrians. *SmartCode* seeks to balance walking, biking, and driving.

55. *Id.* at SC56. Municipal parking lots would require walks no greater than one-quarter mile. *Id.* (defining "standard pedestrian shed" as having about a quarter mile radius). This arrangement is preferable to parking lots owned and controlled by a single business, which may tow vehicles belonging to those patronizing other businesses.

Table 4: Parking Calculations<sup>56</sup>

REQUIRED PARKING (See Table 10)				SHARED PARKING FACTOR		
	T2 T3	T4	T5 T6	Function	with	Function
RESIDENTIAL	2.0 / dwelling	1.5 / dwelling	1.0 / dwelling	RESIDENTIAL		RESIDENTIAL
LODGING	1.0 / bedroom	1.0 / bedroom	1.0 / bedroom	LODGING		LODGING
OFFICE	3.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.	2.0 / 1000 sq. ft.	OFFICE	1	OFFICE
RETAIL	4.0 / 1000 sq. ft.	4.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.	RETAIL	14	RETAIL
CIVIC	To be determined by Warrant					
OTHER	To be determined by Warrant					

Function	with	Function
RESIDENTIAL		RESIDENTIAL
LODGING		LODGING
OFFICE	1	OFFICE
RETAIL	14	RETAIL

One calculates the actual parking requirement by adding the spaces required by each function, as shown in the chart on the left-hand side, and then dividing the total by the factor indicated where the functions intersect in the matrix on the right-hand side.<sup>57</sup> For example, assume a building in the T4 General Urban Zone has 10,000 square feet of retail and 10,000 square feet of office. Standing alone, the Required Parking matrix would require forty parking spaces for the retail function (four parking spaces per 1,000 square feet) and thirty parking spaces for the office function (three parking spaces per 1,000 square feet), for a total of seventy parking spaces.<sup>58</sup> However, the Shared Parking matrix sets a factor of 1.2.<sup>59</sup> Dividing the seventy parking spaces by 1.2 gives us a quotient of fifty-nine, the effective number of shared parking spaces needed.<sup>60</sup> A typical conventional code, such as that of Orange County, Florida would require over eighty parking spaces for the same square footage of office and retail use, consuming almost a half-acre of land.<sup>61</sup> Compared to a typical conventional code, *SmartCode* would trim the amount of required parking by about one-third.

To address economic concerns in more suburban areas, excess

56. *Id.* at SC39.

57. *Id.* at SC39. According to SmartCode’s annotations, when three building functions would share parking, use the lowest factor to ensure enough parking. SMARTCODE 9.0 & MANUAL SCA76 (on file with author) (available for purchase at <http://newurbannetwork.com/tools/books/smartcode-version-9-and-manual>). The Miami 21 Code requires more parking than SmartCode by “dividing the number of spaces required by the lesser of the two uses by the appropriate factor . . . and adding the result to the greater use parking requirement.” MIAMI, FLA., MIAMI 21 ZONING CODE, Art. 4, Table 5, available at <http://miami21.org/pdfs/finaldocumentsmay2010/fulldocument-may2010.pdf>.

58. SMARTCODE, *supra* note 38, at SC39.

59. *Id.*

60. *Id.*

61. The Orange County Code requires five parking spaces per 1,000 square feet of office use and 3.3 parking spaces for every 1,000 square feet of general business use. *See* ORANGE CNTY., FLA., CODE OF ORDINANCES § 38-1476 (2010). Each regular parking space must measure at least 180 square feet. *Id.* § 38-1479.

parking for special events like Christmas shopping on the Friday after Thanksgiving could occur on nearby land set aside as open space.<sup>62</sup> This solution would lessen the visual impact of half-empty parking lots degrading the built environment during the rest of the year.<sup>63</sup> This would also lessen the costs associated with useless over-development of surface parking lots.

Parking lots behind buildings and in the middle of blocks avoid cluttering the streetscape. The following satellite image shows how apartment and mixed-use commercial buildings create a wall along the streets and hide parking lots in the Baldwin Park town center in Orlando, Florida.

Image 1: Baldwin Park Town Center, Orlando, Florida<sup>64</sup>



62. See CALTHORPE, *supra* note 14, at 112 (“Where possible, overflow parking areas should be developed with a permeable surface.”).

63. National chains, including pharmacies and supermarkets, often demand excessive parking when negotiating leases with land owners and developers; *See e.g., New Store Location Criteria* CVS CAREMARK REALTY, <http://www.cvscaremarkrealty.com/new-location-criteria> (last visited Feb. 18, 2011) (stating that CVS requires seventy-five to eighty parking spaces). Corporations making unreasonable parking demands have not grasped that substantially empty parking lots make their investments appear economically unhealthy. A study conducted for Home Depot showed no correlation between parking demand and the square footage of its stores. The study enabled Home Depot to justify requests for substantial parking reductions, thereby saving construction costs. *See* SHOUP, *supra* note 24, at 34-37, 69 n. 52.

64. Image credit: Google Earth.

Vehicular paths across sidewalks, when too numerous and too wide, reduce a neighborhood's pedestrian orientation. Therefore, when homes have front-loaded garages, *SmartCode* restricts driveway widths to ten feet when meeting the street.<sup>65</sup> Whether front-loaded or accessed through rear alleys, *SmartCode* recesses garages to the property's rear.<sup>66</sup> These requirements call less attention to garages and cars.

*SmartCode* requires thoroughfares for both vehicles and pedestrians "designed in context with the urban form[.]" and engineered to the "desired design speed of the Transect Zone[.]"<sup>67</sup> Streets should define blocks and connect with other streets "wherever possible" to form a network.<sup>68</sup> One desirable exception to connectivity occurs when civic buildings, churches, or other architecturally-significant structures appear at the end of a street vista. *SmartCode* would overrule traffic engineering manuals, disallowing this classic urban design.<sup>69</sup>

### *C. Building Functions and Form*

*SmartCode* diminishes, but does not eliminate the separation of uses by prescribing "building functions" in a simple, one-page matrix:

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65. SMARTCODE, *supra* note 38, at SC24.

66. *Id.*

67. *Id.* at SC12.

68. *Id.*

69. *See id.*; *See also* DUANY, ET AL, *supra* note 16, at 35-36 (arguing that decades of experience do not support the concern that motorists would drive into buildings).

Table 5: Specific Function and Use<sup>70</sup>

	T1	T2	T3	T4	T5	T6	SD
<b>a. RESIDENTIAL</b>							
Mixed Use Block					■	■	
Flex Building				■	■	■	
Apartment Building				■	■	■	
Live/Work Unit			■	■	■	■	□
Row House				■	■		
Duplex House				■	■		
Courtyard House				■	■		
Sideyard House				■	■	■	
Cottage			■	■			
House	■	■	■				
Villa	■						
Accessory Unit	■	■	■	■			
<b>b. LODGING</b>							
Hotel (no room limit)					■	■	□
Inn (up to 12 rooms)		□		■	■	■	
Bed & Breakfast (up to 5 rooms)		□	■	■	■		
S.R.O. hostel			□	□	□	□	□
School Dormitory				■	■	■	■
<b>c. office</b>							
Office Building				■	■	■	□
Live-Work Unit			■	■	■	■	□
<b>d. RETAIL</b>							
Open-Market Building	■	■	■	■	■	■	■
Retail Building				■	■	■	□
Display Gallery				■	■	■	□
Restaurant				■	■	■	□
Kiosk				■	■	■	□
Push Cart					□	□	□
Liquor Selling Establishment					□	□	□
Adult Entertainment						□	□
<b>e. CIVIC</b>							
Bus Shelter			■	■	■	■	■
Convention Center						□	■
Conference Center					□	■	■
Exhibition Center						□	■
Fountain or Public Art	■	■	■	■	■	■	■
Library				■	■	■	■
Live Theater					■	■	■
Movie Theater					■	■	■
Museum					□	■	■
Outdoor Auditorium	□	■		■	■	■	■
Parking Structure					■	■	■
Passenger Terminal					□	□	■
Playground	■	■	■	■	■	■	■
Sports Stadium						□	■
Surface Parking Lot				□	□	□	■
Religious Assembly	■	■	■	■	■	■	■
<b>f. OTHER: AGRICULTURE</b>							
Grain Storage	■	■					□
Livestock Pen	□	□					□
Greenhouse	■	■	□				□
Stable	■	■	□				□
Kennel	■	■	□	□	□	□	□
<b>f. OTHER: AUTOMOTIVE</b>							
Gasoline		□				□	□
Automobile Service							■
Truck Maintenance							■
Drive-Through Facility						□	□
Rest Stop	■	■					□
Roadside Stand	■	■					□
Billboard						□	□
Shopping Center							□
Shopping Mall							□
<b>f. OTHER: CIVIL SUPPORT</b>							
Fire Station			■	■	■	■	■
Police Station				■	■	■	■
Cemetery		■	□	□			■
Funeral Home				■	■	■	■
Hospital						□	□
Medical Clinic				□	■	■	■
<b>f. OTHER: EDUCATION</b>							
College						□	□
High School				□	□	□	■
Trade School					□	□	■
Elementary School			□	■	■	■	■
Other- Childcare Center		■	■	■	■	■	□
<b>f. OTHER: INDUSTRIAL</b>							
Heavy Industrial Facility							■
Light Industrial Facility						□	■
Truck Depot							■
Laboratory Facility						□	■
Water Supply Facility							■
Sewer and Waste Facility							■
Electric Substation	□	□	□	□	□	□	■
Wireless Transmitter	□	□					■
Cremation Facility							■
Warehouse						□	■
Produce Storage							■
Mini-Storage							■

■ BY RIGHT  
□ BY WARRANT

Even the function and use matrix of a city as large and diverse

70. SMARTCODE, *supra* note 38, at SC40.

as Miami fits on a single page.<sup>71</sup>

The Function and Use matrix places big box shopping centers and malls, college campuses, cemeteries, utility plants, industrial facilities, adult entertainment, and vehicle service centers in Special Districts.<sup>72</sup> The matrix allows religious assemblies in all zones except for T1.<sup>73</sup>

In the T3 Sub-urban Zone, residential neighborhoods may have restricted commercial and office uses in buildings of a residential character.<sup>74</sup> A neighborhood clubhouse, built in a form compatible with surrounding homes, can contain a small store for basic groceries, over-the-counter drugs, and personal hygiene products.<sup>75</sup> The clubhouse or another building built to look like a home may contain a small restaurant, seating no more than twenty persons. Office use in a home may occur only on the first floor, encouraging the business owner to live upstairs.<sup>76</sup> This type of mixed use would internally capture and avoid traffic trips on nearby arterial roads.

#### D. Open and Civic Space

*SmartCode* defines “Open Space” as “land intended to remain undeveloped[,]” including “civic space.”<sup>77</sup> To prevent developers from designating undesirable or inaccessible parcels, open space takes the form of parks, squares, greenbelts, plazas, and playgrounds, as follows:

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71. MIAMI, FLA. MIAMI 21 ZONING CODE, art. 4, tbl. 3, IV.6 (2010), available at <http://miami21.org/pdfs/finaldocumentsmay2010/fulldocument-may2010.pdf>. *Contra* ORANGE CNTY., FLA., CODE OF ORDINANCES § 38-77 (2010) (Orange County, Florida’s conventional zoning use matrix spans twenty-four oversized pages measuring 8.5 by sixteen inches).

72. SMARTCODE, *supra* note 38, at SC40 (confining these uses in the matrix to the “SD,” or “Special District” designation).

73. *SmartCode* is consistent with the federal Religious Land Use and Institutionalized Persons Act, which states, in part, that “[n]o government shall impose or implement a land use regulation that—(A) totally excludes religious assemblies from a jurisdiction; or (B) unreasonably limits religious assemblies, institutions, or structures within a jurisdiction.” 42 U.S.C. § 2000cc(b)(3) (2006).


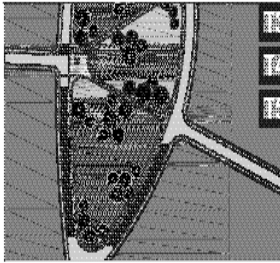
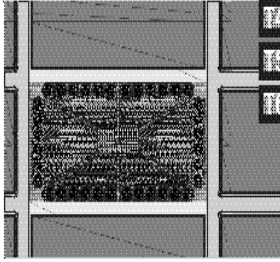
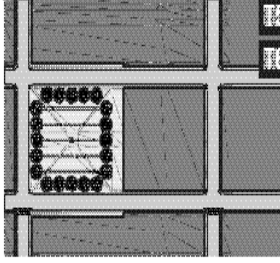

74. *See* SMARTCODE, *supra* note 38, at SC43. Hip and gable roof lines give a residential character to non-residential buildings.

75. *SmartCode* allows a corner store to serve every 300 dwelling units. *Id.* at SC39. However, a corner store off a major road needs at least one thousand households within a five-minute walk for economic sustainability. Robert J. Gibbs, *Neighborhood Retail*, in DOUGLAS FARR, SUSTAINABLE URBANISM: URBAN DESIGN WITH NATURE 139, 140 (2008). Large chain and warehouse stores may have a cost advantage over smaller stores, but neighborhood stores will have a convenience advantage.

76. SMARTCODE, *supra* note 38, at SC39.

77. *Id.* at SC54.

Table 6: Civic Space<sup>78</sup>

<p>a. <b>Park:</b> A natural preserve available for unstructured recreation. A park may be independent of surrounding building Frontages. Its landscape shall consist of Paths and trails, meadows, waterbodies, woodland and open shelters, all naturalistically disposed. Parks may be lineal, following the trajectories of natural corridors. The minimum size shall be 8 acres. Larger parks may be approved by Warrant as Special Districts in all zones.</p>	
<p>b. <b>Green:</b> An Open Space, available for unstructured recreation. A Green may be spatially defined by landscaping rather than building Frontages. Its landscape shall consist of lawn and trees, naturalistically disposed. The minimum size shall be 1/2 acre and the maximum shall be 8 acres.</p>	
<p>c. <b>Square:</b> An Open Space available for unstructured recreation and Civic purposes. A Square is spatially defined by building Frontages. Its landscape shall consist of paths, lawns and trees, formally disposed. Squares shall be located at the intersection of important Thoroughfares. The minimum size shall be 1/2 acre and the maximum shall be 5 acres.</p>	
<p>d. <b>Plaza:</b> An Open Space available for Civic purposes and Commercial activities. A Plaza shall be spatially defined by building Frontages. Its landscape shall consist primarily of pavement. Trees are optional. Plazas should be located at the intersection of important streets. The minimum size shall be 1/2 acre and the maximum shall be 2 acres.</p>	
<p>e. <b>Playground:</b> An Open Space designed and equipped for the recreation of children. A playground should be fenced and may include an open shelter. Playgrounds shall be interspersed within Residential areas and may be placed within a Block. Playgrounds may be included within parks and greens. There shall be no minimum or maximum size.</p>	

Open space can play a social role in bringing a community to-

78. *Id.* at SC41. Future versions of *SmartCode* should address open space in suburban areas to provide overflow parking for big box stores and malls.



gether, an aesthetic role in providing a natural oasis in an urban or suburban environment, and a health and safety role by providing recreational opportunities.

### *E. Development Types*

Peter Calthorpe, one of New Urbanism's founding leaders, describes pedestrians as "the lost measure of a community[.]"<sup>79</sup> *SmartCode* rediscovers this measurement, relying on a concept called the "pedestrian shed."<sup>80</sup> This refers to the one-quarter mile radius distance that most pedestrians will walk comfortably in about five minutes, before opting to drive.<sup>81</sup> A "linear pedestrian shed" follows a commercial corridor and measures one-quarter mile from the center; a "long pedestrian shed," a ten-minute, half-mile walk, applies to Transit Oriented Development, accommodating transit station spacing guidelines.<sup>82</sup> Pedestrian sheds roughly determine the size of neighborhoods in form-based codes.

Smart Code allows development as a matter of right in three primary forms: (1) Traditional Neighborhood Development; (2) Clustered Neighborhood Development; and (3) Regional Center Development.<sup>83</sup> *SmartCode* defines Traditional Neighborhood Development (TND), as "a Community Unit type structured by a Standard Pedestrian Shed oriented toward a Common Destination consisting of a Mixed Use center or Corridor, and in the form of a medium-sized settlement near a transportation route."<sup>84</sup> Seaside, Celebration, and Baldwin Park are classic examples of TND.

Clustered Land Development (CLD)—*SmartCode's* term for a hamlet—is "a small settlement standing free in the countryside."<sup>85</sup> It consists of "a Community Unit type structured by a Standard

79. CALTHORPE, *supra* note 14, at 17.

80. SMARTCODE, *supra* note 38, at SC56.

81. *Id.* Miami's new form-based code states: "It has been shown that provided with a pedestrian environment, most people will walk this [quarter mile] distance rather than drive. The outline of the shed must be refined according to actual site conditions, particularly along [t]horoughfares." MIAMI, FLA., MIAMI 21 ZONING CODE, art. 1, I.24 (2010), available at <http://miami21.org/pdfs/finaldocumentsmay2010/fulldocument-may2010.pdf>. The term "pedestrian shed" revives a concept described in the 1920s by urban planner Clarence Perry, who advocated a neighborhood scale based on a quarter mile, five minute walk to all daily needs. MUMFORD, *supra* note 28, at 500. This amounts to 125 to 160 acres, depending on whether the site is more round or square. U.S. GREEN BLDG. COUNCIL, LEED 2009 FOR NEIGHBORHOOD DEVELOPMENT xvi (2009), available at [www.cnu.org/leednd](http://www.cnu.org/leednd).

82. SMARTCODE, *supra* note 38, at SC53; CALTHORPE, *supra* note 14, at 57 ("Urban TODS are typically sited approximately ½ to 1 mile apart to meet station spacing guidelines . . .").

83. SMARTCODE, *supra* note 38, at SC10.

84. *Id.* at SC57.

85. *Id.* at SC50.

Pedestrian Shed oriented toward a Common Destination such as a general store, Meeting Hall, schoolhouse, or church.”<sup>86</sup> To preserve the environment of the “small settlement . . . in the countryside”<sup>87</sup> against sprawl pressures, at least 50% of the CLD “shall be permanently allocated to a T1 Natural Zone and/or T2 Rural Zone.”<sup>88</sup>

The third community type, Regional Center Development (RCD), “takes the form of a high-Density Mixed Use center connected to other centers by transit.”<sup>89</sup> RCD’s cousin, Transit Oriented Development (TOD), consists of “an overlay on all or part of a TND or RCD,” permitting increased density to support rail or bus transport on dedicated lanes.<sup>90</sup> A viable TOD requires a minimum average of ten residential units per acre, mixing small lot single family homes, accessory living spaces over garages, townhomes, apartments, commercial, and office uses.<sup>91</sup> *SmartCode* requires a variance for approval of a higher density TOD overlay.<sup>92</sup> In most other respects, however, under *SmartCode*, a developer may obtain approval for a New Urbanist community as a matter of right, while single-use, cul-de-sac subdivisions would require a variance—the opposite of conventional codes.

A zoning ordinance must establish sufficient guidelines for government officials to grant permits, variances, and exceptions.<sup>93</sup> *SmartCode* establishes a system comparable to conventional codes,

86. *Id.*

87. *Id.*

88. *Id.* at SC10 (The hamlet is not concerned with economic growth based on development. The Florida Agricultural Lands and Practices Act contemplates Clustered Land Development in the case of an “agricultural enclave . . . larger than 640 acres[.]”). FLA. STAT. § 163.3162(5) (2010). The landowner may submit a comprehensive plan amendment consistent with “the uses and intensities of use of the industrial, commercial, or residential areas that surround the parcel[.]” but “must include appropriate new urbanism concepts such as clustering, mixed-use development, the creation of rural village and city centers, and the transfer of development rights in order to discourage urban sprawl while protecting landowner rights.” *Id.*

89. SMARTCODE, *supra* note 38, at SC55. An RCD consists of “a Long Pedestrian Shed or Linear Pedestrian Shed” adjoined by “one or several Standard Pedestrian Sheds.” *Id.* In other words, the plan anticipates at least two quarter-mile walkable areas adjoining each other.

90. *Id.* at SC57.

91. CALTHORPE, *supra* note 14, at 83.

92. SMARTCODE, *supra* note 38, at SC17.

93. *Mayflower Prop., Inc. v. City of Ft. Lauderdale*, 137 So. 2d 849, 852-53 (Fla. 2d DCA 1962) (stating that a lack of guidelines for permits, variances, and exceptions voids a zoning ordinance). Under Florida law:

A “variance” is the relief granted from the literal enforcement of a zoning ordinance permitting the use of property in a manner otherwise forbidden upon a finding that enforcement of the ordinance as written would inflict practical difficulty or unnecessary hardship on a property owner. An “exception” is a departure from the general provisions of a zoning ordinance granted by legislative process under express provision of the enactment itself.

*Id.* at 852.

but uses the categories of development by “Right,” “Warrant,” or “Variance.”<sup>94</sup> *SmartCode* defines “Warrant” as “a ruling that would permit a practice that is not consistent with a specific provision of this Code[,]” but which the Code’s intent justifies.<sup>95</sup> A “Variance” comprises any other Code deviation.<sup>96</sup> To minimize bureaucratic obstacles, a developer can obtain administrative approval for a Warrant and “[t]he request for a Warrant or Variance shall not subject the entire application to public hearing, but only that portion necessary to rule on the specific issue requiring the relief.”<sup>97</sup>

To protect the traditional form of development, *SmartCode* excludes certain key requirements from Warrants or Variances: (a) maximum traffic lane dimensions; (b) a requirement to furnish rear alleys; (c) minimum residential densities; (d) “permission to build accessory buildings” such as those over garages; and (e) minimum parking requirements.<sup>98</sup> The latter requirement views too little parking as undesirable as too much parking.

*SmartCode* has an additional, optional layer of regulation at the “Regional Level,” classifying land into “Sectors” for preservation, restricted, controlled and intended growth, infill development, and special districts.<sup>99</sup> The Sectors provide an alternative means for organizing a Comprehensive Land Use Plan, as required by Florida and other states.<sup>100</sup> However, the thrust of place-making under a form-based code occurs at the Transect level.

## VI. LOCAL GOVERNMENTS HAVE AUTHORITY TO ADOPT FORM-BASED CODES

In 1926, the United States Supreme Court set the stage for almost universal adoption of single-use zoning separation with its opinion in *Village of Euclid v. Ambler Realty Co.*<sup>101</sup> The term “Eu-

94. See, e.g., SMARTCODE, *supra* note 38, at SC4.

95. *Id.* at SC4. *SmartCode’s* annotations advise, “A Warrant should not be referred to as a Variance. True Variances are typically regulated by state law, which dictates who can grant them, under what circumstances, using what standards. These standards often include that there be a hardship that is not self-imposed and that the circumstance being changed is not commonly found.” SMARTCODE ANNOTATED, VERSION 9 & MANUAL SCA6 (2009) (on file with author). Officials considering Warrants must have “delegated authority, typically with clear parameters[.]” *Id.*

96. SMARTCODE, *supra* note 38, at SC4.

97. *Id.*

98. *Id.* *SmartCode’s* annotations explain, “The five items listed here are important ones that tend to be discarded by many developers wishing to execute only the superficial characteristics of Smart Growth.” SMARTCODE ANNOTATED, VERSION 9 & MANUAL SCA6 (2009) (on file with author).

99. See generally SMARTCODE, *supra* note 38, at SC6-8.

100. *Id.*

101. See *Vill. of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926).

clidean zoning,” came from this decision. Interestingly, *Ambler Realty* provides support for form-based codes as well.

The Village of Euclid created a scheme which divided Ambler Realty’s land into three different land use and height zones, preventing Ambler from extending industrial uses into the Village.<sup>102</sup> Ambler argued that the Village substantially reduced the value of its land, depriving it of liberty and property without due process of law in violation of the Fourteenth Amendment to the United States Constitution.<sup>103</sup> However, the Supreme Court upheld the ordinance’s constitutionality as a reasonable, non-arbitrary extension of the Village’s police powers.<sup>104</sup> The court reasoned that a local government could regulate the location of land uses in a way similar to its ability to regulate nuisances.<sup>105</sup>

*Ambler Realty* contains judicial support for the form-based codes that are replacing *Euclidean* zoning:

There is no serious difference of opinion in respect of the validity of laws and regulations fixing the height of buildings within reasonable limits, the character of materials and methods of construction, and the adjoining area which must be left open, in order to minimize the danger of fire or collapse, the evils of overcrowding and the like, and excluding from residential sections offensive trades, industries and structures likely to create nuisances.<sup>106</sup>

Consistent with this language, form-based codes set building

102. *Id.* at 380-83. The Ambler property’s zoning included categories “U-2,” “U-3” and “U-6.” *Id.* at 382. Each zoning category included the cumulative uses allowed by each prior, sequentially numbered land use category. For example, “U-1” uses included single family dwellings, public parks, water towers and reservoirs, electric railway passenger stations and rights of way, farming, and non-commercial greenhouse nurseries. *Id.* at 380. U-2 zoning included the uses allowed under U-1 as well as residential duplexes. *Id.* U-3 zoning included all the foregoing, as well as “apartments houses, hotels, churches, schools, public libraries, museums, private clubs, community center buildings, hospitals, sanitariums, public playgrounds, . . . recreation buildings, and a city hall and courthouse[.]” *Id.* U-6 included all of the foregoing, the uses allowed by U-4 and U-5, as well as plants for “sewage disposal and [gas production], garbage and refuse incineration, scrap iron, junk, . . . rag storage, aviation fields, cemeteries, crematories, penal and correctional institutions, [mental health] institutions, [oil and gasoline storage facilities], and manufacturing and industrial operations . . .” *Id.* at 381.

103. *Id.* at 384. Industrial uses had a fair market value of \$10,000 per acre compared to residential uses at \$2,500 per acre. *Id.* Ambler also set forth a claim under the Ohio Constitution, treated by the Court no differently than its analysis under the United States Constitution. *Id.*

104. *Id.* at 389.

105. *Id.* at 388.

106. *Id.*

heights appropriate to the context, establish the character of construction, mandate open space, prohibit the overcrowding conditions prevalent in impoverished urban areas a century ago, and exclude “offensive trades, industries, and structures” from transects where they do not belong.<sup>107</sup> Noxious industrial uses remain segregated into Special Districts.<sup>108</sup>

The Supreme Court held that lower courts should uphold zoning ordinances so long as their validity is “fairly debatable.”<sup>109</sup> “Fairly debatable” means “open to dispute or controversy on grounds that make sense or point to a logical deduction[.]”<sup>110</sup> This highly deferential rational basis standard dooms most legal challenges to zoning ordinances and amendments.<sup>111</sup> So that Courts do not become “‘super’ zoning review boards[.]”<sup>112</sup> a zoning classification is “presumptively valid.”<sup>113</sup> “[T]o render a zoning ordinance invalid, it must affirmatively appear that the restriction is clearly arbitrary and unreasonable and without substantial relation to the public safety, health, morals or general welfare.”<sup>114</sup> As the next section demonstrates, ample safety and health considerations justify form-based zoning.

107. *Id.* at 388; SMARTCODE, *supra* note 38, at SC40 (confining industrial uses to Special Districts). One offensive use not appearing on the Function matrix is a slaughterhouse, which could fall into a Special District or T2 Rural District. SmartCode section 2.9.1 dictates that Special District designations “shall be assigned to areas that, by their intrinsic size, Function, or Configuration, cannot conform to” one of the development patterns allowed as a matter of right. *Id.* at SC8.

108. *Id.*

109. *Id.*

110. *City of Miami Beach v. Lachman*, 71 So. 2d 148, 152 (Fla. 1953).

111. *Forde v. City of Miami Beach*, 1 So. 2d 642, 645 (Fla. 1941) (“In this State, it is no longer questioned that a municipality, acting under legislative authority, may be vested with the power to enact a valid zoning ordinance and that a general attack thereon will ordinarily fail . . .”).

112. *Town of Indianalantic v. McNulty*, 400 So. 2d 1227, 1230 (Fla. 5th DCA 1981) (upholding zoning ordinance protecting beach dunes) (quoting *Broward County v. Capeletti Bros., Inc.*, 375 So. 2d 313, 316 (Fla. 4th DCA 1979) (“Where the question of public interests to be served remains fairly debatable, the courts are not empowered to act as super zoning boards substituting their judgment for that of the legislative and administrative bodies exercising legitimate objectives.”)); *See also City of Miami Beach v. Ocean & Inland Co.*, 3 So. 2d 364, 366-67 (Fla. 1941) (adopting the “fairly debatable” standard for zoning laws) (quoting *Amber Realty Co.*, 272 U.S. at 388).

113. *Lee Cnty. v. Sunbelt Equities II, LP*, 619 So. 2d 996, 1005 (Fla. 2d DCA 1993); *Cf. Hanson v. State*, 56 So. 2d 129, 131 (Fla. 1952) (stating that courts should construe a legislative act’s purpose and intent “so as to fairly and liberally accomplish the beneficial purpose for which it was adopted[.]”); *and Alderman v. Unemployment Appeals Comm’n*, 664 So. 2d 1160, 1161 (Fla. 5th DCA 1995) (stating that courts must interpret statutes “to facilitate the achievement of their goals in accordance with reason and common sense.” (citing *Dep’t of Commerce v. Hart*, 372 So. 2d 174 (Fla. 2d DCA 1979))).

114. *Blitch v. City of Ocala*, 195 So. 406, 410 (Fla. 1940) (citing *State v. City of Miami*, 134 So. 541 (Fla. 1931)).

*A. Safety and Health Justifications*

In finding land use segregation “fairly debatable,” the Supreme Court in *Ambler Realty* relied on a number of arguments that, today, seem quaint and outdated.

In the first place, the exclusion of business establishments from residence districts might enable the municipal government to give better police protection. Patrolmen’s beats are larger, and therefore fewer, in residence neighborhoods than in business neighborhoods. A place of business in a residence neighborhood furnishes an excuse for any criminal to go into the neighborhood, where, otherwise, a stranger would be under the ban of suspicion.<sup>115</sup>

*Ambler Realty* assumes that police officers actually walk a beat. Today, cul-de-sac suburban residents rarely see regular police patrols, and never on foot. New Urbanists point to the inefficiency of suburban cul-de-sac road networks as a prime reason why over-stretched police departments provide infrequent patrols.<sup>116</sup> The following map shows three dozen home burglaries in six months in upscale, sprawl development near Orlando, far from any low income area.

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115. *Vill. of Euclid v. Ambler Realty Co.*, 272 U.S. 365, 393 (1926) (quoting *Louisiana ex rel. Civello v. City of New Orleans*, 97 So. 440, 444 (La. 1923)).

116. DUANY ET AL., *supra* note 16, at 129.

Image 2:<sup>117</sup>

Residential Burglaries in the Dr. Phillips Area  
1/1/09 through 7/7/09



Most of the burglaries occurred during daytime working hours.<sup>118</sup> Residential single-use neighborhoods sit desolate during working hours, providing few “eyes on the street” to deter crime.<sup>119</sup> The residents who would put a stranger “under the ban of suspicion” drive away to work or to the strip shopping center when day-

117. Map courtesy of Orange County, Florida, Sheriff's Office.

118. David Ogden, Captain, Orange Cnty. Sheriff's Off., Remarks at the Meeting of the Dr. Phillips Advisory Council (Oct. 7, 2009) (stating most burglaries in Dr. Phillips occur during working hours). Communities in Dr. Phillips such as Bay Hill spend thousands of dollars in homeowners' association dues on off-duty police patrols. Residential areas on the map showing no residential burglaries include the guard-gated communities of Orange Tree, across Turkey Lake Road from Universal Orlando, and Isleworth, in the map's northwest corner. Gated communities disconnect road and pedestrian travel networks. ANDRES DUANY, JEFF SPECK, & MIKE LYDON, *THE SMART GROWTH MANUAL* 5.13 (2010) (arguing that gated communities “disrupt the road network, acting as huge cul-de-sacs and impeding an efficient, distributive transportation network.”).

119. See generally JANE JACOBS, *THE DEATH AND LIFE OF GREAT AMERICAN CITIES* 45-46 (Modern Library 1993) (1961) (stating, “there must be eyes upon the street, eyes belonging to those we might call the natural proprietors of the street. The buildings on a street . . . to insure the safety of both residents and strangers, must be oriented to the street. They cannot turn their backs or blank sides on it and leave it blind. . . . [T]he sidewalk must have users on its fairly continuously, both to add to the number of effective eyes on the street and induce the people in buildings along the street to watch the sidewalks in sufficient numbers. Nobody enjoys sitting on a stoop or looking out a window at an empty street. Almost nobody does such a thing. . . . The basic requisite for such surveillance is a substantial quantity of stores and other public places sprinkled along the sidewalks of a district[.]”).

time burglaries occur.<sup>120</sup> The map illustrates that disconnected cul-de-sacs, apart from making police patrolling more difficult, provide little, if any crime deterrence. In contrast, the Town of Windermere, a well-patrolled area of mostly gridded streets adjacent to Dr. Phillips, reported only one residential burglary in all of 2009.<sup>121</sup>

Another outdated justification for single-use zoning in *Ambler Realty* concerns fire fighting. The Supreme Court noted: “[T]he segregation of residential, business and industrial buildings will make it easier to provide fire apparatus suitable for the character and intensity of the development in each section . . . .”<sup>122</sup> Today, the increased distance fire fighters must travel due to disconnected, sprawling road networks greatly increases danger to persons, property, and fire fighters themselves.<sup>123</sup> Hook and ladder fire trucks, whose sizes far exceed the needs of two-story residential areas, result in wider streets, high speed traffic, more accidents, and, ironically, a greater likelihood of fuel-fed vehicular fires.<sup>124</sup>

*Ambler Realty* further justified segregating land uses on the basis that it would “increase the safety and security of home life, greatly tend to prevent street accidents, especially to children, by reducing the traffic and resulting confusion in residential sections[.]”<sup>125</sup>

Contrary to the Supreme Court’s suppositions, today’s gently curving streets and arterial roadways have lanes as wide as interstate highways designed for high-speed travel. Rounded intersection corners, instead of more squared curbs, encourage quick vehicle turns, creating peril for children and all pedestrians. A 2009 report concluded that more than half of all pedestrian deaths occur on poorly designed arterial roadways.<sup>126</sup> The report ranked sprawling metropolitan Orlando, Tampa, Miami-Ft. Lauderdale-Pompano Beach, and Jacksonville as the most dangerous areas for pedestri-

120. *Ambler Realty Co.*, 272 U.S. at 393.

121. Interview with Daniel Saylor, Chief of Police, Windermere Police Dep’t., (Oct. 1, 2009) (regarding the difficulty of patrolling cul-de-sacs in the Dr. Phillips area compared to Windermere’s street grid); Florida Department of Law Enforcement, FLA. DEP’T OF LAW ENFORCEMENT, FLORIDA INDEX CRIME BY JURISDICTION, 1991-2009 (2009), available at [http://www.fdle.state.fl.us/Content/FSAC/Data---Statistics-\(1\)/UCR-Offense-Data/UCR-Offense-Data.aspx](http://www.fdle.state.fl.us/Content/FSAC/Data---Statistics-(1)/UCR-Offense-Data/UCR-Offense-Data.aspx).

122. *Ambler Realty Co.*, 272 U.S. at 394.

123. See CONGRESS FOR NEW URBANISM, EMERGENCY RESPONSE & STREET DESIGN, 6-7 (2009) available at [http://www.wyopass.org/Documents/Upload/File/CNUEmergency\\_Response\\_FINAL.pdf](http://www.wyopass.org/Documents/Upload/File/CNUEmergency_Response_FINAL.pdf).

124. DUANY, ET AL, *supra* note 16, at 67-68.

125. *Ambler Realty Co.*, 272 U.S. at 394.

126. ERNST & SHOUP, *supra* note 9, at 8.



ans in the nation.<sup>127</sup>

In 2007, more than 50,000 child pedestrians sought treatment at hospital emergency rooms, with 5,300 hospitalized.<sup>128</sup> In 2005, 876 child pedestrians died.<sup>129</sup> Including adults, vehicles kill more than 4,000 pedestrians annually.<sup>130</sup> This large annual statistic persists even though drive-only sprawl development discourages and has reduced pedestrian activity. The percentage of children walking or biking to school has decreased from 48% in 1969 to 13% in 2009.<sup>131</sup> In one study, parents most often cited distance and traffic danger as the reasons their children did not walk to school.<sup>132</sup> *SmartCode* seeks to reverse this trend, stating: “[S]chools should be sized and located to enable children to walk or bicycle to them.”<sup>133</sup> A New Urban environment can induce up to 80% of chil-

127. *Id.* at 8-9. The *Orlando Sentinel* reported that 115 pedestrians died in Central Florida in 2007-2008, an average of more than one pedestrian death a week. Dan Tracy, David Damron, & Scott Powers, *Pedestrians Beware—National Study Ranks Orlando Worst in Nation*, ORLANDO SENTINEL, Nov. 9, 2009, at A1. The 2009 report updates Michelle Ernst, *Mean Streets 2004: How Far Have We Come?—Pedestrian Safety, 1994-2003*, SURFACE TRANSPORTATION POLICY PROJECT 6-7 (2004), [http://www.transact.org/library/reports\\_html/ms2004/pdf/final\\_mean\\_streets\\_2004\\_4.pdf](http://www.transact.org/library/reports_html/ms2004/pdf/final_mean_streets_2004_4.pdf). The studies use a Pedestrian Danger Index (“PDI”), which “looks at the rate of pedestrian deaths, relative to the amount that people walk in a given metro area.” *Id.* at 6.

128. American Academy of Pediatrics, *Policy Statement—Pedestrian Safety*, 124 PEDIATRICS 802, 802 (2009), available at <http://pediatrics.aappublications.org/cgi/reprint/124/2/802.pdf> (citing Centers for Disease Control and Prevention, *Web-Based Injury Statistics Query and Reporting System (WISQARS)*, [www.cdc.gov/injury/wisqars/fatal.html](http://www.cdc.gov/injury/wisqars/fatal.html) (last visited Feb. 18, 2011)).

129. *Id.* Some of the most tragic incidents involved vehicles traveling on high-speed arterial roads hitting children stepping out of or waiting for a school bus. See, e.g., Dave McDaniel, *Driver in Fatal Accident Had Revoked License*, WESH.COM (Jan. 5, 2005), <http://www.wesh.com/news/4050596/detail.html> (“‘These cars on this road are out of control,’ said Ron Seggi, the owner of the home where the child died.”); James W. Dodson, *Children Who Were Injured or Killed at Florida School Bus Stops, 1981-2010*, FLA. CHILD INJ. L. BLOG (Jun. 9, 2010), <http://www.floridachildinjurylawblog.com/children-who-were-injured-or-killed-at-florida-school-bus-stops-1981-2010/>.

130. ERNST & SHOUP, *supra* note 9, at 6.

131. *U.S. Travel Data Show Decline in Walking and Biking to School Has Stabilized*, SAFEROUTES (Apr. 8, 2010), [http://www.saferoutesinfo.org/news\\_room/2010-04-08\\_2010\\_nhts\\_release.cfm](http://www.saferoutesinfo.org/news_room/2010-04-08_2010_nhts_release.cfm) (citing U.S. DEPT OF TRANSP, FED. HIGHWAY ADMIN., NATIONAL HOUSEHOLD TRAVEL SURVEY (2009), available at <http://nhts.ornl.gov/introduction.shtml>); Noreen C. McDonald, *Active Transportation to School: Trends Among U.S. Schoolchildren, 1969-2001*, 32 AM. J. PREVENTATIVE MED. 509, 511 (2007).

132. *Id.* at 513-15.

133. SMARTCODE, *supra* note 38, at SC3. Orange County, Florida, facilitates sprawl by requiring sixty-five acre high schools (resulting in massive parking lots consuming as much land as the buildings), twenty-five acre middle schools, and fifteen acre elementary schools, with only a 10% reduction for multi-story schools. ORANGE CNTY., FLA., CODE OF ORDINANCES § 38-1755(1) (2010). LEED-ND, which incorporates New Urban principles and awards points and certification for sustainable neighborhood development, compresses high schools to fifteen acres, middle schools to ten acres, and elementary schools to five acres. U.S. GREEN BLDG. COUNCIL, *supra* note 81, at 76. Future versions of *Smart Code* should also include acreage standards. Before placing schools on arterial roads, school boards and school officials should consider the increased annual operating costs of more bus transportation

dren to walk or bike to school.<sup>134</sup>

To avoid typical street configurations that discourage pedestrian activity, *SmartCode* establishes the following principle:

“Within the more urban Transect Zones (T3 through T6) pedestrian comfort shall be a primary consideration of the Thoroughfare. Design conflict between vehicular and pedestrian movement generally shall be decided in favor of the pedestrian.”<sup>135</sup> *SmartCode* prescribes safer, narrower, pedestrian-friendly street geometries:<sup>136</sup>

Table 7: Vehicular Lane Dimensions<sup>137</sup>

DESIGN SPEED	TRAVEL LANE WIDTH	T1	T2	T3	T4	T5	T6	
Below 20 mph	8 feet	■	■	■	□			■ BY RIGHT
20-25 mph	9 feet	■	■	■	■	□	□	□ BY WARRANT
25-35 mph	10 feet	■	■	■	■	■	■	
25-35 mph	11 feet	■	■			■	■	
Above 35 mph	12 feet	■	■			■	■	

DESIGN SPEED	PARKING LANE WIDTH						
20-25 mph	(Angle) 18 feet					■	■
20-25 mph	(Parallel) 7 feet				■		
25-35 mph	(Parallel) 8 feet			■	■	■	■
Above 35 mph	(Parallel) 9 feet					■	■

DESIGN SPEED	EFFECTIVE TURNING RADIUS							(See Table 17b)
Below 20 mph	5-10 feet			■	■	■	■	
20-25 mph	10-15 feet	■	■	■	■	■	■	
25-35 mph	15-20 feet	■	■	■	■	■	■	
Above 35 mph	20-30 feet	■	■			□	□	

*SmartCode* allows travel lanes as narrow as eight to ten feet wide, to slow urban design speeds to thirty-five miles per hour or less.<sup>138</sup> To compare, arterial roadways in suburban sprawl have at least twelve foot wide lanes like interstate highways, resulting in speeds of forty to fifty-five miles per hour.<sup>139</sup> *SmartCode* slows the

and the capital costs of constructing larger parking lots. The ability to walk to and from school safely increases opportunities for students to participate in extracurricular activities.

134. Robert Steuteville, *How Design can Influence Walking to School*, NEW URBAN NETWORK (Dec. 17, 2010), <http://newurbannetwork.com/news-opinion/blogs/robert-steuteville/13750/how-design-can-influence-walking-school> (citing University of Utah study finding that 15% of children walked to conventional suburban school while, two miles away, 80% of children walked to school in New Urban development).

135. SMARTCODE, *supra*, note 38 at SC12.

136. *See id.* at SC29-30.

137. *Id.* at SC29.

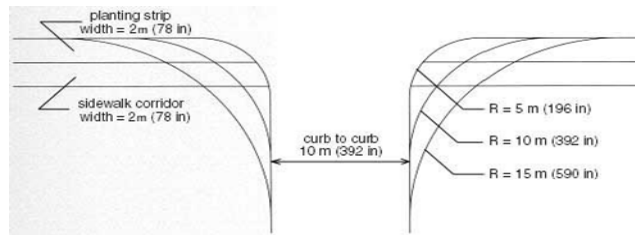
138. *Id.*

139. PLANS AND PREPARATION MANUAL, *supra* note 53, at 2-40 (matrix showing twelve foot wide lanes for freeways and arterial roads); GREENBOOK, *supra* note 53, at 3-16 (“Traffic lanes should be 12 feet in width, but shall not be less than 10 feet in width. Streets and highways with significant truck/bus traffic should have 12 feet wide traffic lanes.”). The Green Book authorizes engineers to design roads for speeds faster than the posted speed: “A design speed 5 mph to 10 mph greater than the posted speed limit will compensate for a

speed of vehicles turning corners, with an effective turning radius between five and twenty feet in urban transects.<sup>140</sup> To compare, intersection corners in suburban sprawl often have a twenty-five foot or greater turning radius, which increases vehicle turning speeds.<sup>141</sup> The increased turning radius also lengthens a pedestrian’s crossing distance and exposure to peril. The following graph illustrates the impact of increasing the turning radius on pedestrian crossing distances:

Figure 3: Increased Turning Radius and Crossing Distances<sup>142</sup>

Turning Radius	Crossing Distance	Increased Crossing Distance
16.4 ft. (5 m)	35.4 ft.	2.6 ft.
32.8 ft. (10 m)	51.5 ft.	18.7 ft.
49.2 ft. (15 m)	72.2 ft.	39.4 ft.



A thirty-five foot turning radius requires a pedestrian to cross more than fifty feet of pavement. A fifteen foot turning radius reduces the crossing distance to thirty-five feet. Consequently, form-based codes mandate a smaller turning radius than conventional codes and most engineering standards.<sup>143</sup>

slight overrunning of the speed limit by some drivers.” *Id.* at 3-5. This explains why motorists often exceed posted speed limits. Federal interstate highways also have twelve foot lanes. *Lane Width*, U.S. DEP’T OF TRANSP., FED. HIGHWAY ADMIN., [http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/chapter3/3\\_lanewidth.htm](http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/chapter3/3_lanewidth.htm) (last visited Feb. 18, 2011).

140. SMARTCODE, *supra* note 38, at SC29. The typical curb radius in Manhattan is ten feet. ROBERT STEUTEVILLE & PHILIP LANGDON, *NEW URBANISM: BEST PRACTICES GUIDE* 146 (2009).

141. GREENBOOK, *supra*, note 53, at 3-48 - 3-49 (“Where turning roadway criteria are not used, the radius of the inside pavement edge should be no less than 25 feet.”); ORANGE COUNTY, FLA., CODE OF ORDINANCES § 34-171(4) (“The horizontal alignments of streets in a subdivision shall be subject to the following: a. The minimum radius of inside edge of pavement at right angle curves internal to subdivisions will be thirty-five (35) feet.”).

142. Chart adapted from Federal Highway Administration, *Pedestrian Crossings*, U.S. DEPT. OF TRANSP., <http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks208.htm> (last visited Feb. 18, 2011) (measuring the increase in crossing distance by using a baseline curb-to-curb crossing distance of 32.8 feet).

143. Various techniques can increase the effective turning radius for vehicles, including on-street parking, bike lanes, and mountable curbs. These techniques can ensure adequate turning space for fire engines and garbage trucks, while preserving a reasonable pedestrian crossing distance. *see, e.g.*, ORANGE CNTY., FLA., CODE OF ORDINANCES § 38-1382(h)(4) (2010) (“The right turning radius easement may be created, for instance, by installing

To achieve the twin goals of moving traffic while providing a safe and friendly pedestrian realm, *SmartCode* revives the European-style, multi-way boulevard.<sup>144</sup> Landscape strips separate faster through traffic lanes in the middle from lanes for slower, local traffic and on-street parking on the sides.<sup>145</sup> A study of boulevards in Europe and the United States found they “are not inherently more dangerous than ordinarily configured arterial streets” because, “[w]hen a situation is complex, drivers and pedestrians use greater caution.”<sup>146</sup> The same principle applies to the modern roundabout, which warrants inclusion in future versions of *SmartCode*. By decreasing traffic speeds and potential conflict points, roundabouts reduce fatalities more than 90% compared to signalized intersections.<sup>147</sup>

The ability to require adequate parks and recreational facilities falls squarely within the police powers to provide for health, safety, and welfare. The Florida Fourth District Court of Appeal recognized: “Open space, green parks and adequate recreation areas are vital to a community’s . . . physical well-being.”<sup>148</sup> One study found a correlation between the amount of physical activity in

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mountable curbs, and/or by strategically arranging on-street parking and no parking zones.”).

144. DUNHAM-JONES & WILLIAMSON, *supra* note 8, at 82 (“Americans stopped building multiway boulevards in the 1930s. Traffic engineers feared that the complexity of the intersections would lead to high accident rates, and boulevards did not fit into the developed functional classification street system[.]” which consists solely of arterials, collectors, and local roads.) Post-World War II preferences for Euclidean separation hastened the multiway boulevard’s demise as a “mixed use public way.” ALLAN B. JACOBS, ELIZABETH MACDONALD, & YODAN ROFÉ, *THE BOULEVARD BOOK: HISTORY, EVOLUTION, DESIGN OF MULTIWAY BOULEVARDS* 5-6 (2002).

145. *Thoroughfares Module*, SMARTCODE ANNOTATED, SCA42-SC43 (2009), available at [http://curis.msstate.edu/publish/3000\\_3\\_Modules-V9\\_PrintFinal.pdf](http://curis.msstate.edu/publish/3000_3_Modules-V9_PrintFinal.pdf).

146. JACOBS, MACDONALD, & ROFÉ, *supra* note 144, at 110; See generally TOM VANDERBILT, *TRAFFIC: WHY WE DRIVE THE WAY WE DO (AND WHAT IT SAYS ABOUT US)* 176-210 (2008); Eric Dumbaugh, *Safe Streets, Livable Streets*, 71 J. AM. PLAN. ASS’N. 283, 288 (2005), available at <http://www.informaworld.com/smpp/content~db=all~content=a787370026> (based on 1999-2003 crash data for a section of Colonial Drive near Mills Avenue in Orlando with on-street parking and eleven foot lanes, “is safer in all respects” compared to section of Colonial Drive four miles to east, which lacks on-street parking, has 12.5 foot lanes, and higher posted speed).

147. U.S. DEP’T OF TRANSP., FED. HIGHWAY ADMIN., *ROUNDABOUTS: A SAFER CHOICE* (2008), available at <http://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa08006> (citing Bhagwant N. Persaud et al., *Observational Before-After Study of the Safety Effect of U.S. Roundabout Conversions Using the Empirical Bayes Method*, TRANSP. RES. REC. 1751 (2001), [https://ceprofs.civil.tamu.edu/dlord/Papers/trb\\_01-0562CDFINcor.pdf](https://ceprofs.civil.tamu.edu/dlord/Papers/trb_01-0562CDFINcor.pdf)). The Town of Windermere, Florida, where the author drives frequently, converted intersections with stop signs into roundabouts. The Town virtually eliminated long traffic backups while retaining Main Street as a charming two-lane road.

148. *Hollywood, Inc. v. Broward Cnty.*, 431 So. 2d 606, 614 (Fla. 4th DCA 1983) (upholding ordinance requiring dedication of three acres of land for every 1,000 residents or contribution of money equal to land value into county-maintained trust fund for park land acquisition).

children and the availability of park space.<sup>149</sup> *SmartCode* requires a playground within 800 feet of every home.<sup>150</sup>

Drive-only sprawl has lessened physical activity and increased obesity in people of all ages.<sup>151</sup> By enabling children to walk and bike to school, form-based codes can help reverse “[t]he rapid increase in prevalence of obesity in the United States pediatric population during the last 25 years,”<sup>152</sup> which the American Academy of Pediatrics says has “reached epidemic proportions.”<sup>153</sup> The Academy has concluded that the built environment can predispose children to obesity.<sup>154</sup> The Centers for Disease Control reports the percentage of obese children between the ages of six to eleven has increased from 6.5% in the 1970’s to 19.6% by 2008.<sup>155</sup> Obese children suffer from psychological damage, cardiovascular disease, asthma, liver damage, diabetes, and have an increased risk of cancer and a substantially lowered life expectancy.<sup>156</sup>

### B. Sociological Justifications

Government land use regulation may protect “family values, youth values, and the blessings of quiet seclusion[.]”<sup>157</sup> *Ambler Realty* stated that single-use zoning would “preserve a more favora-

149. June M. Tester, AMERICAN ACADEMY OF PEDIATRICS, *Policy Statement: The Built Environment: Designing Communities to Promote Physical Activity in Children*, 123 PEDIATRICS 1591, 1592 (2009), available at <http://pediatrics.aappublications.org/cgi/reprint/123/6/1591.pdf>.

150. SMARTCODE, *supra* note 38, at SC11 (This provision compensates for small backyards and very small front yards.).

151. Tester, *supra* note 149 at 1591, 1593.

152. Michael Rosenbaum, *Special Considerations Relative to Pediatric Obesity*, in OBE-SITY (Matthias Tschoep ed. 2007), <http://www.endotext.org/obesity/obesity16/obesity16.html>.

153. PEDIATRIC NUTRITION HANDBOOK: POLICY OF THE AMERICAN ACADEMY OF PEDIATRICS 755, 763 (Ronald E. Kleinman ed., 6th ed. 2009).

154. *Id.* (“Regular physical activity should be consciously promoted, prioritized, and protected within families, schools, and communities.”). Television, video games, computers, and other sedentary activities, as well as the proliferation of fast food restaurants, have also played obvious roles in increasing childhood obesity.

155. CENTERS FOR DISEASE CONTROL AND PREVENTION, CHILDHOOD OVERWEIGHT AND OBESITY (2010), <http://www.cdc.gov/obesity/childhood/index.html> (last visited Feb. 18, 2011) (The CDC reports data from NHANES surveys show that “the prevalence of obesity [has] increased . . . [a]mong pre-school age children 2-5 years of age . . . from 5 to 10.4% between 1976-1980 and 2007-2008 and from 6.5 to 19.6% among 6-11 year olds. Among adolescents aged 12-19, obesity increased from 5 to 18.1% during the same period.”).

156. WALT LARIMORE & SHERRI FLYNT, SUPERSIZED KIDS: HOW TO RESCUE YOUR CHILD FROM THE OBESITY THREAT 17-22 (2005); HOWARD FRUMKIN, LAWRENCE FRANK, & RICHARD JACKSON, URBAN SPRAWL AND PUBLIC HEALTH: DESIGNING, PLANNING, AND BUILDING FOR HEALTHY COMMUNITIES 190 (2004) (“Children who are physically inactive tend to have lower self-esteem. Children who become overweight confront psychosocial challenges such as rejection by other children. . . . Moreover, overweight children tend to become overweight adults, predisposing to a wide range of adult disease.”(footnotes omitted)).

157. *See* Vill. of Belle Terre v. Boraas, 416 U.S. 1, 9 (1974).

ble environment in which to rear children[.]”<sup>158</sup> New Urbanists criticize sprawl for requiring a parent—typically the mother—to place her career on hold and devote her time to chauffeuring children to school and activities.<sup>159</sup> Such neighborhoods often feature bored kids with the younger ones stranded at home and older ones tempted to engage in delinquency.<sup>160</sup>

Conventional zoning and high speed arterial roads also leave those senior citizens who can no longer drive safely trapped at home while seniors in traditional communities continue walking to shopping and activities. The author's grandmother, Dorothy Gettleman, an immigrant who never learned to drive, walked the safe, gridded streets of Golf Manor, Ohio to Obermeyer's grocery store for her daily needs. She never had to live in an old-age home, unlike many seniors when their driving days end. About one-third of people in the United States do not drive, yet virtually all new development depends exclusively on automobiles.<sup>161</sup>

Single-use zoning, by disallowing apartments over retail, has contributed to shortages of affordable housing near employment centers. New Urbanists favor the dispersal of affordable housing to avoid concentrations of poverty. *SmartCode* suggests that “municipalit[ies] waive or reduce parking requirements for [a]ffordable [h]ousing units located within a quarter mile of a transit stop.”<sup>162</sup> *SmartCode* allows accessory dwellings over garages, which homeowners can rent out, providing more affordable housing within an

158. *Vill. of Euclid v. Ambler Realty Co.*, 272 U.S. 365, 394 (1926).

159. DUANY, ET AL., *supra* note 16, at 116-18. Seaside, Florida's developer, Robert Davis, wrote, “For many families Seaside has been the first place where kids can run free and can be trusted to find their way back home. This was a normal experience in my early childhood and in [my wife] Daryl's, but today's kids spend much of their time in car seats, bring chauffeured from one activity to another. Experiencing the world in a straightjacket as a set of images through a car window cannot be good for the psychic health of the youngest members of our society.” Robert Davis, *Seaside: Investing in our Children and Grandchildren*, 1 BEACH LIFE 26 (2010).

160. *See* DUANY, ET AL., *supra* note 16, at 116-18. Parental supervision plays a role in whether children turn to delinquency, regardless of the neighborhood type. However, one should not overlook the impact of long commutes leaving children unsupervised and the effect of boredom. *See also* OVER THE EDGE (Warner Home Video 1979) (based on events in Foster City, California) (dramatizing a sterile, planned suburban community whose teenagers, too young to drive, escape boredom with drugs, premarital sex, and violence. Police and parents lash out at the symptoms, oblivious to the underlying causes); Sean, *Forgotten Films: Over the Edge*, FILM JUNK MOVIE BLOG (Mar. 31, 2008), <http://www.filmjunk.com/2008/03/31/forgotten-films-over-the-edge/>; LEINBERGER, *supra* note 1, at 90 (“The boredom of having only the option of drivable sub-urban life, including the unintended consequences of ever longer and more congested commutes and the running of nearly every errand in a car, is not to be underestimated.”).

161. LEINBERGER, *supra* note 1, at 69.

162. Duany Plater-Zyberk & Co. & Sandy Sorlien, *Incentives SmartCode Module* art. 1, § 1.8.1(f), <http://www.transsect.org/docs/Incentives.pdf>.

otherwise expensive neighborhood.<sup>163</sup> Accessory housing over garages increases home values by providing a desirable amenity.

### C. Aesthetic Justifications

Zoning for a community's aesthetic appeal falls within the scope of police power.<sup>164</sup> To achieve the aesthetics of a pedestrian-oriented environment, police powers enable local governments to establish the width of streets and sidewalks,<sup>165</sup> and more broadly, regulate land use "to preserve small town character."<sup>166</sup> In *Restigouche, Inc. v. Town of Jupiter*, the United States Court of Appeals for the Eleventh Circuit upheld the aesthetic "goal of creating a traditional main street[.]"<sup>167</sup> The Court affirmed the denial of an automobile dealership on a pedestrian-oriented street:

To further the goal of creating a traditional main street, the Town sought to encourage retail uses along Indiantown Road which would serve the everyday needs of nearby residents, promote pedestrian traffic, and have a character consistent with the neighboring residential developments. The Town could have reasonably believed that the purchase of an automobile is not an everyday need, that the typically large lot of an automobile dealership might break up the pedestrian flow between retail establishments, and that such dealerships might disrupt the planned residential character of the street with bright lights, red flags and flashy signage.<sup>168</sup>

Aesthetic considerations provide just cause for regulating ad-

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163. See SMARTCODE, *supra* note 38, at SC 23. In Florida, accessory dwelling units can help satisfy the affordable housing component of a local government's comprehensive plan. FLA. STAT. § 163.31771(5)(2010).

164. *Abbott v. City of Cape Canaveral*, 840 F. Supp. 880, 884 (M.D. Fla. 1994) (municipal ordinance regulating satellite dishes did not violate the dish owner's right to substantive due process since the ordinance's preamble articulated legitimate government objectives of safety and aesthetics).

165. See *Garvin v. Baker*, 59 So. 2d 360, 363-64 (Fla. 1952) (upholding ordinance requiring dedication of at least sixty feet for streets, avenues, and six foot sidewalks). Six-foot-wide sidewalks generally provide sufficient space for two people to walk side-by-side. Many sidewalks in suburban sprawl areas do not exceed four feet in width.

166. *Corn v. City of Lauderdale Lakes*, 997 F.2d 1369, 1375 (11th Cir. 1993) (citing *Constr. Indus. Ass'n v. City of Petaluma*, 522 F.2d 897, 905-09 (9th Cir. 1975)).

167. 59 F.3d 1208, 1214 (11th Cir. 1995).

168. *Id.* However, in many instances a small to moderate-sized car dealership could place its showroom on the street and parking lot behind the building, as frequently seen outside the United States.

vertising signs.<sup>169</sup> For pedestrian-oriented urban retail areas, *SmartCode* allows one “blade sign,” installed perpendicular to the façade eight feet above the sidewalk for each business.<sup>170</sup> *SmartCode* prohibits internal illumination, though it allows neon signage in shop-front windows in the T4-T6 zones.<sup>171</sup> Special situations requiring different signage, such as a theatre, would require permission by Warrant.

By regulating the general mass and form of buildings, form-based zoning ensures that single-family homes, apartments, and businesses below apartments transition seamlessly.<sup>172</sup> To ensure compatibility, zoning regulations may, for example, require office buildings to take a “residential scale and character” with pitched roofs and hidden parking.<sup>173</sup> Some form-based codes disguise multi-family buildings as single-family homes to ensure compatibility. An apartment house, for example, can look like a mansion.<sup>174</sup>

The size of lots on which one may erect one, two, or four-family buildings “is a subject for police regulation and when not unreasonable, such regulations do not deprive a person of his property without due process of law.”<sup>175</sup> Conventional lot size restrictions do not necessarily prevent construction of buildings out of proportion to adjacent ones.<sup>176</sup> A form-based code can more effectively prescribe minimum and maximum building width, depth, scale, and mass.<sup>177</sup>

Zoning may set specific building heights as an exercise of police power. Heights may vary in the city according to location, if well-calculated to promote the general welfare.<sup>178</sup> *SmartCode* sets build-

169. *City of Lake Wales v. Lamar Adver. Ass'n of Lakeland, Fla.*, 414 So. 2d 1030, 1031 (Fla. 1982) (“[T]here is a relationship between signs and the general welfare and well-being of a community from the standpoint of aesthetics.”); *City of Miami Beach v. Meiselman*, 216 So. 2d 774, 774 (Fla. 3d DCA 1968) (holding that a municipality may restrict size of signs).

170. *SMARTCODE*, *supra* note 38, at SC25.

171. *Id.*

172. *PAROLEK ET AL.*, *supra* note 3, at 46 (illustrating scenarios for mid-block and rear lot transitions between mixed use development and residential uses to achieve seamless consistency at the street front and not “compromise . . . the residential character of the adjacent neighborhood.”)

173. *Battaglia Prop. Ltd. v. Fla. Land & Water Adjudicatory Comm'n*, 629 So. 2d 161, 167 (Fla. 5th DCA 1993).

174. *See PAROLEK ET AL.*, *supra* note 3, at 80.

175. *Garvin v. Baker*, 59 So. 2d 360, 364-65 (Fla. 1952).

176. In the Orlando metropolitan area, the construction of large mansions next to small homes periodically stirs controversy in Windermere and Winter Park.

177. *PAROLEK ET AL.*, *supra* note 3, at 47 (policymakers should, nonetheless, allow sufficient variety in mass to avoid architectural monotony).

178. *Town of Bay Harbor Islands v. Burk*, 114 So. 2d 225, 227 (Fla. 3d DCA 1959) (citing *Welch v. Swasey* 214 U.S. 91 (1909)).



ing heights by transect.<sup>179</sup> Local calibration should ensure the compatibility of adjacent building heights.

A legislative act establishing a setback line is valid.<sup>180</sup> The same principle applies to a “build-to line,” which, in a form-based code, brings buildings close to the roads for pedestrian convenience, gives thoroughfares architectural definition, and hides parking lots in the rear. A city ordinance may restrict the location of parking.<sup>181</sup>

#### D. Economic Benefits

Regulation protecting a local economy “promotes the welfare of the public,” and falls within a local government’s police powers.<sup>182</sup> Improved aesthetics and walkability increase the economic value of development. In Nashville, between the years 2003 and 2008, neighborhoods that implemented form-based codes for redevelopment saw increases in taxable value of 75% compared to 28% countywide.<sup>183</sup> Residential lot prices in Seaside increased ten times during the town’s first decade, while prices in adjacent areas remained stagnant or declined.<sup>184</sup>

David Pace, who developed Baldwin Park and Celebration, characterized New Urbanism as “the most profitable form of development that you can undertake, if you have the right piece of land.”<sup>185</sup> Pace describes New Urbanism as “a safer market” because, “[w]hen times get tough, people are going to be more inclined to invest their money in a project that has the bones and the infrastructure” of a traditional town rather than “a classic, suburban sprawling community that has nothing else going for it.”<sup>186</sup> In normal economic cycles, developers who diversify with mixed use have steadier returns than those who depend on a single

179. SMARTCODE, *supra* note 38, at SC 37.

180. *Scutti v. State Rd. Dep’t. of Fla.*, 220 So. 2d 628, 629-30 (Fla. 4th DCA 1969).

181. *See Ross v. City of Orlando*, 141 F. Supp. 2d 1360, 1366 (M.D. Fla. 2001) (rejecting facial vagueness challenge and upholding city ordinance preventing residents from parking recreational vehicles on their residential property under certain conditions).

182. *Graham v. Estuary Props, Inc.*, 399 So. 2d 1374, 1377-81 (Fla. 1981) (upholding conditions on development prohibiting destruction of mangroves because resulting pollution would adversely impact the local fishing industry).

183. *Building Great Neighborhoods with Form-Based Codes*, ROXANNE QUALLS, CINCINNATI CITY COUNCIL, [http://www.roxannequalls.com/home/initiatives/building\\_great\\_neighborhoods\\_with\\_form-based\\_codes.html](http://www.roxannequalls.com/home/initiatives/building_great_neighborhoods_with_form-based_codes.html) (last visited Feb. 18, 2011) (citing Rick Bernhardt, Nashville Metro Planning Dept. executive director).

184. PETER KATZ, *THE NEW URBANISM: TOWARD AN ARCHITECTURE OF COMMUNITY 4* (1994).

185. ORANGE CNTY. GROWTH MGMT. DEP’T PLANNING DIV., *THE ECONOMIC RETURN ON NEW URBANISM STUDY 69* (2008).

186. *Id.*

market sector.<sup>187</sup>

Before the recession of 2007 to 2009, costs ran about 20% higher for developing Celebration and Baldwin Park than conventional suburban development.<sup>188</sup> However, a high level of community amenities, not essential to New Urbanism, contributed to the premium.<sup>189</sup> At the housing price spectrum's lower half, the United States Department of Housing and Urban Development's Hope VI Program is redeveloping failed public housing projects into mixed income, mixed-use neighborhoods based on New Urbanism principles.<sup>190</sup> The combined cost of demolition, site preparation, and construction is less than one-half the cost of apartments and condominiums sold in Celebration and Baldwin Park.<sup>191</sup>

Even in communities with upscale amenities and higher production costs, walkable development can double returns to a devel-

187. *See id.* at 78.

188. *Id.* at 69, 71 (developer for Celebration and Baldwin Park estimated the cost premium at 20% "plus a loss of land acreage," however, "[y]ou're going to get your density back"). Reed Berlinsky, vice president of land acquisition for KB Homes, has built homes in the New Urbanist community of Avalon Park, in Orange County, Florida, and he believes that "[t]wenty percent is the right number on the development side," although "we've really had some very skewed development costs over the last five years as the market has changed." *Id.* at 71.

189. *Id.* at 50-51 (Celebration architect John Van Fossen states, "[A] lot of the costs that have been attributed to New Urbanism are not really necessary to New Urbanism[,] they're in many cases . . . things that developers have added on to them, because they want a high end community . . . New Urbanism is about building walkable[,] compact communities. It doesn't say they all have to be high end, and I think that's a problem that we've added on to get these developed."); *See also* RICHARD FOGLESONG, MARRIED TO THE MOUSE: WALT DISNEY WORLD & ORLANDO 159-60 (2001) (stating only 10% of Disney World cast members could afford Celebration's minimum home price).

190. *See generally* CONG. FOR THE NEW URBANISM & THE DEP'T OF HOUS. & URBAN DEV., PRINCIPLES FOR INNER CITY NEIGHBORHOOD DESIGN: HOPE VI AND THE NEW URBANISM (2000), available at <http://www.huduser.org/Publications/pdf/principles.pdf>; *Hope VI Funds New Urban Neighborhoods*, NEW URB. NEWS (Jan/Feb 2002), <http://www.newurbannews.com/hopeVI.html>; CALTHORPE & FULTON, *supra* note 17, at 254 (opining that the HOPE VI program "shows that we can bring zones once dominated by violence and despair back in to the social, economic, and physical fabric of the city" and that "economic integration is possible even at the extreme end of our social spectrum.").

191. Barbara Sard & Leah Staub, *House Bill Makes Significant Improvements In "Hope VI" Public Housing Revitalization Program: Provisions to Overcome Employment Barriers Need Strengthening*, CENTER ON BUDGET AND POLICY PRIORITIES 2, n.3 (2008), <http://www.cbpp.org/files/1-16-08hou.pdf> ("HUD figures indicate an average cost per unit developed with HOPE VI of \$153,441, of which \$63,114 (or 41 percent) is contributed by the HOPE VI program. These figures include demolition and site preparation as well as construction of all units, including market rate and tax credit-assisted units as well as public housing." (emphasis removed)); *Contra*, Jack Snyder, *Celebration Apartments Set Record Per-Unit Price*, ORLANDO SENTINEL, Nov. 3, 2005, at C3, available at: [http://articles.orlandosentinel.com/2005-11-03/news/MIRASOL03\\_1\\_1\\_celebration-apartments-gdc](http://articles.orlandosentinel.com/2005-11-03/news/MIRASOL03_1_1_celebration-apartments-gdc) (stating that Mirasol, a luxury apartment complex in Celebration sold for \$402,000 per unit.); *See*, Mary Shankin, *Condos Help Perk Up Sales in Orlando's Baldwin Park*, ORLANDO SENTINEL, June 8, 2009, at M6 (stating condominiums in Baldwin Park are selling in excess of \$359,000 per unit).

oper compared to drive-only development.<sup>192</sup> The market for traditional, walkable communities is about one-third of home buyers, while supply generally does not exceed 5%.<sup>193</sup> Conventional zoning codes, therefore, distort the market by creating an artificial scarcity of traditional neighborhoods, driving up housing prices 40% to 200% in walkable developments.<sup>194</sup> The price premium will diminish as form-based codes increase the supply of walkable development to meet marketplace demand. However, because new construction and infrastructure increases in the built environment at a rate of only 2% annually, the demand for walkable New Urbanism development will outstrip supply for decades.<sup>195</sup>

Infill development encouraged by form-based codes can meet future housing needs as the market shifts from housing for families with children to housing for retiring baby boomers and younger people who remain single or delay starting families. A 2006 study predicts thirty two million new households by 2025, of which only four million will include children.<sup>196</sup> This trend will lessen demand for large lot housing in high performing public school districts.<sup>197</sup>

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192. ORANGE CNTY. GROWTH MGMT. DEP'T PLANNING DIV., *supra*, note 185, at 60 (One market study, according to Canin Associates land planner Edward Erfurt, "went up to a full TND, and it was over a 100 percent return from where they were with a conventional development.")

193. *Id.* at 54. Outside of Florida, real estate analyst Chris Leinberger estimates that "Atlanta and Phoenix have no more than ten percent of their housing supply in walkable urban neighborhoods[.]" while "[o]lder metropolitan areas such as Boston and Chicago may have upward of twenty to thirty percent of their housing in walkable urban neighborhoods." LEINBERGER, *supra* note 1, at 101.

194. *Id.* at 99-100 (housing prices in walkable communities forty to 200% higher than drive-only communities); A 2005 study found a demand for walkable urbanism by 29% of respondents in Atlanta and 40% in Boston. *Id.* at 94 (citing Jonathan Levine, Aseem Inam, & Gwo-Wei Torng, *A Choice-Based Rationale for Land Use & Transportation Alternatives: Evidence from Boston & Atlanta*, 24 J. PLAN. EDUC. & RES. 317, 317-323 (2005)). High amenities contribute to the premium in newer communities. ORANGE CNTY. GROWTH MGMT DEP'T PLANNING DIV., *supra*, note 185, at 50-51.

195. LEINBERGER, *supra* note 1, at 172.

196. *Id.* at 88-90 (citing Arthur C. Nelson, *Leadership in a New Era*, 72 J. AM. PLAN. ASS'N 393, 394 (2006)).

197. *Id.* at 90 ("These 28 million childless households, more than seven times the absolute growth of families with children, will be the primary factor that dictates the future of the built environment. These families will not overly concern themselves with the quality of public schools or the perceived need for large lots for children in making their decisions."); S. Mitra Kalita & Robbie Whelan, *No McMansions for Millennials*, WALL ST. J. (Jan. 13, 2011, 12:19 PM), <http://blogs.wsj.com/developments/2011/01/13/no-mcmansions-for-millennials/> (reporting "key finding" of "Generation Y" survey of people born between 1980 and the early 2000's was, "They want to walk everywhere[.]" and that "[a] whopping 88% want to be in an urban setting . . .").

### *E. Environmental Justifications*

Local governments may exercise their police powers “to protect and preserve the environment.”<sup>198</sup> Sprawl development created by conventional zoning consumes enormous quantities of undeveloped and agricultural land. Between 1982 and 2007, the amount of developed land in the United States increased by 50%, from 70.9 million acres to 111.2 million acres.<sup>199</sup> For perspective, this is a land mass larger than the State of Illinois. The rate of development accelerated 50%, from 1.4 million acres annually during the 1980s to 2.2 million acres annually during the 1990s.<sup>200</sup>

Form-based codes reduce sprawl pressures by creating more compact development patterns and by encouraging infill development. *SmartCode* provides for a mechanism known as a Transfer of Development Rights (TDRs).<sup>201</sup> Those developing in more urbanized transects can pay for TDRs for increased density rights or to meet open space requirements. Landowners in the T-1 and T-2 Transects receive compensation for land preservation.<sup>202</sup> Parks, as required by form-based codes, can preserve undeveloped land for nature trails, habitats, and aquifer recharge. It is well established that a local government may, as a condition of plat approval, require a developer to dedicate land or pay a fee to expand the park system.<sup>203</sup>

198. *Town of Indianlantic v. McNulty*, 400 So. 2d 1227, 1231 (Fla. 5th DCA 1981) (“There can no longer be any question that the ‘police power’ may be exercised to protect and preserve the environment.”); *Moviematic Indus. Corp. v. Bd. of Cnty. Comm’rs. of Metro. Dade Cnty.*, 349 So. 2d 667, 667-69 (Fla. 3d DCA 1977) (upholding rezoning of property from heavy industrial use to single family lots on five acre parcels to protect the Biscayne Aquifer).

199. U.S. DEP’T OF AGRIC., NAT’L RES. INVENTORY 2007 ANNUAL NRI, LAND USE 31 (Feb. 2007), available at [http://www.nrcs.usda.gov/technical/NRI/2007/2007\\_NRI\\_Summary.pdf](http://www.nrcs.usda.gov/technical/NRI/2007/2007_NRI_Summary.pdf). Brookings Institution real estate analyst Chris Leinberger points out that “the USDA does not consider some of the lowest density development popular over the past generation, such as McMansions on two-acre lots, as urban land use.” He estimates that, including exurban fringe development, land consumption exceeded metropolitan population growth by at least ten to twenty times between 1980-2000. LEINBERGER, *supra* note 1, at 72 (footnote omitted).

200. U.S. DEP’T OF AGRIC., NAT’L RES. INVENTORY, 2001 ANNUAL NRI, URBANIZATION AND DEVELOPMENT OF RURAL LAND, KEY FINDINGS (2003), available at <http://www.nrcs.USDA.gov/technical/NRI/2001/nri01dev.html>.

201. SMARTCODE, *supra* note 38, at SC7.

202. *See Shands v. City of Marathon*, 999 So. 2d 718, 725 (Fla. 3d DCA 2008) (denying inverse condemnation claim on basis that “the availability of . . . TDRs for at least six acres of the upland portion of the Key suggests that some, perhaps not insignificant, economic value remains.”); *City of Hollywood v. Hollywood, Inc.* 432 So. 2d 1332, 1337 (Fla. 4th DCA 1983) (contemplates scenario of landowner obtaining increased density by buying TDR).

203. *Hollywood, Inc. v. Broward Cnty.*, 431 So. 2d 606, 607, 614 (Fla. 4th DCA 1983) (upholding ordinance requiring dedication of three acres of land for every 1,000 residents or depositing money equal to land value into county-maintained trust fund for park land acquisition).

Local police powers authorize zoning restrictions to prevent pollution.<sup>204</sup> In *Massachusetts v. EPA*, the United States Supreme Court found that greenhouse gases fall within the definition of “air pollutants” under the Clean Air Act.<sup>205</sup> An amendment to Florida’s Growth Management Act in 2008 requires local governments to plan energy efficient land use patterns and strategies to reduce greenhouse gases.<sup>206</sup>

Drive-only sprawl development increased miles traveled by vehicles by over 150% between 1977 and 2001—roughly five times faster than population growth.<sup>207</sup> The United States Department of Energy projects a further 48% increase in vehicle miles traveled by 2030.<sup>208</sup> Despite higher fuel efficiency standards, carbon emissions would remain at 2005 levels.<sup>209</sup>

By placing schools, shopping, and employment within a safe walking distance of most residences, form-based codes can reduce carbon and other vehicle pollutants by decreasing vehicle miles traveled by at least one-fourth.<sup>210</sup> Widespread adoption of form-based codes could also help the United States lessen its dependency on foreign crude oil from hostile or unstable countries.<sup>211</sup>

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204. *Graham v. Estuary Props., Inc.*, 399 So. 2d 1374, 1381 (Fla. 1981); *see also* *Cent. Fla. Invs., Inc. v. Orange Cnty. Code Enforcement Bd.*, 790 So. 2d 593, 597 (Fla. 5th DCA 2001) *and* FLA. CONST., art. II, §7 (stating, “Adequate provision shall be made by law for the abatement of air and water pollution[.]”).

205. *Massachusetts v. E.P.A.*, 549 U.S. 497, 529-30 (2007). In response to the Supreme Court ruling, the EPA published a rule interpreting the Clean Air Act to include greenhouse gases. *See Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 18,885 (proposed Apr. 24, 2009) (to be codified at 40 C.F.R. ch.1).

206. *See* FLA. STAT. § 163.3177(6)(a) (2010); Tom Pelham, *The Role of Local Land Use and Transportation Planning in Reducing GHG*, FLA. DEP’T OF CMTY. AFFAIRS <http://www.dca.state.fl.us/fdcp/dcp/EnergyGHG/Files/LocalLandUseGHGPresentation.pdf> (last visited Feb. 18, 2010).

207. Joseph B. White, *Next Car Debate: Total Miles Driven*, WALL ST. J., Feb. 5, 2008, at O2, *available at* <http://online.wsj.com/article/SB120190455899936509.html>.

208. REID EWING ET AL, URBAN LAND INSTITUTE, *GROWING COOLER: THE EVIDENCE ON URBAN DEVELOPMENT AND CLIMATE CHANGE 4* (2008) (48% increase in vehicle miles traveled compared to 2005 levels).

209. *Id.*

210. *Id.* at 6-7 (citations omitted); Robert Steuteville, *New Urban Community Promotes Social Networks and Walking*, NEW URBAN NETWORK (Sept. 2009), *available at* <http://newurbannetwork.com/article/new-urban-community-promotes-social-networks-and-walking> (stating that 50% of residents in a traditional community walked to the store five or more times per week compared to only 5% in a sprawl neighborhood); *See also* NAT’L RESEARCH COUNCIL OF THE NAT’L ACADS, *Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use, and CO2 Emissions* (2009), [http://reconnectingamerica.org/public/display\\_asset/drivingandbuiltenvironment20090901?docid=337](http://reconnectingamerica.org/public/display_asset/drivingandbuiltenvironment20090901?docid=337).

211. *See generally* THOMAS FRIEDMAN, *HOT FLAT & CROWDED* 77-110 (2008).

*F. Increased Road Capacity*

The United States Supreme Court has recognized that a local government has a legitimate public purpose in reducing traffic congestion by requiring pedestrian and bicycle pathways.<sup>212</sup> Florida courts have likewise upheld zoning restrictions to avoid serious traffic congestion.<sup>213</sup>

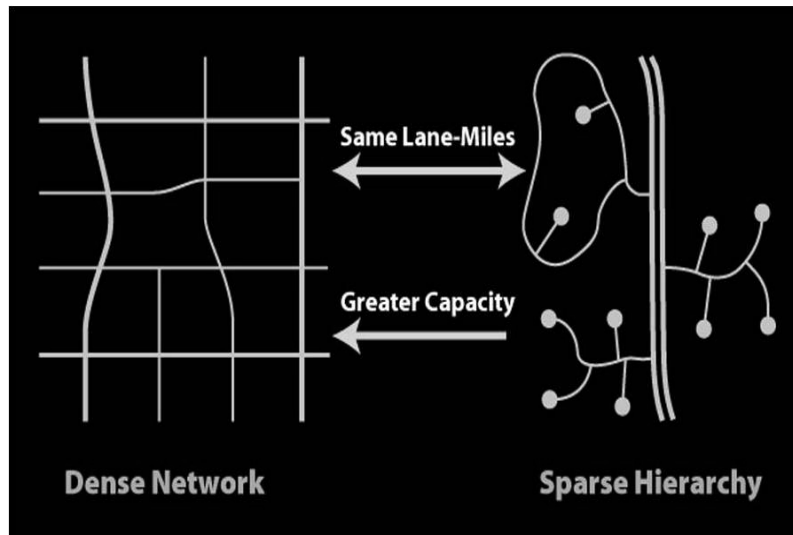
Collector and arterial roads remove the ability to walk and bike to destinations, concentrate traffic, and cause suburban congestion. Traditional communities rely on pedestrians to reduce traffic and grid patterns to disperse traffic. Charleston, South Carolina, laid-out on a 2,500 acre grid, "handles an annual tourist load of 5.5 million people with little congestion, while Hilton Head Island, ten times larger," but which relies on a loop arterial road, "experiences severe backups at 1.5 million visitors."<sup>214</sup> The following graphic illustrates the principle:

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212. *Dolan v. City of Tigard*, 512 U.S. 374, 387-88, 395-96 (1994) (holding, "[n]o precise mathematical calculation is required, but the city must make some effort to quantify its findings in support of the dedication for the pedestrian/bicycle pathway beyond the conclusory statement that it could offset some of the traffic demand generated.").

213. *See e.g.*, *Corn v. City of Lauderdale Lakes*, 997 F.2d 1369, 1375 (11th Cir. 1993); *See also City of Miami Beach v. Lachman*, 71 So. 2d 148, 151-52 (Fla. 1953) ("Collins Avenue . . . is heavily congested and . . . to rezone would seriously aggravate the traffic problem[.]"); *Trachsel v. City of Tamarac*, 311 So. 2d 137, 140 (Fla. 4th DCA 1975); *see also Cnty. of Brevard v. Woodham*, 223 So. 2d 344, 348 (Fla. 4th DCA 1969).

214. DUANY, ET AL, *supra* note 16, at 24. Limited access to and from Hilton Head Island also contributes to the congestion.

Figure 4<sup>215</sup>

*Smart Code* mandates an interconnected street network founded on blocks. Cul-de-sacs become the exception, rather than the rule: “All Thoroughfares shall terminate at other Thoroughfares, forming a network. Internal Thoroughfares shall connect wherever possible to those on adjacent sites. Cul-de-sacs shall be subject to approval by Warrant to accommodate specific site conditions only.”<sup>216</sup>

### G. Reducing Government Expenses

Gridded street design reduces the cost of infrastructure by at least one-third over conventional suburban design.<sup>217</sup> Compact

215. Image Credit: Craig Ustler, Ustler Development, Inc. For similar graphs, see Brian Bochner & Fred Dock, *Street Systems and Classifications to Support Smart Growth* 8 (2003), available at [http://www.urbanstreet.info/2nd\\_sym\\_proceedings/Volume%202/Dock.pdf](http://www.urbanstreet.info/2nd_sym_proceedings/Volume%202/Dock.pdf), and *The Land Use Plan: Balanced Transportation*, CITY OF NEWPORT NEWS FRAMEWORK FOR THE FUTURE 2030, available at [http://www2.nngov.com/newport-news/plan/framework2008/section\\_d393749e1271.html](http://www2.nngov.com/newport-news/plan/framework2008/section_d393749e1271.html) (source credited to Glatting Jackson, Inc.).

216. *SmartCode*, *supra* note 38, at SC12.; Cf. Eric M. Weiss, *In Va., Vision of Suburbia at a Crossroads: Targeting Cul-de-Sacs, Rules Now Require Through Streets in New Subdivisions*, WASH. POST, Mar. 22, 2009, at A1, available at <http://www.washingtonpost.com/wp-dyn/content/article/2009/03/21/AR2009032102248.html> (stating that severe limits on cul-de-sacs decrease consumer choice in new development and reduce privacy; however, this is the trade-off to limit government expenditures and avoid ever-widening roads.).

217. See Robert Steuveville, *The Case for the Simple Grid*, NEW URB. NEWS, Mar. 2009 at 7 (reporting: “A grid lowers per-unit infrastructure costs 35 to 40 percent compared to conventional suburban development, reports Jonathan Ford, a planner and civil engineer with Morris Beacon Design. In a study for EPA, he ran cost comparisons of various development scenarios for a South Carolina site.”).

communities enable local governments to provide services to more residents at a lower per capita cost and at a higher service level. For example, a fire station serving a TND in Charlotte, North Carolina, covers 4.5 times as many households as a comparable fire station in the city's drive-only sprawl.<sup>218</sup> Per capita operating costs of \$740 for the fire station in sprawl far exceeded the \$159 for the fire station serving the traditional neighborhood.<sup>219</sup> Firefighter response times improve with interconnected, gridded streets.<sup>220</sup>

At the macro level, a University of Pennsylvania study of the Orlando metropolitan area examined land planning alternatives for a population projected to grow from 3 million to 7.2 million by the year 2050.<sup>221</sup> The present trend model, relying on roads and new highways to service low density residential neighborhoods, would cost government \$130.7 billion.<sup>222</sup> An alternative, Transit Oriented Development model reduced newly developed acreage by 64% and infrastructure costs by \$26.3 billion compared to the present trend model.<sup>223</sup> The reduction occurred *despite* \$27.9 billion invested in high speed and commuter rail and \$18.1 billion spent acquiring environmentally-sensitive land.<sup>224</sup>

#### *H. Form-Based Codes Are Easier to Understand*

An ordinance is unconstitutionally vague when “persons of common intelligence must necessarily guess at its meaning and differ as to its application.”<sup>225</sup> The diagrams and images in form-based codes can clarify language otherwise vague in a conventional code,<sup>226</sup> and make obsolete the notion that we are “[c]ondemned to

218. CONG. FOR NEW URBANISM, *supra* note 123, at 7.

219. *Id.*

220. *Id.* at 6 (in Charlotte, firefighter response times increased from 4.5 minutes to 5.5 minutes between the mid-1970's and 2002, coinciding with the prevalence of cul-de-sac residential development. Response times decreased to five minutes since adoption in 2001 of an ordinance requiring street connectivity).

221. See generally Jonathan Barnett, *Alternative Futures for the Seven-County Orlando Region*, in SMART GROWTH IN A CHANGING WORLD 61 (Jonathan Barnett ed., 2007). The Penn researchers extrapolated the 2050 population from a projection of 5.3 million people by 2030 made by the University of Florida's Bureau of Economic and Business Research. *Id.* at 62.

222. *Id.* at 69.

223. *Id.* at 72-75.

224. *Id.* at 75.

225. *Rectory Park, L.C. v. City of Delray Beach*, 208 F. Supp. 2d 1320, 1329 (S.D. Fla. 2002).

226. *Anderson v. City of Issaquah*, 851 P.2d 744, 753 (Wash. Ct. App. 1993). For a brief summary of this case and its implications, see SLONE & GOLDSTEIN, *supra* note 42, at 111. For examples of graphic links from an online code's text, see ST. PETERSBURG, FLA., CODE OF ORDINANCES ch.16 § 20.010.4.1 (2008), available at <http://www.municode.com/resources/gateway.asp?pid=11602&sid=9>.



the use of words[.]”<sup>227</sup> Form-based zoning codes rely on images, diagrams, and matrixes to make the requirements and physical vision understandable to the general public, government officials, developers, and the professionals who work with them. Diagrams illustrating flexible standards within a mathematically certain range may regulate the placement of buildings, streets, sidewalks, parking, above-ground utilities, and trash containers.<sup>228</sup>

More general diagrams, labeled for “Illustrative Purposes Only,” may convey intent as to general appearance without constituting a specific regulation.<sup>229</sup> A photograph illustrating a design principle could contain information inconsistent with another code provision.<sup>230</sup> To avoid ambiguity, a form-based code should contain language such as that drafted by the author for the City of Winter Garden Downtown Historic District Overlay: “The photographs and illustrations . . . are for illustrative purposes only. Each photograph and illustration is intended to illustrate the design principle(s) or architectural style or element identified in the corresponding caption. The text [of the Code] . . . shall prevail in the event of any discrepancy with a visual depiction . . . .”<sup>231</sup>

Conventional zoning codes also use graphics, diagrams, and matrixes, but to a more limited extent. A map, for example, painted with the myriad colors of zoning use districts, must accompany a zoning ordinance.<sup>232</sup> A roadway corridor map associated with a comprehensive land use plan similarly uses graphics to convey information.<sup>233</sup> Florida law expressly permits comprehensive land use plan graphics to prescribe standards for an area’s physical de-

227. *Grayned v. City of Rockford*, 408 U.S. 104, 110 (1972) (rejecting vagueness attack on noise ordinance).

228. *See Union Trust Co. v. Lucas*, 125 So. 2d 582, 586-87 (Fla. 2d DCA 1960) (upholding a setback ordinance although it failed to define “building”). A vagueness attack will fail when a decision-maker has “flexibility” in applying “clear and definite standards.” *See Rectory Park, L.C.* 208 F. Supp. 2d at 1334 (upholding zoning ordinance allowing high density, mixed-use development as conditional use).

229. Elizabeth Garvin & Dawn Jourdan, *Through the Looking Glass: Analyzing the Potential Legal Challenges to Form-Based Codes*, 23 J. LAND USE & ENVTL. L. 395, 420 (2008) (“If graphics are regulatory, it is wise to provide written guidance to match the intent of the illustration, both in the form of labels on the illustration and text with the regulation.”).

230. For example, an early draft of the Design Guidelines Manual accompanying the Winter Garden, Florida, Historic Downtown District Overlay ordinance contained a photograph of a house for the purpose of conveying its architectural style. However, the photograph showed a vehicle parked on the lawn, in violation of another code provision. We replaced the photograph.

231. WINTER GARDEN, FLA., CODE § 98-188(4)(b) (2010). *See also SMARTCODE*, *supra* note 38, at art. 1, § 1.2.6 SC2 (“Where in conflict, numerical metrics shall take precedence over graphic metrics.”).

232. *See Moon v. Smith*, 189 So. 835, 838-39 (Fla. 1939) (holding a zoning ordinance is deemed void for lack of definiteness if lacking a zoning map).

233. *See Palm Beach Cnty. v. Wright*, 641 So. 2d 50, 53-54 (Fla. 1994).

velopment.<sup>234</sup> Conventional codes use complex matrixes to categorize those land uses permitted or available as a conditional use.<sup>235</sup> These well-established precedents, authorized by local government police powers, set the stage for a more comprehensive use of graphics, diagrams, and matrixes to guide and improve the look and function of future development.

Despite the overwhelming advantages of replacing conventional zoning with form-based codes, some will oppose their adoption. The next section reviews potential challenges.

## VII. POTENTIAL CHALLENGES TO FORM-BASED CODES

### A. Consistency with the Comprehensive Land Use Plan

Florida's Growth Management Act requires consistency between zoning and the underlying Comprehensive Plan.<sup>236</sup> The Act requires compatibility that will "further the objectives, policies, land uses, and densities or intensities in the comprehensive plan."<sup>237</sup> A potential challenger to a form-based code would look for inconsistencies.<sup>238</sup>

In Florida, each local governing body must transmit a comprehensive plan to the Department of Community Affairs.<sup>239</sup> The comprehensive plan should set forth "general guidelines[.]" which Courts should construe broadly.<sup>240</sup> Land use regulations must implement the Comprehensive Plan with "specific and detailed provisions" that, among other things:

#### (b) Regulate the use of land and water for those land use

234. See FLA. STAT. § 163.3177(1) (2010) (stating in part: "The comprehensive plan shall consist of materials in such descriptive form, written or graphic, as may be appropriate to the prescription of principles, guidelines, and standards for the orderly and balanced future economic, social, physical, environmental, and fiscal development of the area.").

235. See, e.g., ORANGE CNTY., FLA., CODE OF ORDINANCES § 38-77 (2010).

236. FLA. STAT. § 163.3194(1)(b) (stating that "[a]ll land development regulations enacted or amended shall be consistent with the adopted comprehensive plan, or element or portion thereof[.]"); *Id.* § 163.3213(2)(b) (defining "[l]and development regulation" as an ordinance for regulating "any aspect of development"). See *Bd. of Cnty. Comm'rs. v. Snyder*, 627 So. 2d 469, 476 (Fla. 1993) (concluding a landowner seeking a zoning change has the initial burden of proving consistency with comprehensive plan).

237. FLA. STAT. § 163.3194(3)(b).

238. "Some areas frequently requiring adjustment [in comprehensive plans before adopting a form-based code] are Transfer of Development Rights, fast-tracking approvals, building code waivers, the bifurcated Variance/Warrant system and associated administrative processing of Warrants, and the procedures for various approvals by the [Consolidated Review Committee], the Planning Office, the Board of Appeals and the Legislative Body, or their local analogs." SMARTCODE 9.0 & MANUAL A-44 (on file with author).

239. FLA. STAT. § 163.3184.

240. *Id.* § 163.3194(4)(b).

categories included in the land use element and ensure the compatibility of adjacent uses and provide for open space.

. . . .

(e) Ensure the protection of environmentally sensitive lands designated in the comprehensive plan.

(f) Regulate signage.

. . . .

(h) Ensure safe and convenient onsite traffic flow, considering needed vehicle parking.<sup>241</sup>

As demonstrated earlier, in ways superior to conventional zoning, form-based codes ensure compatibility between adjacent uses, provide for meaningful open spaces, protect environmentally sensitive lands, regulate signage, ensure safe and efficient traffic flow, and provide for necessary parking. A comprehensive plan can accommodate, facilitate and encourage form-based zoning.

The Growth Management Act “shall be construed to encourage the use of innovative land development regulations.”<sup>242</sup> The Act mandates “land use efficiencies within existing urban areas[,]” and “innovative” greenfield development which uses “creative land use planning techniques, which may include, but not be limited to, urban villages, new towns . . . clustering and open space provisions, mixed-use development, and sector planning.”<sup>243</sup> This language amply authorizes adoption of form-based codes.

The Growth Management Act requires “comprehensive plans and implementing land development regulations [that] provide strategies which maximize the use of existing facilities and services through redevelopment, urban infill development, and other strategies for urban revitalization.”<sup>244</sup> *SmartCode* contains an entire Article on infill development.<sup>245</sup>

Amendments to comprehensive land use plans are legislative

241. *Id.* § 163.3202(2).

242. *Id.* § 163.3202(3).

243. *Id.* § 163.3177(11)(b) (stating: “It is the intent of the Legislature that the local government comprehensive plans and plan amendments adopted pursuant to the provisions of this part provide for a planning process which allows for land use efficiencies within existing urban areas and which also allows for the conversion of rural lands to other uses, where appropriate and consistent with the other provisions of this part and the affected local comprehensive plans, through the application of innovative and flexible planning and development strategies and creative land use planning techniques, which may include, but not be limited to, urban villages, new towns, satellite communities, area-based allocations, clustering and open space provisions, mixed-use development, and sector planning.”).

244. *Id.* § 163.3177 (11)(c).

245. SMARTCODE, *supra* note 38, at art. IV.

in character, even if pertaining to a single parcel.<sup>246</sup> Therefore, the “fairly debatable” standard would apply to a comprehensive plan that provides for form-based zoning.

### *B. Not a Taking of Property*

A claim that a form-based code takes property without reasonable compensation in violation of the United States Constitution would likely fail. The Constitution confers no general freedom from zoning changes.<sup>247</sup> The purchase of land creates no right to build to a property’s highest and best use,<sup>248</sup> or even rely on existing zoning.<sup>249</sup> In fact, a landowner with favorable zoning who delays development acts at his “own peril” since zoning laws may change.<sup>250</sup>

Form-based codes normally increase property values, but even if one could demonstrate otherwise, a regulation diminishing most of a property’s value is not a taking.<sup>251</sup> A zoning ordinance is invalid only if it prohibits all reasonable<sup>252</sup> and “economically viable”<sup>253</sup> uses. In the T1 Natural Transect, property owners may receive

246. *Bd. of Cnty. Comm’rs v. Qualls*, 772 So. 2d 544, 546 (Fla. 1st DCA 2000). At the zoning stage, however, an application to change a single parcel would constitute a quasi-judicial proceeding, requiring substantial competent evidence. *See Bd. of Cnty. Comm’rs v. Snyder*, 627 So. 2d 469, 474 (Fla. 1993), (upholding a lower court ruling that, “[R]ezoning actions which have an impact on a limited number of persons or property owners, on identifiable parties and interests, where the decision is contingent on a fact or facts arrived at from distinct alternatives presented at a hearing, and where the decision can be functionally viewed as policy application, rather than policy setting, are in the nature of. . . quasi-judicial action. . . .” (quoting *Snyder v. Bd. of Cnty. Comm’rs*, 595 So. 2d 65, 78 (Fla. 5th DCA 1991))).

247. *See New Port Largo, Inc. v. Monroe Cnty.*, 95 F.3d 1084, 1090 (11th Cir. 1996).

248. *Lee Cnty. v. Morales*, 557 So. 2d 652, 655 (Fla. 2d DCA 1990) (holding that a property owner was not entitled to more economically valuable zoning); *See also Graham v. Estuary Props., Inc.*, 399 So. 2d 1374, 1379 (Fla. 1981) (holding that a developer was not permitted to destroy mangroves to maximize residential density because mangrove destruction would pollute bays and impact the fishing industry).

249. *Morales*, 557 So. 2d at 655 (commercial zoning replaced with agriculture/rural residential zoning to protect ecologically significant barrier island).

250. *Monroe Cnty. v. Ambrose* 866 So. 2d 707, 711 (Fla. 3d DCA 2003) (citing *Pasco Cnty. v. Tampa Dev. Corp.*, 364 So. 2d 850 (Fla. 2d DCA 1978)).

251. *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 125-33 (1978); *see also Graham*, 399 So. 2d at 1382.

252. *See Key Haven Associated Enters. Inc. v. Bd. of Trs. of Internal Improvement Trust Fund*, 427 So. 2d 153, 159 (Fla. 1982) (“A zoning ordinance is, by definition, invalid if it is confiscatory”) (citing *Dade Cnty. v. Moore*, 266 So. 2d 389 (Fla. 3d DCA 1972)) (emphasis omitted); *Forde v. City of Miami Beach*, 1 So. 2d 642, 645 (Fla. 1941); *Town of Indianlantic v. McNulty*, 400 So. 2d 1227, 1232-34 (Fla. 5th DCA 1981) (holding that a zoning ordinance to protect beach sand dunes prohibited landowner from building; however, the ability to obtain a waiver or variance with proper submittals did not establish a taking); *Broward Cnty. v. Capeletti Bros.*, 375 So. 2d 313, 315 (Fla. 4th DCA 1979).

253. *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1016 (1992) (emphasis omitted).

compensation for non-development by way of TDRs in compliance with constitutional standards.<sup>254</sup> A more realistic—and potentially serious—challenge in Florida would come under its private property rights protection statute, the Bert Harris Act.

### C. Bert Harris Act Challenges

The Bert J. Harris, Jr. Private Property Rights Protection Act (the “Bert Harris Act”) creates a cause of action when government regulation “inordinately burden[s]” a property.<sup>255</sup> This standard is easier to prove than a taking of property under the Constitution. A well-crafted, form-based code will contain disincentives to Bert Harris litigation. Most property owners should find that form-based codes *increase* their property rights by deregulating zoning use classifications, onerous parking requirements, and density constraints. Further, a form-based code should streamline cumbersome and time-consuming approvals for proposed development meeting the code’s requirements.<sup>256</sup> Finally, a litigant could find proving loss of market value difficult because walkability generally increases land value.<sup>257</sup> Regardless, to avoid unnecessary Bert Harris actions, local governments should exercise care when assigning properties to transects and when calibrating *SmartCode* to prevailing building heights. To reduce building heights on a partially developed street may invite Bert Harris litigation by those

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254. See *Shands v. City of Marathon*, 999 So. 2d 718, 723 (Fla. 3d DCA 2008) (rejecting inverse condemnation claim in part due to availability of transfer of development rights); *Glisson v. Alachua Cnty.*, 558 So. 2d 1030, 1037 (Fla. 1st DCA 1990) (concluding that entitlement to transfer of development rights precludes a takings claim).

The effectiveness of TDRs is dictated by: (1) the “[d]emand for [b]onus [d]evelopment[.]” (2) the receiving area’s appropriateness, including adequate infrastructure and political acceptability; (3) “[s]trict [s]ending-[a]rea [d]evelopment [r]egulations[.]” (4) “[f]ew or [n]o [a]lternatives to TDRs for [a]chieving [a]dditional [d]evelopment[.]” (5) transfer ratios that provide market incentives; (6) mandatory instead of discretionary transfer approvals to remove uncertainty; (7) “[s]trong [p]ublic [s]upport for [p]reservation[.]” (8) simplicity of the program; (9) promotion of the TDR option; and (10) a TDR Bank to buy, hold, and sell TDRs, including purchasing TDRs when private buyers are not available. Rick Pruetz & Noah Standridge, *What Makes Transfer of Development Rights Work? Success Factors from Research and Practice*, 75 J. AM. PLAN. ASS’N. 78, 78-86 (2009).

255. FLA. STAT. § 70.001(2) (2010).

256. For example, Arlington, Virginia’s form-based code enables development approval within fifty-five days. *Columbia Pike Revitalization, VA., ARLINGTON ECONOMIC DEVELOPMENT*, <http://www.arlingtonvirginiausa.com/index.cfm/7471> (last visited Feb. 18, 2011); *SmartCode* provides for administrative approval of development by right and warrant. SMARTCODE, *supra* note 38, at SC4; PAROLEK ET AL., *supra* note 3, at 89.

257. LEINBERGER, *supra* note 1, at 99-100 (40%-200% cost premium to live in walkable communities compared to drive-only communities). Under the Bert Harris Act, a property owner must “present the claim in writing to the head of the governmental entity” along with “a bona fide, valid appraisal,” which “demonstrates the loss in fair market value to the real property.” FLA. STAT. § 70.001(4)(a).

who perceive a loss of rights enjoyed by their neighbors. Local governments should not “incautiously rescind[]” previously allowed, or “grandfathered” uses.<sup>258</sup>

At an adoption hearing for Miami’s new form-based code, attorneys threatened Bert Harris lawsuits due to height limits in a certain district.<sup>259</sup> Miami’s conventional zoning ordinance allowed heights up to ninety-five feet in C-1 commercial zones. This encouraged re-zonings of residential land to C-1 and construction of tall buildings next to single family homes. Miami’s form-based code, therefore, restricted building heights in such areas for compatibility.<sup>260</sup> As explained below, unless the developers spent money developing their properties at the previously allowed heights, or can establish their proposed heights are compatible with the adjacent single family homes, their threatened Bert Harris Act claims will likely fail.

The Bert Harris Act states:

When a specific action of a governmental entity has inordinately burdened an existing use of real property or a vested right to a specific use of real property, the property owner of that real property is entitled to relief, which may include compensation for the actual loss to the fair market value of the real property caused by the action of government, as provided in this section.<sup>261</sup>

Accordingly, the Bert Harris Act protects only an “existing use . . . or a vested right to a specific use” from an “inordinate burden.”<sup>262</sup> An “inordinate burden” means “an action of one or more governmental entities [that] has directly restricted or limited the use of real property such that the property owner is permanently unable to attain the reasonable, investment-backed expectation for the existing use . . . or a vested right to a specific use.”<sup>263</sup> Pre-existing zoning must have supported the “investment-backed

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258. *Lee Cnty. v. Sunbelt Equities, II, Ltd. P’ship*, 619 So. 2d 996, 1006 (Fla. 2d DCA 1993). For example, a local government may designate a certain parcel as “conservation” in a new land use plan and new zoning ordinance when a pre-existing PUD designated the land for preservation.

259. See Memorandum from Marc D. Sarnoff, Commissioner, District 2, to Mr. Chair and Fellow Commissioners (Sept. 1, 2009), <http://marcsarnoff.com/uploads/2009-09-01%20Miami%2021.pdf>.

260. Viglucci & Rabin, *supra* note 39.

261. FLA. STAT. § 70.001(2).

262. *Id.* § 70.001(3)(e).

263. *Id.*

expectation.”<sup>264</sup> A “unilateral expectation or an abstract need” is insufficient.<sup>265</sup>

Development rights vest “by applying the principles of equitable estoppel or substantive due process under the common law or by applying the statutory law of this state.”<sup>266</sup> Approval of a site plan, issuance of a building permit, and subjective expectations all fail to create a vested right to rely on existing zoning.<sup>267</sup> Nor can one rely on maximum intensities and densities allowed by a Comprehensive Land Use Plan.<sup>268</sup> Rather, property rights vest, triggering Bert Harris Act protection, when a landowner changes his position substantially, such as by incurring “extensive obligations and expenses[,]” so as to make destruction of an “acquired” right “highly inequitable and unjust[.]”<sup>269</sup> Statutory vesting can occur with approval of a Development of Regional Impact.<sup>270</sup> Absent those facts, “[i]t would be unconscionable to allow the Landowners to ignore *evolving* and existing land use regulations under circumstances when they have not taken any steps in furtherance of developing their land.”<sup>271</sup>

The concept of vesting creates an important distinction from an infringement of theoretical property rights a landowner would

264. *Palm Beach Polo, Inc. v. Vill. of Wellington*, 918 So. 2d 988, 995 (Fla. 4th DCA 2006) (Bert Harris Act claim on preserved land designated as “conservation” before purchase was “frivolous”).

265. *Namon v. Dept’t of Env’tl. Regulation*, 558 So. 2d 504, 505 (Fla. 3d DCA 1990) (quoting *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1005 (1984)). The property owner must further prove it “bears permanently a disproportionate share of a burden imposed for the good of the public, which in fairness should be borne by the public at large.” FLA. STAT. § 70.001(3)(e).

266. FLA. STAT. § 70.001(3)(a); *See also City of Jacksonville v. Coffield*, 18 So.3d 589, 595 (Fla. 1st DCA 2009) (denying Bert Harris claim because parcel’s development into residential lots was not a vested right).

267. *See Monroe Cnty. v. Ambrose*, 866 So. 2d 707, 711 (Fla. 3d DCA 2003) (recordation of parcels does not vest rights.); *Walker v. Indian River Cnty.*, 319 So. 2d 596, 599-600 (Fla. 4th DCA 1975) (site plan approval does not create a vested right in absence of substantial expenditures in reliance); *City of Boynton Beach v. Carroll*, 272 So. 2d 171, 173 (Fla. 4th DCA 1973) (“It follows then, and it has been so held, that if the possession of a building permit does not create a vested right, then a mere application for a building permit cannot create a vested right.”); *see also City of Miami Beach v. Chisholm Props. South Beach, Inc.*, 830 So. 2d 842, 843 (Fla. 3d DCA 2002) (Schwartz, C.J., concurring) (characterizing Ritz Carlton’s Bert Harris Act claim due to a building height restriction “spurious”).

268. *Bd. of Cnty. Comm’rs., v. Snyder*, 627 So. 2d 469, 475 (Fla. 1993) (“[T]he local government should have the discretion to decide that the maximum development density should not be allowed[.]”).

269. *Hollywood Beach Hotel Co. v. City of Hollywood*, 329 So. 2d 10, 15-16 (Fla. 1976) (nearly \$200,000 spent on site plan, models, building permits and architect’s plans and specifications). Such instances create an estoppel.

270. FLA. STAT. § 163.3167(8); *Edgewater Beach Owners Ass’n v. Walton Cnty.*, 833 So. 2d 215, 222 (Fla. 1st DCA 2002) (determining that rights acquired by approval of development of regional impact are vested and do not require compliance with a more recently adopted comprehensive plan).

271. *Ambrose*, 866 So. 2d at 711 (emphasis added).

never exercise. For example, a property owner with C-1 commercial zoning, who intended to build single-story strip shopping center, would face evidentiary obstacles bringing a Bert Harris action based on an alleged inability to construct a ninety-five foot office tower. A form-based code requiring two or three stories of mixed-use development would increase the density actually built.

A zoning ordinance allowing a maximum, or even unlimited, height does not vest a right to build at a height certain if the ordinance also reserves the right to require compatibility with adjacent development.<sup>272</sup> A form-based code would, in effect, replace a theoretical, non-vested height limit (indeterminate due to the compatibility requirement) with a vested right to built at a lower, but certain number of stories legislatively determined as compatible.

The Bert Harris Act protects, and a form-based code should not interfere, with existing uses. For example, an existing five-story building would become non-conforming when a new form-based code allows only three stories; however, the building would remain. Miami's form-based code states, "[N]onconformities may continue but are not encouraged to expand or enlarge, and once they cease they may not be re-established[.]"<sup>273</sup> This is consistent with case law, which grandfathers existing nonconforming uses.<sup>274</sup> The law expects nonconforming uses to disappear gradually through "abandonment, destruction, and obsolescence."<sup>275</sup>

However, the term "existing use," as defined by the Bert Harris Act, extends to "such reasonably foreseeable, nonspeculative land uses which are suitable for the subject real property and compatible with adjacent land uses and which have created an existing fair market value in the property greater than the fair market val-

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272. *Las Olas Tower Co. v. City of Ft. Lauderdale*, 742 So. 2d 308, 313-14 (Fla. 4th DCA 1999) (affirming lower court's denial of a forty-five story residential condominium based on incompatibility with adjacent properties, despite the central business district's exemption from maximum height restrictions); *Battaglia Props. v. Fla. Land & Water Adjudicatory Comm'n*, 629 So. 2d 161, 168 (Fla. 5th DCA 1993) (holding that a thirty-five foot height limit is reasonably related to maintaining compatibility with a nearby residential neighborhood).

273. MIAMI, FLA. MIAMI 21 ZONING CODE, art. 7, § 2.1(b) (2010), available at <http://miami21.org/pdfs/finaldocumentsmay2010/fulldocument-may2010.pdf>. Miami's form-based code also allows development conditions approved under the old code to continue. *Id.* at art. 2, § 2.3 (2009).

274. *Dowd v. Monroe Cnty.*, 557 So. 2d 63, 65 (Fla. 3d DCA 1990) (holding a nonconforming motel use grandfathered but preventing it from expansion); *Bemas Corp. v. City of Jacksonville*, 298 So. 2d 467, 469 (Fla. 1st DCA 1974) (pit operation beginning before zoning change resulted in grandfathered nonconforming use).

275. *3M Nat'l Adver. Co. v. City of Tampa Code Enforcement Bd.*, 587 So. 2d 640, 641 (Fla. 2d DCA 1991).



ue of the actual, present use or activity on the real property.”<sup>276</sup> The determination whether a proposed use is “reasonably foreseeable, nonspeculative” and compatible with adjacent land uses is fact-intensive and conducive to litigation.<sup>277</sup> Nevertheless, the “compatible with adjacent land uses” requirement restrains unreasonable judicial results.<sup>278</sup> Under this standard, a property owner could not recover damages when a local government rejects a proposed building height *far* exceeding the heights of adjacent single-family homes. In closer cases, the outcome becomes more uncertain. Regardless, the Bert Harris Act pertains to “as-applied” challenges, as opposed to facial challenges to an ordinance. The property owner must seek, and the local government must reject, a request for a height variance under the form-based code.<sup>279</sup>

In response to a Bert Harris claim, the local government must tender a written settlement offer, which may include land swaps or a transfer of development rights.<sup>280</sup> The government entity must also “issue a written ripeness decision identifying the allowable uses to which the subject property may be put.”<sup>281</sup> The circuit court must consider both the settlement offer and ripeness decision when determining whether an inordinate burden has occurred.<sup>282</sup> Therefore, if an actual market and mechanism exists for development right transfers, a settlement offer of such a transfer may enable the local government to prevail in the litigation.<sup>283</sup>

276. FLA. STAT. §70.001(3)(b) (2010).

277. *Id.*; *see, e.g.*, *City of Jacksonville v. Coffield*, 18 So. 3d 589, 596 (Fla. 1st DCA 2009) (“Once Mr. Coffield learned that an application had been filed to close the only roadway providing ingress and egress to the property, development of the property into eight single-family lots was, if still a possibility, by no means a ‘reasonably foreseeable, nonspeculative,’ use of the property.”); *Citrus Cnty. v. Halls River Dev., Inc.*, 8 So. 3d 413, 421 (Fla. 5th DCA 2009) (The purchase of property zoned for low intensity development of single family residences did not make it “reasonably foreseeable and nonspeculative” to build multi-family condominiums despite county’s assurance along with erroneous zoning map showing property as allowing multi-family uses); *Palm Beach Polo, Inc. v. Vill. of Wellington*, 918 So. 2d 988, 995 (Fla. 4th DCA 2006) (“[T]here was no ‘reasonable investment-backed expectation’ for existing use [to develop protected conservation land.]”).

278. FLA. STAT. 70.001(3)(b).

279. *M & H Profit, Inc. v. City of Panama City*, 28 So. 3d 71 (Fla. 1st DCA 2009).

280. FLA. STAT. § 70.001(4)(c).

281. *Id.* § 70.001(5)(a).

282. *Id.* § 70.001(6)(a). The property owner may file a circuit court lawsuit only after rejecting the settlement offer and ripeness decision. *Id.* § 70.001(5)(b). The property owner must bring the claim at least 180 days before filing suit, shortened to at least ninety days for agricultural property. *Id.* §70.001(4)(a).

283. Doris S. Goldstein, *New Urbanism: Recreating Florida by Rewriting the Rules*, FLA. BAR J., Apr. 2006, at 63 (“To prevent challenges under the Bert Harris Act, communities have preferred to achieve objectives through market-place mechanisms, particularly the use of Transferable Development Rights.” (citation omitted)), *available at* <http://www.floridabar.org/DIVCOM/JN/JNJournal01.nsf/c0d731e03de9828d852574580042ae7a/9a1a0be243586f328525713b00633870?OpenDocument>.

The Bert Harris Act “does not apply to any actions taken by a governmental entity which relate to the operation, maintenance, or expansion of transportation facilities.”<sup>284</sup> Therefore, new thoroughfare regulations under a form-based code—a key element for establishing a safe pedestrian realm—will not expose a local government to Bert Harris liability.

#### VIII. FORM-BASED SYSTEMS AS A PARALLEL, FLOATING, OR HYBRID CODE

One way to virtually ensure rejection of Bert Harris Act claims—and reduce political conflict in general—is to make the form-based code an optional, parallel overlay to the existing zoning code.<sup>285</sup> This approach has proven successful in a limited geographic area. In 1999, Miami-Dade County adopted the optional format for downtown Kendall.<sup>286</sup> Because of its predictability, numerous landowners selected the form-based option over conventional zoning for redeveloping properties into 3,000 residential units, 350,000 square feet of retail, 110,000 square feet of office space, and a Marriott Hotel.<sup>287</sup>

An alternative to a parallel overlay is a “floating code,” which avoids the politics inherent in adopting a mapped regulating plan establishing transects, but which also avoids comprehensive reform of a broken zoning system. At a landowner’s request, the form-based system “floats” to the parcel slated for development. Coherency and consistency will suffer when an inappropriate transect-zone floats to a parcel<sup>288</sup> or when new drive-only sprawl shatters a pedestrian shed. Consequently, a parallel code is significantly preferable to a floating code, although not as ideal as replacing an outdated *Euclidean* zoning scheme.

Political expediency may result in a hybrid code, in which conventional zoning applies to highly suburbanized areas, where resi-

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284. FLA. STAT. § 70.001(10).

285. *Contra*, MIAMI, FLA. MIAMI 21 ZONING CODE, § 2.2.1.1 (2010), available at <http://miami21.org/pdfs/finaldocumentsmay2010/fulldocument-may2010.pdf>. “This Code replaces the Zoning Ordinance for the City of Miami, also known as Ordinance 11000 except that Section 627, ‘SD-27 Midtown Special District’ is hereby retained and incorporated as Appendix C hereto . . .”.

286. Robert Steuteville, *A Suburban Agglomeration Becomes a Downtown*, NEW URB. NEWS, Dec. 2004, at 10, 11.

287. *Id.*

288. *Cf.* *City of Miami Beach v. Lachman*, 71 So. 2d 148, 152 (Fla. 1953) (“The reasonable inference is that if the zoning restrictions are removed from the ten tracts interspersed among the 86 tracts, the zoning plan as to all will be materially affected, if not, in fact, destroyed.”); See also John M. Barry, *Form-Based Codes: Measured Success Through Both Mandatory and Optional Implementation*, 41 CONN. L. REV. 305, 331 (2008).

dents oppose increased density, while form-based zoning applies to more urbanized areas. Saint Petersburg, Florida and Hillsborough County, Florida have hybrid codes. Orange County, Florida is moving in the direction of a hybrid code.

## IX. CONCLUSION

The Florida Supreme Court has held, “[A] zoning plan should be sufficiently stable to protect those who comply with the law, but at the same time, it should be susceptible to change, so that it can be altered to meet changing conditions not adequately recognized or not possible to foresee when the ordinance was adopted.”<sup>289</sup> When zoning laws “become obsolete or run afoul the public welfare would seem to be a good test to prompt the time for change or removal.”<sup>290</sup> This authority alone provides support for changing sprawl-inducing zoning to form-based systems. Decades ago, few could foresee the negative impact of drive-only development on the built environment, the natural environment, public health and safety, and governmental expenditures.

Local governments considering adoption of a form-based code should guard against incorporation of standards not embodying New Urbanism. After a code’s adoption, staff, elected officials, and members of the public should monitor its implementation and execution.<sup>291</sup>

Courts will uphold a fairly-debatable legislative decision to adopt a form-based code. Well-established police powers authorize, and provide ample justification for a local government to adopt form-based zoning to improve aesthetics, reduce pollutants, more efficiently use government resources, and improve health and safety. In most circumstances, a local government fighting a legal challenge to a prudently-crafted form-based code should prevail.

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289. *Forde v. City of Miami Beach*, 1 So. 2d 642, 645 (Fla. 1941).

290. *Siegel v. Adams*, 44 So. 2d 427, 428 (Fla. 1950).

291. Mike Thomas, *Nothing ‘New’ Here—Just Same Old Sprawl*, ORLANDO SENTINEL, Oct. 29, 2009 at B1, available at <http://www.allbusiness.com/government/government-bodies-offices-regional/13342565-1.html> (arguing that Orange County poorly executed its code with New Urbanism principles by separating residents from shopping areas with high speed arterial roads and by omitting alleys from residential subdivisions).



# MEASURING SUCCESS IN DEVOLVED COLLABORATION

SHAHLA ALI\*

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## I. INTRODUCTION

Beginning in the early 1990s, international declarations have increasingly encouraged the use of devolved collaboration as a means of policy planning and regulation of public resources.<sup>1</sup> This encouragement largely arises from a view that public resource decisionmaking is “best handled with [the] participation of all concerned citizens, at the relevant level.”<sup>2</sup> In many respects, this em-

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1. See United Nations Conference on Environment and Development, Rio de Janeiro, Braz., June 3-14, 1992, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev. 1 (Vol.1), Annex 1 (Aug. 12, 1992).

2. *Id.* at Principle 10. Principle 10 states, in full, that:  
Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public au-

phasis on localized decisionmaking reflects the aspirations voiced by proponents of responsive law in the 1970s: that policymaking be conceptualized as “a facilitator of response to social needs and aspirations.”<sup>3</sup> To achieve this end, much depends on the capacity of legal practitioners and policymakers “to develop new institutional methods for gauging social needs and to devise sensible, politically feasible, and socially acceptable legal remedies.”<sup>4</sup>

Like the responsive law movement, the recent support for devolved collaboration in public resource decisionmaking has largely resulted from growing dissatisfaction with the inefficiencies of centralized top-down “announce and defend” policies.<sup>5</sup> In this paper, Part I discusses the movement toward greater devolved collaboration from a legal and policy perspective. Part II then explores the prospects and structural challenges associated with devolved collaboration in community decisionmaking and the need for clear measures or safeguards to assure that devolved collaboration does not reinforce existing inequalities. When successful, devolved community-based resource management efforts respond to the aspiration for broad based input into policies and decisionmaking invoked originally by responsive law proponents.<sup>6</sup>

Yet, in practice, devolved collaboration is not without its challenges. When implemented without regard to issues of universal representation and disparate access to resources, the process has the potential of “replicat[ing] and perhaps . . . exacerbat[ing] exist-

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thorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

3. PHILIPPE NONET & PHILIP SELZNICK, *LAW AND SOCIETY IN TRANSITION: TOWARD RESPONSIVE LAW* 14-15 (1978).

4. LEGALITY AND COMMUNITY: ON THE INTELLECTUAL LEGACY OF PHILIP SELZNICK 88 (Robert A Kagan et al. eds., 2002).

5. Sheila Foster, *Environmental Justice in an Era of Devolved Collaboration*, 26 HARV. ENVTL. L. REV. 459, 465, 470 (2002).

6. See NONET & SELZNICK, *supra* note 3, at 73-77. Responsive Law is described in relation to both Repressive Law (law as servant of repressive power) and Autonomous Law (law as differentiated institution capable of taming repression and protecting its own integrity). Repressive Law generally takes little note of affected interests. A “common source of repression is the poverty of resources available to governing elites” in circumstances where “urgent tasks must be met under conditions of adequate power but scarce resources.” *Id.* at 33, 36 (footnote omitted).

Autonomous Law can be characterized by the Rule of Law, “[b]orn when legal institutions acquire enough independent authority to impose standards of restraint on the exercise of governmental power. . . . [S]pecialized . . . legal institutions . . . claim a qualified supremacy within defined spheres of competence.” *Id.* at 53 (emphasis omitted) (footnote omitted). Autonomous law reflects a transition from “blanket certification of the source of power to a sustained justification of its use.” *Id.* at 56. (emphasis omitted). “Legal institutions purchase procedural autonomy at the price of substantive subordination.” *Id.* at 58 (emphasis omitted). The downside is that “the application of rules ceases to be informed by a regard for purposes, needs, and consequences.” *Id.* at 64.

ing representation problems.”<sup>7</sup> The existence of subjectivity in rule making, and the danger of getting the moral question wrong represent potential challenges.<sup>8</sup> Similarly, devolved collaboration faces the potential danger of rendering community resource problems “less visible or subject to scrutiny.”<sup>9</sup>

In response to such challenges, Part III of this paper suggests structural improvements to the current process of unanimity-based devolved collaboration, including the use of majority vote in circumstances where unanimity is not possible, and the elimination of veto power. Additionally, Part III offers a set of principle-based measures or indicators that can be used to assess the extent to which devolved collaborative resource decisionmaking programs reflect equitable, inclusive and sustainable outcomes. This evaluation framework synthesizes recent learning in the field of principle-based evaluation with the aim of measuring a community’s ability to reach fair and just decisions regarding the use of local resources that sustains and welcomes the participation of each of its members.<sup>10</sup>

## II. LEGAL AND POLICY IMPETUS FOR DEVOLVED COLLABORATION

Devolved collaboration can be described as a method of localized decisionmaking that encourages “widespread, independent participation by local groups to craft comprehensive solutions to

7. Foster, *supra* note 5, at 485.

8. Among the challenges noted by Nonet and Selznick include the fact that “responsive law is a precarious ideal whose achievement and desirability are historically contingent and depend especially on the urgencies to be met and the resources that can be tapped.” NONET & SELZNICK, *supra* note 3, at 116 (emphasis omitted). Specifically, there is the danger of subjectivity in rule making and “getting the moral question wrong.” The achievement of responsive ideals depends a great deal on the development of cognitive competence (within the judiciary) to consider social conditions, and the gathering of relevant information from outside sources in order to search for a solution, rather than arbitrarily laying down a rule. *Id.* at 115-18.

9. Foster, *supra* note 5, at 485.

10. The role of learning processes that aim to promote integrity, create new social meaning and thereby support institutional honesty will likely be of interest to those who expect to see just changes in the way public and private institutions operate. Indeed, following recent criminal prosecution of corporate dishonesty, widespread support for change has been embraced by the American public. Kurt Eichenwald of the *New York Times*, quotes Leon E. Panetta, the chairman of the public policy and review committees of the New York Stock Exchange:

“The public is concerned not just about the executive who commits a criminal violation[.]...They are concerned about whether or not there is any sense of integrity or morality in the way they do business. And that means it extends beyond whether they are doing the minimum in meeting the law. It extends to whether they are behaving as a corporation with the highest standards.”

Kurt Eichenwald, *Even if Heads Roll, Mistrust Will Live On*, N.Y. TIMES, Oct. 6, 2002, at 1.

difficult [natural resource] concerns on a geographically-focused scale.”<sup>11</sup> On the basis of this approach, “public and private stakeholders collaborate to identify concerns, establish priorities, and design and implement holistic . . . solutions to a broad spectrum of natural resource problems faced within a specific community or geographical region.”<sup>12</sup>

Recent support for devolved collaboration in public resource decisionmaking has largely resulted from growing dissatisfaction with the inefficiencies of centralized “announce and defend” policymaking.<sup>13</sup> The features of traditional resource policymaking that have given rise to calls for reform include the following: 1) rigidity of centralized regulatory structures; 2) limitations of utilitarian decisionmaking processes; and 3) public interest group “capture” resulting in inequitable policy outcomes, as will be described in greater detail below.<sup>14</sup>

First, regulatory inflexibility, characterized by command and control processes of resource use decisionmaking, has been found to be ill-equipped to effectively address increasingly complex and diffuse natural resource use problems.<sup>15</sup> Such centralized processes have been found to be too rigid and fragmented to effectively deal with emerging natural resource problems.<sup>16</sup> Furthermore, wasteful adversarial processes resulting from the pitting of applicants against agencies have been well-documented side effects of centralized bureaucratic decisionmaking.<sup>17</sup>

Second, the utilitarian cost/benefit analysis at the heart of centralized technocratic decisionmaking traditionally ignores surrounding socio-economic factors that directly bear on resource allo-

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11. Foster, *supra* note 5, at 472.

12. *Id.*

13. *Id.* at 465, 470.

14. *Id.* at 465-70.

15. *Id.* at 465-67.

16. *Id.* at 465 (citing DEWITT JOHN, CIVIC ENVIRONMENTALISM: ALTERNATIVES TO REGULATION IN STATES AND COMMUNITIES 260 (1994)).

17. See, e.g., ROBERT A. KAGAN, ADVERSARIAL LEGALISM: THE AMERICAN WAY OF LAW 29-33 (2001). Kagan describes the distinctive U.S. style of “adversarial legalism” as characterized by formal legal contestation and litigant activism. *Id.* at 9. Due to the fragmented nature of governmental authority and weak nature of hierarchical control the result is costliness and legal uncertainty. *Id.* The features of adversarial legalism arise from a desire to be protected from harm (total justice) and limited government that is not always empowered to act. *Id.* at 15-16. The process is responsive in nature but as a consequence carries the risk of unpredictability. *Id.* at 9. Particularly because “[l]aw is treated as malleable, open to parties’ novel legal arguments and . . . extenuating circumstances[.]” the process becomes more political and less uniform. *Id.* at 12.

Kagan gives the example of the Oakland, California, port dredging case which underwent eight years of contentious litigation. *Id.* at 29. He observes that when access to the court is easy, compromise is unstable. *Id.* This stands in stark contrast to more collaborative and efficient processes used in Rotterdam for its own harbor conflicts. *Id.* at 29-30.



cation questions.<sup>18</sup> As observers point out, even with extensive modern public participation requirements, “decision makers give substantial deference to [the technocratic] model . . . by using public input to check the math . . . rather than to question the structure of the underlying equations.”<sup>19</sup> As a result, utilitarian processes fail to take into account the distributional impact of policy decisions as well as the ethical and value dimensions surrounding questions of resource use.<sup>20</sup> Given that such resource use questions are “inherently infused with value judgments,”<sup>21</sup> the reduction of such questions to a single “metric, . . . [implies] significant loss to those values.”<sup>22</sup>

Third, public interest group politics associated with centralized decisionmaking have traditionally resulted in a lack of meaningful participation by diverse members of the public and have limited the ability of policymakers to exercise meaningful discretion.<sup>23</sup> Individuals seeking to participate in open public hearing processes must navigate through a complex maze of regulatory and bureaucratic channels, effectively limiting the quality of information collected by such processes.<sup>24</sup> Of additional concern, given the complexity of existing public hearing structures, individuals seeking to participate in such processes must have access to significant resources (whether economic or political) in order to effectively voice input or concerns.<sup>25</sup> Finally, the capture of agencies by particularly well-endowed interest groups inhibits the ability of administrators to effectively exercise discretion in resource decisionmaking.<sup>26</sup>

As a result of growing dissatisfaction with existing centralized bureaucratic decisionmaking and the limits on meaningful public participation, there is increased attention on the development of devolved decisionmaking processes, which will be discussed in greater detail below.

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18. Foster, *supra* note 5, at 467-68.

19. Shelia Foster, *The Challenge of Environmental Justice*, 1 RUTGERS J.L. & URB. POL'Y 1, 9 (2004).

20. *Id.* at 468-69.

21. *Id.* at 469 (quoting Jim Rossi, *Participation Run Amok: The Costs of Mass Participation for Deliberative Agency Decisionmaking*, 92 NW. U. L. REV. 173, 198 (1997)).

22. *Id.*

23. *Id.* at 470-71.

24. *Id.*

25. See Eileen Gauna, *The Environmental Justice Misfit: Public Participation and the Paradigm Paradox*, 17 STAN. ENVTL. L.J. 3, 12-14 (1998).

26. See Foster, *supra* note 5, at 470.

### III. DEVOLVED COLLABORATION: PROSPECTS AND CHALLENGES

When successful, devolved community-based resource management efforts respond to the aspiration for broad based input into policies and decisionmaking invoked originally by responsive law proponents.<sup>27</sup> The aspirations of the devolved collaboration movement challenge traditional assumptions that “users are locked into a destructive pattern of competition that invariably leads to resource abuse”<sup>28</sup> and that individuals are unable to think beyond self-interest without coercion from the state.<sup>29</sup> In addition, successful collaborative efforts build upon “common interests and values, including connectedness to a ‘place’ and social capital (credibility, trust, and respect) among its participants.”<sup>30</sup>

Practically speaking, the application of devolved collaboration still poses some challenges. When policymakers give little or no regard to concerns of widespread representation and unequal access to resources, this can potentially serve to duplicate or even further “exacerbate existing representational problems.”<sup>31</sup> Similar to the challenges facing responsive law, such as the existence of subjectivity in rule-making, and the danger of getting the moral question wrong through caving into power politics (as advanced through special interests, etc), likewise devolved collaboration faces the potential danger of rendering community resource problems “less visible or subject to scrutiny, because the farther the process is removed from a centralized decision-maker, the less accountability there will be.”<sup>32</sup>

Many of the reported challenges of unanimity-based devolved collaboration arise out of some of its structural features including the requirement of strict unanimity, the use of veto power and lack of attention to logistical requirements of inclusion. Such processes, observers have noted, provide a potential “group incentive for limiting the diversity of participants, particularly in a way that excludes minority interests[.]”<sup>33</sup> Such processes may be susceptible to

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27. See NONET & SELZNICK, *supra* note 3, at 73-77.

28. TERRY L. ANDERSON & DONALD R. LEAL, *FREE MARKET ENVIRONMENTALISM* 144 (rev. ed. 2001).

29. See Douglas S. Kenney, *Arguing About Consensus: Examining the Case Against Western Watershed Initiatives and Other Collaborative Groups Active in Natural Resources Management* 33 (2000), <http://www.cde.state.co.us/artemis/ucb6/UCB6582C762000INTERNET.pdf>.

30. Foster, *supra* note 5, at 473 (citing Stephen M. Nickelsburg, Note, *Mere Volunteers? The Promise and Limits of Community-Based Environmental Protection*, 84 VA. L. REV. 1371, 1393-95 (1998)).

31. *Id.* at 485.

32. *Id.*

33. *Id.* at 486.

disenfranchisement of underrepresented groups or interests on the basis of prejudice.<sup>34</sup> For example, observers note that holding meetings far away from affected areas, or without the aid of translators “create[s] large barriers to entry by making information inaccessible as well as creating an unwelcome climate for many residents.”<sup>35</sup> The use or threatened use of veto power may also give rise to increased potential for coercion by forcing decisions that reflect the status quo or, at worst, “exacerbating existing distributional disparities.”<sup>36</sup> Some also note the danger of devolved decisionmaking processes not taking into account a diversity of public values representative of a local community and potentially entrenching structures of unequal influence over economically vulnerable stakeholders, similar to patterns observed in more conventional decisionmaking structures.<sup>37</sup>

Lack of adequate attention to these potential challenges inhibits the ability of devolved collaborative decisionmaking to successfully contribute to sustainable natural resource management efforts. Scholars have noted that if inadequate attention is given to issues such as the representation of individuals involved in the process as well as the “corresponding values, norms, and influence they bring with them[,]”<sup>38</sup> then such devolved processes may even aggravate “disparities in the distribution of costs and benefits of environmental regulation by race and class.”<sup>39</sup> As Foster observes:

The search for improved, legitimate, and equitable environmental decisions will require more than crafting a stronger participatory norm and shifting decision-making power to the local ‘people’ affected by environmental decisions. Any decision-making process that hopes to improve participation must pay sufficient attention to the political economy and resulting social relations of constituencies in a participatory process.<sup>40</sup>

The response to such criticisms, most would agree, is not a return to traditional methods of top-down authoritarian decisionmaking. Rather, the challenge at present is to examine ways

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34. *See id.*

35. *Id.* at 492 (quoting Catherine McCarthy, Testing the Tanner Act: Public Participation and the Reduction of Local Opposition in Siting Hazardous Waste Facilities in California 569 (1999) (unpublished Ph.D. dissertation, University of California, Davis) (on file with the Harvard Environmental Law Review) (discussing Kettleman City)).

36. *Id.* at 494.

37. *Id.* at 485.

38. *Id.*

39. *Id.*

40. *Id.* at 495.

in which collaborative decisionmaking processes might be strengthened to address potential disparities. In exploring potential responses to these concerns, the following section will examine suggested reforms to the existing model of unanimity-based devolved collaboration, including the elimination of veto power and the use of majority vote in cases where unanimity is not possible. It will then suggest an approach to measuring success in devolved collaboration through the process of localized principle-based evaluation. Methods of evaluation that integrate commonly-agreed principles of decisionmaking into standards of measurement are vital in providing guideposts of accountability and transparency informed by shared principles, experience, and best practices.

#### *A. Structural Reforms to Devolved Collaboration*

As noted by the above findings, the challenges presently facing devolved collaboration center upon the requirement of strict unanimity and the existence of veto power in decisionmaking. While unanimous decisions often represent the ideal outcome of a decisionmaking process, and reflect a solution-oriented approach,<sup>41</sup> such aspirations are not inconsistent with a process which aims for consensus but allows for majority vote in the event that deadlock has been reached.

Recent studies in consultative processes have found that decisionmaking processes which aim for consensus, but provide for the possibility of majority vote when consensus is not possible, are often more effective in increasing representation and diversity of views and breaking deadlock.<sup>42</sup> Similarly, the use of veto power is increasingly recognized as an outmoded mechanism which hampers equitable decisionmaking.<sup>43</sup> On the basis of such observations, adjustments to the structure of devolved collaboration to provide for the possibility of majority vote when unanimity is impossible and eliminating veto power represents a positive step towards enhancing representation in decisionmaking groups.

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41. See Rob Sandelin, *Basics of Consensus*, <http://nica.ic.org/Process/Consensusbasics.php> (last visited Feb. 18, 2011); LARRY DRESSLER, *CONSENSUS THROUGH CONVERSATION: HOW TO ACHIEVE HIGH-COMMITMENT DECISIONS* 8 (2006).

42. See Shahla Ali, *New Hong Kong Study: Enhancing Group Decisions: Beyond Strict Unanimity and Roberts Rules* ADR in Asia, Working Paper Series, Vol. 1, 2010, available at <http://adrinasia.wordpress.com/2010/01/18/new-hong-kong-study-breaking-through-impasse-beyond-strict-unanimity-and-roberts-rules-by-shahla-ali/>.

43. See, e.g., James Paul & Céline Nahory, *Theses Towards a Democratic Reform of the UN Security Council*, GLOBAL POLY F. (July 13, 2005) <http://www.globalpolicy.org/component/content/article/200-reform/41131-theses-towards-a-democratic-reform.pdf>.

The next section will consider principle-based factors that may be evaluated in order to measure and reinforce success in devolved collaboration.

#### IV. MEASURING SUCCESS IN DEVOLVED COLLABORATION

The aspirations giving rise to devolved collaboration indicate that communities and social organizations are increasingly challenged to facilitate fair and just decisionmaking processes regarding the use of natural resources. Processes that are freed from corruption address inequity issues and are oriented toward the promotion of cooperative environments. Yet a systematic methodology is required to assist in evaluating whether the aims of devolved collaboration are being achieved in practice. The use of principle-based indicators to measure and assess localized decisionmaking outcomes is an emerging means by which communities can help ensure that the goals of transparency and cooperation are not overlooked in the development process.<sup>44</sup>

The concept of principle-based indicators is a relatively recent one. Traditional performance based indicators of local natural resource development programs have focused on assessing quantitative factors.<sup>45</sup> For example, traditional indicators may measure the length of time to resolve a case or the total number and types of disputes reported.<sup>46</sup> Useful as these measures are in assessing the development of particular aspects of sustainable development, they are increasingly being recognized as inadequate tools to fully assess sustainable progress.<sup>47</sup> “Quantitative indicators are often based on administrative databases used to organize systems or manage resources, and such databases tend to say little about the quality or experience of justice.”<sup>48</sup>

Because the concept of an indicator of progress helps “answer the question of how much, or whether, progress is being made toward a certain objective[,]”<sup>49</sup> understanding and clarifying the objectives of devolved collaboration is critical in reflecting on the contemporary integration of sustainable values into the decisionmak-

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44. See e.g., TRANSBOUNDARY ENVIRONMENTAL NEGOTIATION: NEW APPROACHES TO GLOBAL COOPERATION 156-58 (Lawrence Susskind, William Moomaw, & Kevin Gallagher eds, 2002).

45. See VERA INST. OF JUSTICE, JUSTICE INDICATORS 3 (2005), available at: [http://www.undp.org/oslocentre/docs05/cross/Justice Indicators Background Paper.pdf](http://www.undp.org/oslocentre/docs05/cross/Justice%20Indicators%20Background%20Paper.pdf).

46. *Id.*

47. See AnnJanette Rosga & Margaret L. Satterthwaite, *The Trust in Indicators: Measuring Human Rights*, 27 BERKELEY J. INT'L L. 253, 263 (2009).

48. VERA INST., *supra* note 45, at 3.

49. *Id.* (citing AGENCY FOR INT'L DEV., HANDBOOK OF DEMOCRACY AND GOVERNANCE PROGRAM INDICATORS (1998)).

ing process. Recent learning in the field of sustainable development has identified that the purpose of participation in grass roots decisionmaking processes regarding resource use must take into account the diverse and multifaceted values associated with the use of community resources.<sup>50</sup> Mary Robinson, the former U.N. High Commissioner for Human Rights, in a statement to the World Bank, observed that: “[l]and and culture, development, spiritual values and knowledge are as one. To fail to recognize one is to fail on all.”<sup>51</sup> Therefore, consideration of appropriate indicators that account for not only relevant scientific understanding, but also shared values and principles, is necessary to promote a long-term process of positive social change at the local level.<sup>52</sup>

International treaties and declarations on civil, cultural, economic, political, and social rights have similarly informed standards oriented to promoting equitable development at the local level. Emerging consensus on such standards, according to the Office of the High Commissioner for Human Rights (OHCHR), include the principles of equality and equity, accountability, empowerment, and participation, as well as non-discrimination and attention to vulnerable groups.<sup>53</sup> When these principles are incorporated

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50. Mary Robinson, U.N. High Comm'r for Human Rights, Lecture before the World Bank: Bridging the Gap Between Human Rights and Development: From Normative Principles to Operational Relevance (Dec. 3, 2001), *available at* <http://www.unhchr.ch/hurricane/hurricane.nsf/0/2DA59CD3FFC033DCC1256B1A0033F7C3?opendocument>.

51. *Id.* at para. 30.

52. Inst. for Studies in Global Prosperity, *Science, Religion and Development: Some Initial Considerations*, [http://www.globalprosperity.org/initial\\_considerations.html?SID=4](http://www.globalprosperity.org/initial_considerations.html?SID=4) (last visited Feb. 18, 2011) (pointing out that: “Attention must be brought to a domain of issues that goes to the heart of human identity and motivation. More often than not, social and economic initiatives have neglected the values, traditions and perceptions of the central stakeholders in the development process—the people themselves. The international development agenda has for the most part ignored the fact that the great majority of the world’s peoples do not view themselves simply as material beings responding to material exigencies and circumstances, but rather as moral beings . . . It has thus become evident that the mainly economic and material criteria now guiding development activity must be broadened to include those spiritual aspirations that animate human nature.”).

Development initiatives that take account of both moral and scientific sources of knowledge are in a position to contribute to lasting change and prosperity.

However, the manner in which spiritual perspectives are integrated into development activities must involve the same logical and rigorous methods employed by science. This will ensure that development efforts are anchored to tangible and objective outcomes. Indeed, if religion is to be the partner of science in the development arena, its specific contributions must be carefully scrutinized.

*Id.* at para. 23.

53. U.N. Office of the High Comm'r for Human Rights, *Information Note: Human Rights—Foundation for Engagement to Achieve the MDG's* (June 23, 2010), *available at* <http://www.ohchr.org/Documents/Issues/MDGs/MDGsInfonoteFinal.pdf>; *See also* U.N. Millennium Declaration, G.A. Res. 55/2, U.N. Doc. A/RES/55/2 (Sept. 8, 2000) *available at* <http://www.un.org/millennium/declaration/ares552e.htm> (human rights standards are based on the goals in the declaration).

into locally-determined standards for measuring progress, the level of accountability in the development process is raised.<sup>54</sup>

In addition, an enhanced set of indicators which pays due attention to “practical issues such as training in the administration and enforcement of justice, equitable distribution of community resources, and the upliftment [sic] of persons and groups historically excluded from the benefits and opportunities offered by society”<sup>55</sup> is necessary in order to measure whether progress is being made toward objectives of representation and transparency.

### A. Evaluation Framework

As an initial step in examining how the process of devolved collaboration may achieve its overarching aims of equity, accountability, fairness and transparency, the following elements of an evaluation framework are explored as an approach to examining the success of devolved collaborative efforts from a principle-based perspective.<sup>56</sup>

This evaluation is based on a framework that measures long-term progress toward sustainable prosperity through analyzing the development of consultative skills, group dynamics, and attitudinal change based on a shared conception of rights and responsibilities.<sup>57</sup> This framework requires that “[t]he seemingly antithetical processes of individual progress and social advancement, of globalization and decentralization, and of promoting universal standards and fostering cultural diversity, be harmonized.”<sup>58</sup> The capacity based-indicators include:<sup>59</sup>

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54. *Id.*

55. Inst. for Studies in Global Prosperity, *supra* note 52, at para. 41. Additionally, the document states that:

[w]hen [such] principles are fully integrated into community development activities, the ideas, insights, and practical measures that emerge are likely to be those that promote self-reliance and preserve human honor, thereby avoiding habits of dependency and progressively eliminating conditions of gross economic disparity. An approach to development that incorporates moral and spiritual imperatives will more likely lead to enduring changes in both individual and collective behavior.

*Id.* at para. 6.

56. Principle-based decisionmaking is increasingly being found as the most effective form of practice. Evaluating decisionmaking from a principle-based perspective then is increasingly consistent with best practice. See, e.g., ROGER FISHER & WILLIAM URY, GETTING TO YES: NEGOTIATING AGREEMENT WITHOUT GIVING IN 86-90 (Bruce Patton ed., 1981).

57. See Baha'i Int'l Community, *Valuing Spirituality in Development*, Doc. No. 98-0218 (Feb. 18-19 1998), <http://www.bic.org/statements-and-reports/bic-statements/98-0218.htm> [hereinafter BIC].

58. *Id.* § 1 at para. 1.

59. Many of these indicators arose out of the Comprehensive Development Framework, a global dialogue conducted in 1999 by the World Bank, and are grounded in international rights based principles. See The World Bank, *Comprehensive Development Framework*, PROJECTS & OPERATIONS, <http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/0,,contentMDK:20120725>

- *Local Participation and Consultation*
- *Respect for Unity in Diversity of Culture and Viewpoints*
- *Independent Investigation/ Fact-Finding*
- *Social and Environmental Stewardship*
- *Equity and Justice*
- *Women's Participation*
- *Sustainability*
- *Trust and Cooperation*

From the perspective of this evaluation methodology, evaluation is conducted in a learning framework in which areas for further refinement are embraced as opportunities to reach higher standards of development. "Progress is [viewed] not [as] an event or a statistic, but a process—a trend made up of numerous factors."<sup>60</sup> Below we will examine each indicator in greater detail. Each evaluation section begins with a capacity-based measure, followed by insights from researchers in the field of community and natural resource mediation and a set of possible questions for evaluation.<sup>61</sup>

### *B. Indicators of Progress*

#### 1. Local Participation and Consultation

While not sufficient by itself in achieving successful devolved collaboration, meaningful local participation in the "conceptualization, design, implementation and evaluation of the policies and programs"<sup>62</sup> has been associated with long-term sustainable development. Recent research has found that such systems "maximize[] the opportunity for effective . . . management and the successful creation, implementation, and management of organizational change."<sup>63</sup>

Direct participation by the members of a local community is among the necessary mechanisms to ensure that relevant pragmatic and principle-based contributions are integrated in the development process. With regard to the nature of that participation,

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60. BIC, *supra* note 57, § II at para. 3.

61. Indicator measurement in this case is through "expressed proxies" where "investigators can ask directly about any underlying social variable of concern." This process is described by Jonathan Borck, Cary Coglianesi, & Jennifer Nash, *Evaluating the Social Effects of Environmental Leadership Programs*, 38 ENVTL. L. REP. 10697, 10699 (2008).

62. BIC, *supra* note 57, § VI, at para. 7.

63. Stephanie Carter, *The Importance of Party Buy-In in Designing Organizational Conflict Management Systems*, 17 MEDIATION Q. 61, 61 (1999).



it must be “substantive and creative; it must allow the people themselves access to knowledge and encourage them to apply it.”<sup>64</sup>

Sustainable participation is ensured through “a process of joint diagnosis[,]”<sup>65</sup> which then leads to the generation of “appropriate remedies to fit the organization’s unique needs[.]”<sup>66</sup> Consequently this “helps organizational members learn to diagnos[e] and remedy situations themselves[,] . . . teaches them skills necessary to solve new problems as they arise[,]”<sup>67</sup> and creates a “vested responsibility for the successful operation of the conflict management system.”<sup>68</sup> Carter notes that long term change can occur “because stake-holders are involved in ‘shuffling the deck’ rather than simply being dealt ‘a new hand.’”<sup>69</sup>

Consultative decisionmaking, which encourages drawing on the strength of a group, focuses on diagnosis of the underlying issues

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64. Inst. for Studies in Global Prosperity, *supra* note 52, at para. 26. The Institute for Studies in Global Prosperity has identified a number of capabilities needed for effective participation. These include:

[T]he capacities to take initiative in a creative and disciplined manner; to think systematically in understanding problems and searching for solutions; to use methods of decision-making that are non-adversarial and inclusive; to deal efficiently and accurately with information rather than respond unwittingly to political and commercial propaganda; to make appropriate and informed technological choices and to develop the skills and commitment necessary to generate and apply technical knowledge; to organize and engage in ecologically sound production processes; to contribute to the effective design and management of community projects; to put into place and to participate in educational processes conducive to personal growth and life-long learning; to promote solidarity and unity of purpose, thought, and action among all members of a community; to replace relationships based on dominance and competition with relationships based on reciprocity, collaboration, and service to others; to interact with other cultures in a way that leads to the advancement of one’s own culture and not to its degradation; to encourage recognition of the essential nobility of human beings; to maintain high standards of physical, emotional and mental health; to imbue social interaction with an acute sense of justice; and to manifest rectitude in private and public administration.

*Id.* at para. 27.

According to the Institute, this “list is suggestive of the constellation of capacities necessary for building up the social, economic, and moral fabric of collective life. The list highlights the vital role of both scientific and religious resources in promoting development.” In addition, this list “alerts us to the range of values and attitudes that enhance key capacities, as well as the concepts, information, skills, and methods to be employed in their systematic development.” *Id.* at para. 28. Significantly, “[i]t also underscores the importance of structured learning in generating and sustaining an integrated set of social and economic activities.” *Id.* The challenge to the individual, institutions and the community is to “learn to use material resources and intellectual and spiritual endowments to advance civilization.” *Id.* at para. 29.

65. Carter, *supra* note 63, at 64.

66. *Id.*

67. *Id.* (citation omitted)

68. CATHY A. COSTANTINO, & CHRISTINA SICKLES MERCHANT, *DESIGNING CONFLICT MANAGEMENT SYSTEMS: A GUIDE TO CREATING PRODUCTIVE AND HEALTHY ORGANIZATIONS* 54 (1996).

69. Carter, *supra* note 63, at 65 (quoting COSTANTINO & MERCHANT, *supra* note 68, at 63).

of the conflict. This includes how each individual thinks about the conflict, and how each perceives the underlying issues. Intervention is then based on a process of information-gathering. If a unanimous decision is not possible, then the group will proceed on the basis of a majority vote.<sup>70</sup>

Beyond the traditional party-party conception of conflict, each individual is challenged to see him/herself as a member of a group seeking to find an appropriate solution.<sup>71</sup> This expands the circle of who is actually involved in the process.

Drawing from the above findings suggests that an evaluation framework include the following questions for assessment of devolved collaboration focusing on sustainable natural resource use:

1. To what extent are participants involved in the identification of the aims of the consultation process?
2. How representative of the local community and interests is the group?
3. To what extent do the participants experience a sense of ownership in the process?
4. How accessible is the consultation venue to all participants?
5. Is the decision carried out?
6. What are the group's mechanisms for self-evaluation?

## 2. Trust and Cooperation

A challenging, though important, standard of measuring the success of a devolved decisionmaking process is the level of trust and cooperation sustained by members of the group. Because the

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70. BAHAI TOPICS, *Consultation*, <http://info.bahai.org/article-1-3-6-3.html> (last visited Feb. 18, 2011).

71. The first stage of the consultative process begins with seeking out a common point of unity. This could be either a point of commonality (wanting to resolve the issue) or a point of unity (created by the group). Second, each member of the group is encouraged to take time for personal and group preparation. Among the capacities the group is encouraged to focus on are: detachment, freedom from prejudice, cooperation, humility, and constant attention to the all-important principles of unity, truth and justice. In addition the group is given its own time to prepare as a whole, keeping in mind that its purpose is to work together to find the best answers and solutions to the issues involved. Following this stage of preparation, the group decides if it would like to proceed with the process.

Third, the group proceeds to systematically review and discuss the issues at hand. Each member is given the opportunity to share his/her ideas, thoughts, and concerns. The group is encouraged to be open, honest, and truthful and to regard the ideas presented to the group as the property of the group as a whole. Finally, the group will come to a decision about the best course of action. See Eloy Anello, *The Capabilities of Moral Leadership*, [http://www.bahaiacademy.org/index.php?option=com\\_content&task=view&id=82&Itemid=47](http://www.bahaiacademy.org/index.php?option=com_content&task=view&id=82&Itemid=47) (last visited Feb. 18, 2011).

existence of a high level of trust creates an environment amenable to information sharing and cooperation, trust is a necessary prerequisite to successful group decisionmaking, sustainability and progress. Questions to assess the level of trust and cooperation may include:

1. Do participants follow through with their commitments?
2. To what extent do members of the decisionmaking group share and disclose relevant information?
3. To what extent was a collaborative tone maintained?
4. How explicitly are parties able to identify what they came to resolve?

### 3. Respect for Unity in Diversity of Culture and Viewpoints

Recent studies on cross-cultural decisionmaking have pointed out the necessity of sensitivity to diversity in order to avoid “negotiation failure,”<sup>72</sup> “misperceptions,”<sup>73</sup> and “incorrect attribution of motive,”<sup>74</sup> particularly when “the cultural gap between the negotiation parties is wide, when the actors just meet once and when highly symbolic issues are at hand.”<sup>75</sup> In particular, cultural misunderstanding can result in “conditioning one’s perception of reality, blocking out information that is inconsistent with culturally grounded assumptions, projecting meaning onto the other party’s words and deeds, and impelling the observer to incorrect attribution of motive.”<sup>76</sup>

The capability of operating within a framework that views “the advantage of the part in a world society [as] best served by promoting the advantage of the whole”<sup>77</sup> is critical for effective cross-cultural decisionmaking. This perspective must be conscientiously nurtured, cultivated, and developed over time, and eventually integrated into the method of devolved decisionmaking, information sharing, and planning. Drawing from the above findings, relevant questions for evaluation may include:

1. To what extent are diverse cultural forms of communication and decisionmaking welcomed in the consultative process?

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72. Jacob Bercovitch & Ole Elgström, *Culture and International Mediation: Exploring Theoretical and Empirical Linkages*, 6 INT’L NEGOTIATION 3, 10 (2001).

73. *Id.*

74. *Id.* at 11.

75. *Id.*

76. *Id.* (citing GLEN FISCHER, INTERNATIONAL NEGOTIATION: A CROSS-CULTURAL PERSPECTIVE (1980)).

77. BIC, *supra* note 57, § IV(1), at para. 3.

2. To what extent do participants view themselves and others as members of a collective decisionmaking body?
3. What level of partnership exists between all counterparts?
4. To what extent are facilitators informed by a principle of respect for the unity and diversity of the cultures of the participants?
5. Does the language of the consultation reflect the diverse language abilities of the participants?
6. Is the location accessible to a large majority of the participants?

#### 4. Independent Investigation/Fact-Finding

The ability to independently investigate the conditions within a given community and search for common solutions requires an effective process of joint fact-finding and investigation. "Achieving this [objective] . . . require[s] that mechanisms be established and avenues be opened for community members to participate meaningfully in the conceptualization, design, implementation and evaluation of the policies and programs that affect them."<sup>78</sup> Scott T. McCreary et al., observed that "[r]esolving a complex public policy dispute requires that interested parties share understanding of the technical dimensions of the problem they face . . . . [T]he very best scientific information must be collected and used."<sup>79</sup>

Drawing on the above findings, the achievements of joint investigation can be measured on the basis of a number of criteria, including:

1. How clearly is the question under investigation framed both from a scientific and principled perspective?
2. To what extent do participants pool relevant information?
3. How accessible and objective is information for all participants in the dialogue?
4. What is the extent of community participation in all phases of consultation and implementation?

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78. *Id.* § VI, at para. 7.

79. Scott T. McCreary, John K. Gamman, & Bennett Brooks, *Refining and Testing Joint Fact-Finding for Environmental Dispute Resolution: Ten Years of Success*, 18 *MEDIATION Q.* 329, 329 (2001).

## 5. Social and Environmental Stewardship

The principle of social and environmental stewardship views each member of a community as stewards of the local resources and biological diversity. Use of the earth's natural resources, both renewable and non-renewable, must aim for sustainability and equity and “require full consideration of the potential environmental consequences of all development activities.”<sup>80</sup>

From the perspective of sustainability, the evaluation of the social and environmental impact of the consultation group is a “highly complex affair, and . . . is reflected in the evaluations made by the participants themselves.”<sup>81</sup> Questions that may be explored include the following:

1. To what extent does each member of the community view him/herself as a steward of the local resources and biological diversity?
2. Are environmental consequences of activities examined in light of the goal of achieving sustainability and equity in the use of renewable and non-renewable resources?
3. In the course of the consultation, is a significant level of knowledge gained with respect to the social and environmental situation and resources in the community?
4. What changes occurred with respect to improving the social, environmental and economic conditions in the community?
5. How will lessons learned be incorporated into future implementation?

## 6. Equity and Justice

The assessment of equity and justice in a decisionmaking process, though extremely challenging as a measure, is nevertheless an important standard of evaluation. Equity can be understood as fairness, while “[j]ustice is the vehicle through which equity is applied[.]”<sup>82</sup> Depending on “the nature of the power [ ]balance involved, and the style or approach of the mediator;”<sup>83</sup> particular approaches toward the facilitation process may be “more or less effec-

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80. BIC, *supra* note 57, § V(3), at para. 10.

81. Katharina Holzinger, *Evaluating Environmental Mediation: Results from a Waste Management Conflict in Germany*, 18 *MEDIATION Q.* 397, 397 (2001).

82. BIC, *supra* note 57, § V(2), para. 6.

83. Ilan G. Gewurz, *(Re)Designing Mediation to Address the Nuances of Power Imbalance*, 19 *CONFLICT RESOL. Q.* 135, 139.

tive in dealing with a type of power dynamic.”<sup>84</sup> One of the main questions is “whether there is likely to be an ongoing relationship in the future.”<sup>85</sup> Drawing on the above findings, relevant questions may include:

1. What is the degree of participation by community members typically excluded from the consultation process?
2. How is inequitable access to resources handled?
3. Are appropriate levels of government involved in the decisionmaking process?

## 7. Women’s Participation

Women’s equal participation in local decisionmaking regarding community resources is critical to sustainable development.<sup>86</sup> Studies conducted during the UN Decade for Women have shown that “effective solutions to local problems, while often requiring resources from governments and outside agencies, need to be found in consultation with those to be served—men and women. Women, therefore, must be included not only as implementers and beneficiaries of development projects, but as designers and planners.”<sup>87</sup> Based on these findings, a relevant question for evaluation would be:

To what extent are women and men, as partners, jointly involved in identifying the community's needs and responding creatively with appropriate solutions?

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84. *Id.*

85. *Id.* at 153.

86. Fourth Regional Conference on the Integration of Women into the Economic and Social Development of Latin America and the Caribbean, Guatemala City, Guat., Sept. 27-30 1988, *The Role of Women in Commerce in the Caribbean*, BIC DOC. NO. 88-0927, <http://statements.bahai.org/88-0927.htm>.

It is common knowledge that systematic discrimination against women has not only made women the main victims of a spreading poverty, but has promoted unhealthy attitudes in men. Denied education and technical training, constrained by family, work, and social structures which give preference to men, and excluded from decision-making at all levels, women must often work in the non-formal sector of the economy as traders and walking food vendors, unprotected by legislation and not benefiting from general improvements in working conditions. Meanwhile, men develop attitudes of superiority and habits of oppression that they carry from the family, to the workplace, to political life and ultimately to international relations.

*Id.* at para 1.

87. *Id.* at para. 2.

## 8. Suggested Research Approach/Methodology to Capture Learning on Sustainability

In order to examine the efficacy of devolved collaboration processes, community members are in the best position to reflect and observe consultative sessions. Recent findings have shown that in order to “capture evidence of participants both acting collaboratively . . . for community benefit and encouraging collaboration among their peers and constituents”<sup>88</sup> research “would be . . . served by examining exchanges between participants, not participants separately.”<sup>89</sup> Community members are in the best position to identify, select, and determine which indicators are most relevant and useful given local circumstances.<sup>90</sup>

Both qualitative and quantitative data can be collected to assist in the evaluation of devolved collaboration processes. Qualitative observations through interviews, case studies, and examining the documents and archives of organizations participating in the dialogue effort (memoranda, email, newsletters, meeting minutes, community media reports) can provide information on the nature of interactions among individuals and groups and the existence of collaboration to benefit the entire community.<sup>91</sup> Quantitative data can also be collected in the form of pre and post-participation survey data examining the existence of selected principles in the decisionmaking processes along a scale. Collaborative analysis can be conducted to compare survey responses in order to test for the existence and significance of particular principles at work in the consultation process.<sup>92</sup> Care must be given that such data is placed in a learning context, and that evaluation is oriented toward increasingly improving and refining the process of devolved collaboration.

## V. CONCLUSION

Given the growing promise as well as challenges associated with devolved collaboration, evaluation tools measuring the existence of principle-based factors can contribute to increasing the

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88. Patricia A. Gwartney, Lynne Fessenden, & Gayle Landt, *Measuring the Long-Term Impact of a Community Conflict Resolution Process: A Case Study Using Content Analysis of Public Documents*, 18 NEGOTIATION J. 51, 53 (emphasis omitted).

89. *Id.* at 54 (emphasis omitted).

90. See Dimity Podger et al., *The Earth Charter and the ESDinds Initiative: Developing Indicators and Assessment Tools for Civil Society Organizations to Examine the Values Dimensions of Sustainability Projects*, 4 J. EDUC. FOR SUSTAINABLE DEV. 297, 310 (2010).

91. Gwartney et al., *supra* note 88 at 55-56.

92. See Podger et al., *supra* note 90, at 300.

success of collaboration efforts. With growing consensus regarding principles of consultative decisionmaking, efforts to learn from, reflect on and evaluate programs according to shared standards provide an important measure of progress. They also provide a common language to communicate diverse experiences. Further questions such as how feedback can be systematically integrated into the refinement of local programs will need to be addressed. It is hoped that the above discussion will contribute to this on-going effort to systematically improve the processes of devolved collaboration.



**GOING GREEN TO MAKE GREEN:  
NECESSARY CHANGES TO PROMOTE AND IMPLEMENT  
CORPORATE SOCIAL RESPONSIBILITY WHILE  
INCREASING THE BOTTOM LINE**

GINA IACONA\*

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What is sustainability? It's more than environmentalism. It's about living and working in ways that don't jeopardize the future of our social, economic and natural resources. In business, sustainability means managing human and natural capital with the same vigor we apply to the management of financial capital. It means widening the scope of

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our awareness so we can understand fully the “true cost” of every choice we make.<sup>1</sup>

Today’s businesses are designed to chase economic growth.<sup>2</sup> However, businesses achieve this economic growth “at the expense of other vital concerns, particularly human and ecological health[.]”<sup>3</sup> Sustainable development offers a new paradigm that shifts away from the perceived duty businesses have of achieving economic growth solely by maximizing shareholder profits.<sup>4</sup> Instead, it moves toward a more inclusive and desirable business structure that can promote both the economic bottom line and environmental sustainability.<sup>5</sup>

Businesses have substantial influence on all aspects of society because “[c]orporate power is a key dimension [of] 21st century life.”<sup>6</sup> Therefore, it is imperative for businesses to implement policy that enables them to achieve the goals of sustainable development. One possible step toward this achievement is to implement Corporate Social Responsibility (CSR). CSR consists of policies that express a company’s commitment to develop economically while improving the quality of life and without degrading the environment.<sup>7</sup> Today, academics and professionals alike advocate CSR as a means of achieving sustainable development.<sup>8</sup> In addition, the global dominance of sustainable development discourse and its increasing association with CSR has prompted some companies to voluntarily implement CSR into their business practices.<sup>9</sup> This discourse has also encouraged foreign countries and U.S. states to mandate CSR implementation.

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1. *Sustainable Links*, SUSTAINABLE PITTSBURGH, [http://www.sustainablepittsburgh.org/susDev\\_links.html](http://www.sustainablepittsburgh.org/susDev_links.html) (quoting Interface, Inc.) (last visited Feb. 18, 2011). This website, along with Interface’s website, debunks the myth that financial success and environmental success are mutually exclusive. *Toward a More Sustainable Way of Business*, INTERFACE, <http://www.interfaceglobal.com/Sustainability.aspx> (last visited Feb. 18, 2011).

2. WILLIAM McDONOUGH & MICHAEL BRAUNGART, *CRADLE TO CRADLE: REMAKING THE WAY WE MAKE THINGS* 42 (2002).

3. *Id.* at 42-43.

4. Carmen Valor, *Corporate Social Responsibility and Corporate Citizenship: Towards Corporate Accountability*, 110 *BUS. & SOC’Y REV.* 191, 201 (2005).

5. *See id.* (footnote omitted).

6. Jem Bendell & Kate Kearins, *The Political Bottom Line: the Emerging Dimension to Corporate Responsibility for Sustainable Development*, 14 *BUS. STRATEGY & ENV’T* 372, 373 (2005) (citation omitted).

7. MICHAEL KERR ET AL., *CORPORATE SOCIAL RESPONSIBILITY: A LEGAL ANALYSIS* 9 (2009).

8. Theodore E. Zorn & Eva Collins, *Is Sustainability Sustainable? Corporate Social Responsibility, Sustainable Business, and Management Fashion*, in *THE DEBATE OVER CORPORATE SOCIAL RESPONSIBILITY* 405, 406 (Steve May, George Cheney, & Juliet Roper eds., 2007).

9. *See id.* at 407-08.

This Comment analyzes the trend toward a legal framework for incorporating CSR into business practices and what changes are needed for this implementation to become effective. This Comment will show that a continuum of different approaches causes companies to implement CSR. These approaches include voluntary initiatives, stakeholder<sup>10</sup> pressures, and legal mandates.

A discussion of CSR often suggests that companies adopting CSR policies must radically transform their business structure in order to reap minimal benefits. This belief is inaccurate. This Comment will show that companies can realize numerous benefits—with little effort—by incorporating sustainable development and CSR into their business practices.

Part I provides the relevant background information regarding sustainable development and how businesses can, and should, integrate this concept. Part II will examine how these businesses can implement sustainable development through incorporating CSR into their business practices. Part II not only will examine the basics of CSR but also will analyze why CSR is beneficial for society and the benefits businesses can realize by implementing CSR initiatives. This discussion will show that implementation of CSR will increase a company's bottom line. Part III looks at the means by which companies implement CSR. As briefly mentioned above, these implementation means include voluntary initiatives, stakeholder pressures, and mandated regulations. To illustrate this implementation process, Part IV explores the Triple Bottom Line (TBL)—a way to account for environmental factors in calculating a company's profit. Companies implement TBL similar to CSR because it includes the same three implementation means.<sup>11</sup>

Finally, Part V considers the legal changes necessary to achieve greater CSR implementation. These include changes to the corporate law structure, including mandating codes of conduct and safe harbor provisions, and changing the business mindset. The

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10. "The [Global Reporting Initiative (GRI)] defines stakeholders as 'entities or individuals that can reasonably be expected to be significantly affected by the organization's activities, products, and/or services; and whose actions can reasonably be expected to affect the ability of the organization to successfully implement its strategies and achieve its objectives.'" Janet E. Kerr, *The Creative Capitalism Spectrum: Evaluating Corporate Social Responsibility Through a Legal Lens*, 81 TEMP. L. REV. 831, 868 (2008) (quoting GLOBAL REPORTING INITIATIVE, SUSTAINABILITY REPORTING GUIDELINES 10 (2006), available at [http://www.globalreporting.org/NR/rdonlyres/A1FB5501-B0DE-4B69-A900-27DD8A4C2839/0/G3\\_GuidelinesENG.pdf](http://www.globalreporting.org/NR/rdonlyres/A1FB5501-B0DE-4B69-A900-27DD8A4C2839/0/G3_GuidelinesENG.pdf) (hereinafter GLOBAL REPORTING INITIATIVE)). In addition, stakeholders include those that are invested in the company, such as employees, shareholders, and suppliers, as well as those who are external to the company, such as communities. GLOBAL REPORTING INITIATIVE at 10.

11. It is important to recognize that TBL is only one example of CSR implementation. Businesses can incorporate sustainable development and CSR in a variety of ways. This variety will not be discussed due to the breadth of the many examples. To find out about other examples see KERR ET AL., *supra* note 7, at 91.

business mindset must change from short-term goals relating to shareholder-driven profit maximization to long-term goals relating to the differing needs of various stakeholders. Furthermore, TBL accounting and reporting must be mandatory. The United States should look toward foreign countries—particularly to the members of the European Union (EU)—as helpful examples on how to further promote CSR.<sup>12</sup>

This Comment is designed to help companies understand why it is imperative that they incorporate CSR into their business practices. This Comment offers the TBL example to demonstrate one way companies can easily incorporate these policies into their everyday decisions. By weighing the pros and cons of different implementation strategies and analyzing potential changes that need to occur before CSR implementation can be successful, this Comment advocates CSR as an integral component to successfully furthering the idea of sustainable development.<sup>13</sup>

## I. SUSTAINABLE DEVELOPMENT

### A. Definition and History

“Sustainable development is about ensuring a better quality of life for everyone,” in both present and future generations.<sup>14</sup> The best-known definition, articulated by the 1987 Brundtland Commission,<sup>15</sup> defines sustainable development as “meet[ing] the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>16</sup>

In response to the Brundtland Commission’s advocacy for advancing sustainable development, numerous countries, including the United States, assembled in Rio de Janeiro for the 1992 Earth Summit.<sup>17</sup> These nations agreed to work toward sustainable development both nationally and globally.<sup>18</sup> Overall, the objective of sustainable development is to align economic, social, and environ-

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12. See Joe W. (Chip) Pitts III, *Corporate Social Responsibility: Current Status and Future Evolution*, 6 RUTGERS J.L. & PUB. POL’Y 334, 382-85 (2009).

13. Despite its significance, this Comment will not discuss the globalization of corporations and multinational companies; even though these are well documented and important in the broader context of CSR, they are beyond this Comment’s scope.

14. CHARLES O. HOLLIDAY, JR. ET AL., *WALKING THE TALK: THE BUSINESS CASE FOR SUSTAINABLE DEVELOPMENT* 174 (2002).

15. See BOB WILLARD, *THE SUSTAINABILITY ADVANTAGE: SEVEN BUSINESS CASE BENEFITS OF A TRIPLE BOTTOM LINE* 5 (2002).

16. WORLD COMM’N ON ENV’T & DEV., *OUR COMMON FUTURE* 43 (1987).

17. Shiv Ganesh, *Sustainable Development Discourse and the Global Economy: Promoting Responsibility, Containing Change*, in *THE DEBATE OVER CORPORATE SOCIAL RESPONSIBILITY*, *supra* note 8, at 379-80.

18. See Ganesh, *supra* note 17, at 380.

mental goals.<sup>19</sup> These goals—also called pillars—are aligned when nations develop policies and practices that consider the interdependence of these goals.<sup>20</sup>

The economic pillar forms the basis of our society's economic structure by suggesting that economic growth is essential for society to sustain itself.<sup>21</sup> Sustainable development takes this basis and adds to it the social and environmental pillars. The social pillar emerges primarily in response to concerns regarding the impacts economic growth has on human life.<sup>22</sup> Lastly, the basic principles in the environmental pillar are concerned with effective management of natural resources to conserve them for the future.<sup>23</sup> All resources have finite capacity; therefore, human activity must operate at a level that does not threaten these natural resources.<sup>24</sup> All three pillars shape sustainable development and are fundamental in achieving successful nationwide sustainability. This Comment will look at the first and third pillars more closely and will leave the second pillar, social concepts, to another paper.

### *B. Calling Businesses to Act*

For the United States to realize the benefits that come from implementing sustainable development practices, businesses must do their part by implementing practices that structure themselves around the three pillars of sustainable development.<sup>25</sup>

Historically, businesses have “pursued investment, production and marketing strategies that have resulted directly in extensive waste and degradation of natural resources or encouraged consumption patterns that do the same.”<sup>26</sup> The environment has often been ignored. One study predicts that with increasing development “one-fifth or more of the world's [plant and animal species] . . .

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19. David Monsma & John Buckley, *Non-Financial Corporate Performance: The Material Edges of Social and Environmental Disclosure*, 11 U. BALT. J. ENVTL. L. 151, 171 (2004).

20. *Id.*

21. Dirk Matten, *Why Do Companies Engage in Corporate Social Responsibility? Background, Reasons and Basic Concepts*, in THE ICCA HANDBOOK ON CORPORATE SOCIAL RESPONSIBILITY 3, 28 (Judith Henningfeld et al. eds., 2006).

22. *Id.* at 29.

23. *Id.* at 28.

24. *Id.*

25. See David Monsma, *Equal Rights, Governance, and the Environment: Integrating Environmental Justice Principles in Corporate Social Responsibility*, 33 ECOLOGY L.Q. 443, 482 (2006) (citation omitted).

26. United Nations Research Inst. for Soc. Dev., *Business Responsibility for Sustainable Development*, Geneva 2000 Occasional Paper No. 2, 1 (Jan. 2000) (by Peter Utting), available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.112.991&rep=rep1&type=pdf>.

could disappear within the next [thirty] years[.]”<sup>27</sup> More specifically, Hooker Chemical and Union Carbide’s release of toxic chemicals, creating the incidents at Love Canal and Bhopal, respectively,<sup>28</sup> illustrate the negative impact companies can have on ecology. The Bhopal Union Carbide plant, for example, leaked forty-two tons of toxic methyl isocyanate gas and is said to be one of the world’s worst industrial disasters.<sup>29</sup>

In analyzing the three pillars of sustainable development, one can see that applying each pillar to business practices is simple. In the economic pillar, there is a narrow concept and a broad concept. “A narrow concept of economic sustainability focuses on the economic performance of the [company] itself: the responsibility of [company] management is to develop, produce and market products that secure the [company’s] long-term economic performance.”<sup>30</sup> A broader concept includes “the company’s attitude towards and impacts upon the [entire industrial] economic framework[.]”<sup>31</sup> Companies easily accept this pillar; individually and collectively, they recognize the importance of sustaining the economic health of all companies.<sup>32</sup>

The social pillar is primarily concerned with the impacts business activities have on communities in less-developed countries.<sup>33</sup> However, this pillar also “includes observing human rights, improving working conditions . . . , making charitable contributions, . . . supporting public health, and fostering community relations.”<sup>34</sup>

Lastly—and most importantly for the purposes of this Comment—the basic principles in the environmental pillar not only require companies to do no harm to the environment, but also forces them to restore what harm they have already committed.<sup>35</sup> This pillar gives companies the most difficulty. Nonetheless, it is imperative that all companies incorporate all three pillars into their business practices in order for society as a whole to advance sustainable development.

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27. Margaret Chon, *Postmodern “Progress”: Reconsidering the Copyright and Patent Power*, 43 DEPAUL L. REV. 97, 127 (1993).

28. David E. Adelman, *The Art of the Unsolvable: Locating the Vital Center of Science for Environmental Law & Policy*, 37 ENVTL L. 935, 940 (2007); Eckardt C. Beck, *The Love Canal Tragedy*, EPA (Jan. 1979), <http://www.epa.gov/history/topics/lovecanal/01.htm>; *History of Bhopal*, INDIANETZONE, [http://www.indianetzone.com/39/history\\_bhupal.htm](http://www.indianetzone.com/39/history_bhupal.htm) (last updated Sept. 3, 2009).

29. *History of Bhopal*, *supra* note 28.

30. Matten, *supra* note 21, at 28 (emphasis removed).

31. *Id.* at 29.

32. WILLARD, *supra* note 15, at 5.

33. Matten, *supra* note 21, at 29.

34. WILLARD, *supra* note 15, at 7.

35. WILLARD, *supra* note 15, at 5.

## II. CORPORATE SOCIAL RESPONSIBILITY

A. *Definition and History*

The concept of CSR originated with the 1953 publication of Howard Bowen's *Social Responsibilities of the Businessman*.<sup>36</sup> This book introduced the basic idea underlying CSR by asserting that companies "have an obligation extending beyond economic performance."<sup>37</sup> Bowen argues that the pursuit of profit is, in fact, compatible with environmental responsibilities.<sup>38</sup>

Bowen's definition did not begin the desire to pursue responsible business practices. CSR actually has roots dating back to the industrial era.<sup>39</sup> However, increased corporate scandal, public awareness, and stakeholder pressure have propelled CSR into an important business endeavor.<sup>40</sup> Corporations have to abide by the law, but complying with minimal legal standards is no longer enough. The public is demanding implementation of CSR into business practices to raise the threshold with which companies must comply. Some companies also demand implementation of CSR because they realize the economic benefits that exist from complying with and surpassing current legal standards.

Overall, CSR policies promoting sustainable business practices are gathering strength. A 2003 Price Waterhouse survey found that "concerns over concepts of sustainability [are] continuing to gather momentum in the business community."<sup>41</sup> Similarly, "the World Business Council for Sustainable Development treats CSR as one of its 'cross-cutting themes.'"<sup>42</sup> CSR is important, and society and businesses are beginning to realize its true potential.

B. *Why Does CSR Benefit Society?*

CSR is not just about enhancing the bottom-line through more efficient . . . processes that conserve resources, remove waste, and reduce costs[,] . . . although CSR does have those benefits. More importantly, . . . CSR is about building businesses that are sustainable and valuable over the long-term

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36. Valor, *supra* note 4, at 192 (citation omitted). *See generally* HOWARD ROTHMANN BOWEN, *SOCIAL RESPONSIBILITIES OF THE BUSINESSMAN* (1953).

37. Zorn & Collins, *supra* note 8, at 406.

38. *Id.*

39. Matthew W. Seeger & Steven J. Hipfel, *Legal Versus Ethical Arguments: Contexts for Corporate Social Responsibility*, in *THE DEBATE OVER CORPORATE SOCIAL RESPONSIBILITY*, *supra* note 8, at 156.

40. *See id.*

41. Zorn & Collins, *supra* note 8, at 407.

42. *Id.* (citation omitted).

[by making them] more closely aligned with and adaptable to the needs and goals of the societies in which those businesses are embedded.<sup>43</sup>

In the movement for CSR, businesses are indispensable participants who can choose to contribute either positively or negatively.<sup>44</sup> The decisions and actions these companies take, or choose not to take, affect everything from humans to the environment.<sup>45</sup> For example, “in the process of providing services and/or [products], [companies] consume or affect . . . a variety of natural resources such as water, air, soil, . . . and biodiversity.”<sup>46</sup> In California alone, more than fifty percent of the annual garbage comes from the business sector.<sup>47</sup> This increase in waste negatively affects the environment and the landscape by creating larger landfills filled with toxic chemicals and non-biodegradable products. One business alone can even cause irreversible detrimental effects on the environment and its species. Syngenta’s<sup>48</sup> use of atrazine (an herbicide used on corn), for example, causes an increase in estrogen while reducing testosterone levels in fish, reptiles, birds, and mammals.<sup>49</sup> Therefore, atrazine is causing species, such as the North American leopard frog, to develop into hermaphrodites,<sup>50</sup> which reduces “behavioral and reproductive fitness” and leads to a decrease in amphibian populations.<sup>51</sup>

Industry-caused environmental degradation is further illustrated by examining the number of companies not complying with environmental statutes. *The New York Times* indicates:

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43. Pitts, *supra* note 12, at 414.

44. Surya Deva, *Sustainable Good Governance and Corporations: An Analysis of Asymmetries*, 18 GEO. INT’L ENVTL. L. REV. 707, 712. (2006). The number of companies in the United States, along with the influence they have on society, make businesses indispensable participants. *Id.* at 713.

45. *Id.*

46. *Id.* at 714. Statistics to illustrate these harms are not easily found. Most companies do not disclose the ways they degrade the environment and government agencies do not readily provide this information. If one searches long enough, the Internet can provide a few helpful examples.

47. Linda Moulton-Patterson, *AB:939: Challenges and Opportunities*, CAL. EPA (Winter 2000), <http://www.calepa.ca.gov/pressroom/newsletters/2000/00Fall.htm>.

48. Due to the negative reaction surrounding the recent developments regarding the harmful side-effects of atrazine used by Syngenta, the company has incorporated CSR principles and practices. See *Corporate Governance*, SYNGENTA GLOBAL, [http://www2.syngenta.com/en/investor\\_relations/corporate\\_governance.html](http://www2.syngenta.com/en/investor_relations/corporate_governance.html) (last visited Feb. 18, 2011).

49. LAND STEWARDSHIP PROJECT & PESTICIDE ACTION NETWORK N. AM., *THE SYNGENTA CORPORATION & ATRAZINE: THE COST TO THE LAND, PEOPLE & DEMOCRACY 12-13* (2010), available at <http://www.landstewardshipproject.org/pdf/AtrazineReportJan2010.pdf>.

50. *Id.* at 13.

51. *Herbicide*, THE ENCYCLOPEDIA OF EARTH, <http://www.eoearth.org/article/Herbicide?topic=49494> (last visited Feb. 18, 2011).



[T]he Clean Water Act has been violated more than 506,000 times since 2004, by more than 23,000 companies . . . . Companies sometimes test what they are dumping only once a quarter, so the actual number of days when they broke the law is often far higher. And some companies illegally avoid reporting their emissions, . . . so infractions go unrecorded.<sup>52</sup>

### C. Why Do Companies Consider CSR?<sup>53</sup>

A recent survey found that “82% of [American] executives agree that operating responsibly benefits the bottom line.”<sup>54</sup> Seventy-nine percent of CEOs in 2003, a ten percent increase from the previous year, agreed that sustainable development initiatives are vital to any company’s profitability.<sup>55</sup> This attitude toward environmental responsibility is likely to continue increasing because seventy-seven percent of corporate recruiters say it is “important to hire students that are aware of social and environmental issues” and most potential employees hold corporate responsibility as a prerequisite when choosing where to work.<sup>56</sup> A 2005 survey “found that 91[%] of respondents stated a preference to work for . . . [an] environmentally responsible” company.<sup>57</sup> More importantly, surveys also show that students would accept a lower salary to work for a company that prides itself on being responsible.<sup>58</sup>

Despite these statistics illustrating the high level at which CEOs, employees, and students hold businesses responsible, companies mainly pursue CSR for three reasons: morality, compliance, and/or opportunity.<sup>59</sup> Scholar Bob Willard summarized these reasons in his book *The Sustainability Advantage*, where he states,

[t]he morality motivation is based on the assumption that business[es] owe[] it to society to improve people’s lives and the environment in exchange for the privilege to operate. . . . The compliance motivation is driven by the threat of current or anticipated environmental and social regulations

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52. Charles Duhigg, *Clean Water Laws Are Neglected, at a Cost*, N.Y. TIMES, Sept. 13, 2009, at 1.

53. Dirk Matten’s table “Reasons for engaging in CSR and basic approaches” gives a concise summary of the reasons companies incorporate CSR policies into their businesses and the ideas behind these reasons. Matten, *supra* note 21, at 40.

54. Zorn & Collins, *supra* note 8, at 407 (citation omitted).

55. *Id.* at 407-08 (citation omitted).

56. *Id.* at 408 (citation omitted).

57. KERR ET AL., *supra* note 7, at 45.

58. *Id.*

59. WILLARD, *supra* note 15, at 11.

that could affect the company's right to operate. The opportunity motivation is the result of companies seeing a chance for increased revenues and profits.<sup>60</sup>

One can easily categorize these motivations into a hierarchy from most to least significant in effectuating the implementation of CSR. Since profits are the focus of the business sector, it is not surprising that the opportunity motivation is the core motivation followed by the compliance motivation,<sup>61</sup> with the morality motivation<sup>62</sup> at a distant third.

Every business action that harms or hurts the environment also moves the bottom line. This is where the opportunity motivation kicks in. There is growing evidence that companies can profit from taking into account environmental externalities. Therefore, incorporating CSR is becoming a strategic business imperative.<sup>63</sup> CSR helps businesses "reduce unnecessary risks, avoid waste generation, increase material and energy efficiency, . . . and obtain operating permits[.]"<sup>64</sup>

Companies, such as General Electric (GE), have capitalized on CSR to gain a competitive advantage. GE's sustainability initiative, called Ecomagination, is meant to offer continual advancements to existing products and to serve as a catalyst for development of future clean technologies.<sup>65</sup> This initiative allowed GE to create forty-five new products, increasing GE's revenue by twelve billion dollars.<sup>66</sup> Thus, by adopting CSR principles similar to GE,

60. *Id.*

61. The compliance motivation demands that businesses abide by the law. "Laws are understood as the codification of society's moral views, and therefore abiding by these standards is a necessary prerequisite for any further reasoning about social responsibilities." Matten, *supra* note 21, at 7. Even though this motivation seems mandatory because companies must abide by society's laws to remain in operation, there is always "ongoing coverage of corporate . . . scandals and lawsuits reveal[ing] that abiding by the law . . . [cannot] be taken for granted [in modern society]." *Id.* This is the reason behind labeling the compliance motivation behind the opportunity motivation. There are companies present in society that are more concerned with the opportunity to increase the bottom line than to act in compliance with federal and state regulations.

62. The morality motivation includes company responsibilities that are not compelled by doing what is required by the legal framework. *Id.* However, these ethical responsibilities can be motivated by society because they usually "consist of what is generally *expected* by society, over and above economic and legal expectations." *Id.* at 7-8.

63. Jeff Civins & Mary Mendoza, *Corporate Sustainability and Social Responsibility: A Legal Perspective*, 71 TEX. B.J. 368, 372 (2008).

64. Francisco Székely & Marianna Knirsch, *Responsible Leadership and Corporate Social Responsibility: Metrics for Sustainable Performance*, 23 EUROPEAN MGMT. J. 628, 628 (2005).

65. Ira Robert Feldman, *Business and Industry: Transitioning to Sustainability*, in AGENDA FOR A SUSTAINABLE AMERICA, 71, 80 (John C. Dernbach ed., 2009).

66. *Id.* at 81.

“businesses can become more profitable and sustain their activities over the long term.”<sup>67</sup>

The opportunity motivation is also related to reputation, and a positive reputation increases business profits. Modern companies are “under an unprecedented level of scrutiny from investors, government, [consumers,] and the media to prove their dedication to . . . a higher degree of corporate responsibility.”<sup>68</sup> Many companies have learned that “environmental [responsibility] is necessary for gaining a positive public reputation and prerequisite for being considered a good corporate citizen.”<sup>69</sup> A majority of consumers surveyed said that “the more . . . environmentally responsible a company is, the more likely they are to purchase the company’s products or services.”<sup>70</sup>

Companies not implementing CSR will experience a reduction in net profits by failing to implement sound business practices that take into account the company’s environmental costs.<sup>71</sup> These costs can include regulatory fines, financial charges—such as costs from expended energy, material waste, and remediation—“and losses due to inefficient production processes or poor management of activities that affect the environment.”<sup>72</sup> A company’s ability to manage risks and respond to new opportunities will allow it to show a profit, even in hard economic times.<sup>73</sup>

It is important to realize that the implementation of a CSR policy may initially cause companies to incur additional costs with no immediate return. This is because companies may have to choose more expensive production techniques and resources to protect the environment, both of which lower the bottom line by increasing operating costs. However, corporations “should seek to ignore the short term costs of instituting and adhering to . . . CSR . . . in favor of thinking about the long term benefits thereof, . . . for the company, [the environment,] and the world.”<sup>74</sup>

Companies that incorporate responsible business practices usually break even or increase profits.<sup>75</sup> Interface Carpets esti-

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67. Székely & Knirsch, *supra* note 64, at 628-29.

68. Monsma & Buckley, *supra* note 19, at 173.

69. *Id.* at 165.

70. KERR ET AL., *supra* note 7, at 46 (footnote omitted).

71. See U.N. INDUS. DEV. ORG., ENVIRONMENTAL MANAGEMENT ACCOUNTING 10, available at [http://www.unido.org/fileadmin/import/26164\\_EMApart1cropped.5.pdf](http://www.unido.org/fileadmin/import/26164_EMApart1cropped.5.pdf) (last visited Feb. 18, 2011).

72. Monsma & Buckley, *supra* note 19, at 165.

73. See Feldman, *supra* note 65, at 84.

74. Kristina K. Herrmann, *Corporate Social Responsibility and Sustainable Development: The European Union Initiative as a Case Study*, 11 IND. J. GLOBAL LEGAL STUD. 205, 219 (2004) (footnote omitted).

75. See *Green Team Business Guide*, KANSAS GREEN TEAMS, <http://www.kansasgreenteams.org/business-organizations-guide> (last visited Feb. 18, 2011).

mates that it has saved \$372 million between 1995 and 2007 “as a result of its waste elimination activities.”<sup>76</sup> IBM also increased its bottom line and output by thirty-three percent through reducing energy and water use by three million dollars a year at one facility.<sup>77</sup> Greenworks Cabinetry, a company realizing the rapid depletion of our natural resources, more than tripled its profits in 2010’s first quarter by incorporating green projects.<sup>78</sup> The Clifton Hotel in South Beach also incorporated green projects with the use of solar panels, dual-flush toilets, and energy-conserving windows.<sup>79</sup> Brian Scheinblum, the owner of Clifton, stated: “Many of these things can be done at a very reasonable cost . . . .”<sup>80</sup> This hotel wants other hotel and business owners to understand that “they can be energy efficient without losing money.”<sup>81</sup> Companies should no longer see CSR policies as obstacles to increasing the bottom line.

#### D. What are the Critics Saying?

CSR is not without its critics.<sup>82</sup> The most common criticism of CSR is that “the only responsibility corporate directors have is to make a profit for their shareholders.”<sup>83</sup> Milton Friedman, one of the most vocal critics, argues this position by stating that businesses are only supposed “to use [their] resources and engage in activities designed to increase [their] profits so long as [they] stay[] within the rules of the game, which is to say, engage[] in open and free competition, without deception or fraud.”<sup>84</sup> However, compliance with laws is not enough when society begins to realize the presence of goals and desires that legislation does not currently

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This website informs its audience how businesses can maximize their outputs and increase their profits by incorporating recycling and waste reduction practices into their daily operations. It also offers a list of ways businesses can help the environment and how businesses will increase their bottom line by incorporating this list into their business practices. This will in turn enhance a company’s reputation by showing customers, other businesses, and the general public a company’s commitment to the environment. Lastly, this website offers steps companies can use to get started on the path to increased corporate responsibility.

76. KERR ET AL., *supra* note 7, at 42 (footnote omitted).

77. Peyton Fleming, *A Race Toward Sustainability—and Profits: New Report Delivers Powerful Message and Roadmap for Companies*, CERES (March 11, 2010), <http://www.ceres.org/Page.aspx?pid=1227>.

78. Toluse Olorunnipa, *Cashing in on Green Business*, MIAMI HERALD, Apr. 19, 2010, at 14G. These projects include the use of “rapidly renewable materials, like bamboo and lyptus, and wood that comes from forests which are responsibly managed and certified by the Forest Stewardship Council.” *Why Green?*, GREENWORKS CABINETRY, <http://greenworkscabinetry.com/whygreen.php> (last visited Feb. 18, 2011).

79. Olorunnipa, *supra* note 78.

80. *Id.*

81. *Id.*

82. Monsma, *supra* note 21, at 480 (footnote omitted).

83. Colin Marks & Nancy B. Rapoport, *The Corporate Lawyer’s Role in a Contemporary Democracy*, 77 FORDHAM L. REV. 1269, 1272 (2009).

84. *Id.* (quoting MILTON FREIDMAN, CAPITALISM AND FREEDOM 133 (2d ed. 1982)).

articulate. The law moves at a snail's pace compared to changes in societal beliefs. Protecting the environment for its own sake and for future generations is becoming a prominent goal in our society. Therefore, companies must occasionally tweak their normal structure to comply with the changing demands of society rather than with the minimum legal requirements.

CSR is also criticized as being "unable to deliver on its grand promises[.]"<sup>85</sup> and as fostering deliberate green washing or encouraging pet projects.<sup>86</sup> Critics afraid of green washing charge that CSR is mere window-dressing, or empty rhetoric, that exists mainly for public relations or marketing purposes.<sup>87</sup> This green washing allows companies to reap the rewards of having a good CSR reputation without keeping CSR promises or bearing the initial investment costs of implementing CSR.<sup>88</sup> There is truth in this critique, although it is overstated. Public relations considerations drive CSR efforts to some degree.<sup>89</sup> Smart businesses desire a positive reputation, "[b]ut the smartest businesses know . . . there must be substance behind [their] claims or the result is greater, rather than less, risk of distrust and . . . liability."<sup>90</sup> Furthermore, rhetoric itself can drive change.<sup>91</sup> Rhetorical benchmarks, such as policy statements or voluntary codes, are more than mere rhetoric because they are helping to create stronger formal and informal enforcement measures.<sup>92</sup>

Lastly, critics propose there is a lack of conceptual clarity in defining and implementing CSR.<sup>93</sup> Some vagueness must exist, however, because the demands of society vary. Needs and desires may change even within the same group of stakeholders. Once CSR becomes thoroughly "[instilled] and intermixed with legal as well as voluntary principles[.]"<sup>94</sup> it will take on the conceptual clarity these critics desire.

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85. Monsma, *supra* note 21, at 480 (quoting *Behind the Mask: The Real Face of Corporate Social Responsibility*, CHRISTIAN AID 2 (2004), available at <http://www.st-andrews.ac.uk/~csearweb/aptopractice/Behind-the-mask.pdf>).

86. Matthew Genasci & Sarah Pray, *Extracting Accountability: The Implications of the Resource Curse for CSR Theory and Practice*, 11 YALE HUM. RTS. & DEV. L.J. 37, 41 (2008).

87. Pitts, *supra* note 12, at 375-76.

88. *Id.* at 376. See also Mollie Painter-Morland, *Triple Bottom Line Reporting as Social Grammar: Integrating Corporate Social Responsibility and Corporate Codes of Conduct*, 15 BUS. ETHICS: A EUROPEAN REV. 352, 353 (2006).

89. Pitts, *supra* note 12, at 377.

90. *Id.*

91. *Id.* at 378 (footnote omitted).

92. *Id.*

93. See Marks & Rapoport, *supra* note 83, at 1279.

94. Pitts, *supra* note 12, at 374.

## III. IMPLEMENTATION OF CSR

There is a growing array of initiatives aimed at creating greater implementation of CSR.<sup>95</sup> The majority includes non-legal approaches such as voluntary initiatives and standards set by various stakeholders. Companies adopt voluntary programs due to internal influences, aimed at improving the company's bottom line and gaining a competitive advantage, as well as external influences from stakeholder pressure.<sup>96</sup> This is especially true for companies that have been targets of protests, litigations, and boycotts.<sup>97</sup> These non-legal initiatives are significant because they demonstrate that companies are acknowledging their role in maintaining and encouraging CSR<sup>98</sup> and that stakeholders are influentially voicing their opinions to positively change the way business is being done.

Another trend, albeit slow moving, for implementing CSR consists of legal mandates in the form of legislation from federal, state, and local governments and even global entities. It is important to pair this hard law with the voluntary initiatives to successfully implement CSR. Voluntary initiatives on their own lack enforcement and incentives; however, the process to create legal mandates can be burdensome and lengthy. The most successful companies will be those that use the two initiatives interdependently.

A. *Voluntary Initiatives*

Some companies are making voluntary commitments beyond legal compliance that address the environmental pillar of CSR.<sup>99</sup> One way companies are making these voluntary commitments is

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95. Sandra A. Waddock et al., *Responsibility: The New Business Imperative*, 16 ACAD. MGMT. EXECUTIVE 132, 137 (2002).

96. Deva, *supra* note 44, at 715.

97. *Id.* at 728. For example, Marine campaign group Oceana boycotted Royal Caribbean Cruises in October 2004. *Successful Consumer Boycotts*, ETHICAL CONSUMER, <http://www.ethicalconsumer.org/Boycotts/successfulboycotts.aspx> (last visited Feb. 18, 2011). This led to the company installing Advanced Wastewater Purification (AWP) technology on all its ships. *Id.* "Oceana campaigns to stop the release of toxic chemicals and waste from cruise ships, and feels that the AWP systems will ensure that each vessel meets strict quality standards." *Id.* Also, Mitsubishi Motors signed an agreement with Rainforest Action Network to make changes to their wood and paper purchasing policies after a long-standing boycott. *Id.* During the Network's campaign, "more than 40 Californian cities passed resolutions condemning the company, and over 700,000 letters of objection were sent." *Id.*

98. Deva, *supra* note 44, at 728.

99. Monsma & Buckley, *supra* note 19, at 155. "Whether or not non-financial performance statements or commitments are 'material' within the current meaning of the array of U.S. securities disclosure laws, or whether such information should be required, is . . . an important concern for corporate management." *Id.* at 157-58 (citations omitted).

by creating “codes of conduct as operating principles for how the company will conduct itself[.]”<sup>100</sup> For example, “Dow Chemical set a goal to reduce energy per pound of production by 20[%] within ten years.”<sup>101</sup> The company reached its goal and while doing so saved \$3 billion in energy costs.<sup>102</sup>

Voluntary initiatives have proven successful, but there are potential pitfalls. Voluntary initiatives allow companies to account for industry differences; however, this flexibility can lead to a lack of consistency.<sup>103</sup> In addition, voluntary initiatives, while serving as baseline standards for companies, lack enforcement mechanisms.<sup>104</sup> The *Law of Transnational Business Transactions* states that “voluntary measures are only helpful to the extent that companies undertake to actively engage in the practices that are encouraged in these voluntary codes. . . . Voluntary measures allow companies to find niche activities and practices through which they can make the most progress . . . .”<sup>105</sup>

Despite these pitfalls, voluntary initiatives are essential to achieving CSR. Voluntary initiatives can respond more quickly and effectively to business activities than can hard law and the legislative process.<sup>106</sup> Therefore, the federal government must step up to provide efficient regulation and enforcement laws to help business achieve CSR.

### *B. Principles, Labels, and Standards Imposed by Stakeholders*

Voluntary initiatives are increasing in part due to “a growing demand for sustainability data . . . from a wide variety of stakeholders[.]”<sup>107</sup> Due to the increasing sophistication of third party organizations, such as NGOs, companies are integrating CSR into their business practices. Surveys show that people trust NGOs

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100. *Id.* at 156 (citation omitted).

101. KERR ET AL., *supra* note 7, at 42.

102. *Id.*

103. See Jay G. Martin & Ann L. MacNaughton, *Sustainable Development: Impacts of Current Trends on Oil and Gas Development*, 24 J. LAND RESOURCES & ENVTL. L. 257, 268 (2004).

104. *Corporate Social Responsibility and Accountability Under the Alien Tort Claims Act*, in 1 LAW OF TRANSNATIONAL BUSINESS TRANSACTIONS § 1A:5, 1A-13 (Ved P. Nanda ed., 2009).

105. *Id.* at 1A-13 to -14.

106. Pitts, *supra* note 12, at 377-78.

107. Brenda H. Gotanda et al., *Corporate Sustainability Reporting: Capturing Benefits, Avoiding Pitfalls*, LEGAL INTELLIGENCER, Aug. 20, 2009, at 5, 5 (2009). These stakeholders include “shareholders, investors, customers, business partners, . . . public interest groups and the general public.” *Id.*

more than businesses and the government.<sup>108</sup> This gives third parties the power to shape CSR initiatives.

Many of these organizations have even “developed into serious partners with business[es] in addressing some of the difficult problems of . . . environmental harm . . . [and have become] well versed at harnessing the power of publicity to focus public and media attention on these issues.”<sup>109</sup> The World Wildlife Fund (WWF) assists companies looking to improve their bottom line while increasing their corporate responsibility.<sup>110</sup> They tout themselves as partnering with leading companies to help them achieve their business objectives while simultaneously supporting WWF’s conservation objectives.<sup>111</sup> The Coca-Cola Company works with WWF to make operational changes that reduce its overall environmental impact.<sup>112</sup> Through their partnership, established in 2007, Coca-Cola and WWF combine their strengths and resources to support water conservation by improving the efficiency of the company’s water use and decreasing its carbon dioxide emissions and energy use.<sup>113</sup>

Partnerships can also arise between various stakeholders. The Coalition for Environmentally Responsible Economies Principles (Ceres, pronounced “series”) is a “national network of investors, environmental organizations and other public interest groups working with companies . . . to address sustainability challenges[.]”<sup>114</sup> These stakeholders come together under Ceres because they realize “the environmental cost of doing business [has become] painfully clear and it [is] apparent that companies werent [sic] doing enough to account for the environmental . . . impacts of their operations.”<sup>115</sup>

Moreover, consumer activism, mainly through protests and boycotts, pushes companies to change their behavior. The Home Depot became a focus of this activism when consumers realized the company used wood products sourced from old growth forests.<sup>116</sup>

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108. Cynthia A. Williams, *Civil Society Initiatives and “Soft Law” in the Oil and Gas Industry*, 36 N.Y.U. J. INT’L L. & POL. 457, 467 (2004) (citation omitted).

109. *Id.* at 466-67.

110. See *Partners: Creating Partnerships for Conservation*, WORLD WILDLIFE FUND, <http://www.worldwildlife.org/what/partners/index.html> (last visited Feb. 18, 2011).

111. See *id.*

112. See *About the Partnership*, THE COCA-COLA COMPANY, [http://www.thecocacola.com/citizenship/pdf/wwf\\_partnership\\_fact\\_sheet.pdf](http://www.thecocacola.com/citizenship/pdf/wwf_partnership_fact_sheet.pdf) (last visited Feb. 18, 2011).

113. *Id.*

114. *About Us*, CERES, <http://www.ceres.org/Page.aspx?pid=415> (last visited Feb. 18, 2011).

115. *Id.*

116. KERR ET AL., *supra* note 7, at 46.



The company quickly phased out selling old growth wood after this media attention.<sup>117</sup>

Pressure can stem from businesses within the industry as well. Business stakeholder pressure has led to a demand for more disclosure regulation regarding environmental impacts.<sup>118</sup> This pressure is also demanding that corporate law be modified to expand directors' duties to include a duty of care for the environment and create legal accountability for the directors and managers of a company guilty of various abuses.<sup>119</sup>

Wal-Mart, for example, recently began requiring "all businesses in its supply chain to provide it with information about their sustainability practices[.]"<sup>120</sup> This action "poses a powerful threat, approximating a privatized EPA, . . . with coercive powers beyond that of any government."<sup>121</sup> This type of regulation—often referred to as civil regulation—is used to fill the gap between voluntary initiatives and the law.<sup>122</sup> Civil regulation works by forcing companies to take into account various factors other than maximizing profits.<sup>123</sup> This will increase the bottom line for companies like Wal-Mart and for those on the supply chain by creating compliance incentives "through price premiums, market access, or the prevention of negative boycott campaigns."<sup>124</sup>

The Forest Stewardship Council (FSC) is an industry-wide example of this civil regulation. The FSC uses "private-sector certification programs to force sustainable forest management standards upward. . . . Similar certification programs are [presently] expanding to address some critically important [industries]," including fisheries, food, and mining.<sup>125</sup> Similar to Wal-Mart, the FSC is creating a level of compliance beyond that of legal obligations. Companies choosing to abide by the FSC's standards will benefit by gaining certification rights and a positive reputation.

Overall, stakeholder pressure is one of the main reasons behind company implementation of voluntary initiatives and the beginning of government regulation on disclosing and reporting CSR policies. Stakeholder pressure—whether from outside organizations, third-party demonstrations, competing businesses, well-known companies, or private-sector certification—creates

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117. *Id.* at 46-47.

118. Nanda, *supra* note 104, at 1A-12.

119. *Id.*

120. Gotanda et al., *supra* note 107.

121. Feldman, *supra* note 65, at 79.

122. *Id.* at 77-78.

123. *See id.*

124. *Id.* at 78 (footnote omitted).

125. *Id.* (footnote omitted).

industry wide principles and standards that force companies to implement CSR.

### *C. Legislation Mandating CSR and Non-Financial Disclosure*

Regulatory authorities begin to mandate substantive regulations when voluntary initiatives fail.<sup>126</sup> One survey “found that ‘legal requirements were cited as the most important driving force for addressing environmental issues by 49[%] of primary [and] secondary industry.’”<sup>127</sup> This shows that federal and state governments must assist companies to meet the voluntary initiatives and obligations imposed by stakeholders to create binding legislation holding companies accountable for their behavior.

Numerous legal issues are poised to impact CSR. Some examples of present legislation mandating partial aspects of CSR include acts from the Securities and Exchange Commission (SEC), Sarbanes-Oxley Act, and Environmental Self-Auditing statutes.

The SEC regulates and enforces disclosure requirements “[t]o promote truth and transparency . . . and deter the use of false or misleading information[.]”<sup>128</sup> Notably, “[t]he SEC does not require companies to make a profit[.]”<sup>129</sup> Instead, it only requires disclosures “to be communicated widely and simultaneously and to be true.”<sup>130</sup> The SEC claims it has environmental liability reporting obligations; however, these are inadequate to address the problems associated with businesses degrading the environment. Item 101(c)(1)(xii) of SEC’s guidance states:

[D]isclosure . . . shall be made as to the material effects that compliance with Federal, State and local provisions which have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, may have upon the capital expenditures, earnings and competitive position of the registrant and its subsidiaries. The registrant shall disclose any material estimated capital expenditures for environmental control facilities for the remainder of its current fis-

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126. Rob Gray & Markus Milne, *Towards Reporting on the Triple Bottom Line: Mirages, Methods and Myths*, in THE TRIPLE BOTTOM LINE: DOES IT ALL ADD UP? 70, 71 (Adrian Henriques & Julie Richardson eds., 2004).

127. Carol Adams et al., *Triple Bottom Line: A Review of the Literature*, in THE TRIPLE BOTTOM LINE: DOES IT ALL ADD UP?, *supra* note 126, at 22, 23-24 (quoting RORY SULLIVAN & HUGH WYNDHAM, EFFECTIVE ENVIRONMENTAL MANAGEMENT: PRINCIPLE AND CASE STUDIES 9 (2001)).

128. Monsma & Buckley, *supra* note 19, at 183.

129. *Id.* at 201.

130. *Id.*

cal year and its succeeding fiscal year and for such further periods as the registrant may deem material.<sup>131</sup>

This language rewards corporate noncompliance instead of creating environmental disclosure requirements. In other words, the SEC allows companies to disregard environmental disclosure requirements as long as the companies categorize the requirements as non-material. Because of this vagueness, along with a lack of enforcement, the SEC environmental guidelines do not increase CSR implementation.

The SEC also mandates that companies disclose liabilities and litigation.<sup>132</sup> However, “74% of companies facing environmentally-related legal actions . . . do not adequately disclose these liabilities to shareholders as mandated by SEC Regulation[.]”<sup>133</sup> This reiterates the SEC’s lack of environmental reporting guidelines and enforcement.

It is likely that the SEC will face stakeholder pressure to force companies to incorporate non-financial disclosures along with their material financial disclosures. This is likely because environmental values and CSR are becoming more important to our society. If the SEC mandates non-financial disclosure, companies can use frameworks such as TBL and the Global Reporting Initiative to accurately disclose, discussed later in this Comment.

The Sarbanes-Oxley Act, enacted in 2002, “spurred a closer look at codes of conduct and how they were being implemented.”<sup>134</sup> This act was “designed to increase the transparency, integrity, and accountability of public companies and, in turn, to combat the kind of corporate deceit that had given rise to . . . scandals and financial breakdowns.”<sup>135</sup> The act forces publically traded companies to disclose if they have a code of ethics, if not, why not, and when the board of directors waives any part of the company’s code of ethics.<sup>136</sup> Two problems arise in this Act. First, it is only for publicly traded companies. Secondly, this does not force companies to comply with anything beyond the existing law. To increase CSR im-

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131. SEC. AND EXCH. COMM’N, 33-9106; 34-61469; FR-82, COMMISSION GUIDANCE REGARDING DISCLOSURE RELATED TO CLIMATE CHANGE 13 (2010), available at <http://www.sec.gov/rules/interp/2010/33-9106.pdf>.

132. Monsma & Buckley, *supra* note 19, at 201.

133. *Id.* at 202.

134. Elizabeth F. Brown, *No Good Deed Goes Unpunished: Is There a Need for a Safe Harbor for Aspirational Corporate Codes of Conduct?*, 26 YALE L. & POL’Y REV. 367, 380 (2008).

135. Note, *The Good, The Bad, and Their Corporate Codes of Ethics: Enron, Sarbanes-Oxley, and the Problems with Legislating Good Behavior*, 116 HARV. L. REV. 2123, 2123 (2003).

136. Brown, *supra* note 134, at 380-81.

plementation, regulation must include non-publicly traded companies and take steps beyond minimum compliance.

Some laws “provide incentives for businesses to engage in environmental self-audits.”<sup>137</sup> The EPA’s self-auditing policy creates incentives for companies who self-audit by offering “reduced gravity-based penalties . . . to businesses that voluntarily discover, promptly disclose, and timely remediate any violation of EPA-administered environmental statutes or regulations.”<sup>138</sup>

States have gone above the minimum aforementioned federal regulations to create greater CSR implementation.<sup>139</sup> Oregon governors have issued executive orders relating to CSR, and the most relevant executive order “requires the state’s Economic and Community Development Department to develop a plan to encourage private businesses and committees throughout the state to learn about and voluntarily adopt sustainable practices[,]” including CSR.<sup>140</sup> Furthermore, the Oregon legislature has amended its corporations code to allow corporations to authorize their decisionmakers to act in an environmentally responsible manner.<sup>141</sup> This “provision helps dispel the common misconception that corporate boards have a legal obligation to maximize shareholder profits and may not take into account . . . other stakeholder groups.”<sup>142</sup> However, this is just one small step in the right direction. Many more steps are needed to successfully implement CSR in all American companies.

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137. *Id.* at 383. Self-audits, also known as self-assessments, are self-reviews of business operations done to assess a company’s compliance with environmental regulations. Rudolph A. Cartier, Jr. *The Small Business Guide to Environmental Awareness: A Simplified Approach to Environmental Compliance*, N.H. DEP’T ENVTL. SERVS. 4 (June 2004), [http://des.nh.gov/organization/commissioner/pip/publications/co/documents/small\\_business.pdf](http://des.nh.gov/organization/commissioner/pip/publications/co/documents/small_business.pdf).

138. Brown, *supra* note 134, at 383 (footnote omitted). EPA’s Audit Policy is available at <http://epa.gov/oecaerth/incentives/auditing/auditpolicy.html> (last visited Feb. 18, 2011).

139. See Nancy J. King & Brian J. King, *Creating Incentives for Sustainable Buildings: A Comparative Law Approach Featuring the United States and the European Union*, 23 VA. ENVTL. L.J. 397, 413-18 (2005). Unlike Oregon, other state laws that related to sustainability neither create frameworks to pursue sustainability or commit states to sustainability; however, they provide their own definition of sustainability. See *id.* Minnesota “requires a state agency to draft a model ordinance containing minimum regulations, to guide sustainable development at the local level.” *Id.* at 415. Also, Vermont established “a state policy to engage in publicly supported financing activities to encourage entrepreneurial investments by the private sector in businesses that promote a sustainable economy.” *Id.* Third, New Jersey “codified an executive order requiring that all state departments and agencies pursue sustainability goals.” *Id.* at 416.

140. *Id.* at 414 (footnote omitted).

141. Judd F. Sneirson, *Green is Good: Sustainability, Profitability, and a New Paradigm for Corporate Governance*, 94 IOWA L. REV. 987, 1019 (2009).

142. *Id.*

## IV. TRIPLE BOTTOM LINE: FROM VOLUNTARY TO MANDATORY

Accountability is a prerequisite for CSR. Demands for greater corporate responsibility are fostering new accountability and reporting initiatives among partnerships of businesses, investors, and governmental bodies.<sup>143</sup> It is important to know “who controls [companies] and to whom are [companies] accountable.”<sup>144</sup> Milton Friedman and other ardent believers of the free market argue that corporations are only accountable to their shareholders and are accountable simply to obey and comply with the law.<sup>145</sup> However, companies should be accountable to all relevant stakeholders. Some scholars argue that “CSR can be actualized only within a context of accountability.”<sup>146</sup> For companies to become more accountable, they must audit and report on their environmental performance through new accounting procedures.<sup>147</sup> This reporting will make corporate activity and performance more visible to those with a stake in the company and thus ensure heightened corporate responsibility.<sup>148</sup>

## A. Definition and History

TBL, coined by John Elkington,<sup>149</sup> represents the notion that “business does not have just one single goal—namely adding economic value—but that it has an extended goal set, which [requires] adding environmental and social value too.”<sup>150</sup> TBL describes how companies are moving beyond reporting only on their financial bottom line to assessing and reporting on the three pillars of sustainability.<sup>151</sup> TBL is even emphasized by the phrase: “people,

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143. Sandra Waddock, *Creating Corporate Accountability: Foundational Principles to Make Corporate Citizenship Real*, 50 J. BUS. ETHICS 313, 314 (2004).

144. Matten, *supra* note 21, at 37.

145. *Id.*

146. Ganesh, *supra* note 17, at 387 (citations omitted).

147. Matten, *supra* note 21, at 38 (citations omitted).

148. *Id.*

149. *Id.* at 27. John Elkington, director of the SustainAbility strategy consultancy, “advocates . . . and has written a number of influential books on corporate environmentalism.” *Id.* SustainAbility works with the world’s leading companies to help them anticipate, accelerate, and benefit from society’s shift to sustainability. *Work*, SUSTAINABILITY, <http://www.sustainability.com/work> (last visited Feb. 18, 2011). The list of companies consulted by SustainAbility is extensive, but includes prominent names such as Apple, Coca-Cola, Ford, Gap, Intel, Johnson & Johnson, McDonald’s, MasterCard, Nike, Starbucks, Target and Walt Disney. *Clients*, SUSTAINABILITY, <http://www.sustainability.com/clients> (last visited Feb. 18, 2011). For more information, visit SustainAbility’s homepage at <http://www.sustainability.com>.

150. Matten, *supra* note 21, at 27 (citation omitted).

151. Thomas Wiedmann & Manfred Lenzen, *Sharing Responsibility Along Supply Chains—A New Life-Cycle Approach and Software Tool for Triple-Bottom-Line Accounting*,

planet and profits,”<sup>152</sup> which integrates the three pillars of sustainable development.

TBL is a type of reporting device intended to improve a corporation’s economic bottom line. Much of sustainable development is about “development,” but if businesses keep developing by only analyzing the economic impacts of their actions, the “sustainable” aspect is lost. The “planet” part of the three pillars refers to sustainable environmental practices. A company that incorporates the TBL accounting into its business structure endeavors to thrive while reducing its environmental footprint. Companies that adopt TBL do so because they acknowledge that it will “create more financial value as a direct and measureable result.”<sup>153</sup> Success in addressing environmental responsibility is becoming an important indicator among investors of sound management quality.<sup>154</sup>

### *B. Implementation Categories*

Companies moving beyond compliance mandates are voluntarily reporting on a broader scope of information by creating corporate sustainability reports, including the TBL accounting framework.<sup>155</sup> These voluntary reports “aim to assure stakeholders that businesses are looking beyond short-term profits and are implementing broader goals that address environmental, social and economic performance.”<sup>156</sup> Often a business activity addressing environmental aspects can turn out to be financially profitable in ways companies would not realize if they analyzed their bottom line from a purely economic perspective.<sup>157</sup>

Because voluntary efforts can vary in quality and because environmental aspects are not measured in any standardized fashion, third-party stakeholders should verify company reporting. Some reporting frameworks have emerged to guide TBL reporting. These frameworks include the Global Reporting Initiative’s Sustainability Reporting Guidelines, Dow Jones Sustainability Index, AccountAbility’s AA1000 Standards, and the International Organization for Standardization’s ISO 14031 Standard for environmental

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THE CORPORATE RESPONSIBILITY RESEARCH CONFERENCE 3 (2006), available at [http://www.censa.org.uk/docs/Wiedmann\\_Lenzen\\_2006\\_CRRC\\_paper.pdf](http://www.censa.org.uk/docs/Wiedmann_Lenzen_2006_CRRC_paper.pdf).

152. John Elkington, *Enter the Triple Bottom Line*, in THE TRIPLE BOTTOM LINE: DOES IT ALL ADD UP?, *supra* note 126, at 1, 2.

153. Martin & MacNaughton, *supra* note 103, at 267 (footnote omitted).

154. *Id.*

155. Gotanda et al., *supra* note 107.

156. *Id.*

157. See *Corporate Sustainability Assessment*, DOW JONES SUSTAINABILITY INDEXES, [http://www.sustainability-index.com/07\\_html/assessment/overview.html](http://www.sustainability-index.com/07_html/assessment/overview.html) (last visited Feb. 18, 2011) [hereinafter DOW JONES INDEXES].

performance evaluation.<sup>158</sup> These reporting systems use a set of criteria to “assess the opportunities and risks deriving from economic, environmental and social developments[.]”<sup>159</sup> Under the Dow Jones Sustainability Index, a major source of the information comes from a questionnaire completed by companies, third-party documents, and external assurance reports.<sup>160</sup> The Index then ranks the assessed companies within their industry group and selects them for certain categories based on these assessments.<sup>161</sup> This information is then compiled and easily accessible on the Internet.<sup>162</sup> This is similar to AccountAbility’s AA1000 standards, which promote accountability through a set of general guidelines and a third-party verification system that evaluates the credibility of companies’ sustainability reports,<sup>163</sup> and the International Organization for Standardization’s ISO 14031, which “provides guidance on how an organization can evaluate its environmental performance” through a selection of performance indicators.<sup>164</sup>

As aforementioned, the “[SEC] regulations do not specifically address sustainability disclosures[, but] . . . they may nevertheless affect a company’s sustainability reporting[.]”<sup>165</sup> Regulation S-K, for example, is an SEC regulation containing prescribed reporting requirements for public companies filing forms under the Securities Act of 1933, the Securities Exchange Act of 1934, and the Energy Policy and Conservation Act of 1975.<sup>166</sup> Although the regulation does not directly address sustainability, some of its requirements may be broad enough to include CSR issues.<sup>167</sup> “Item 101 of [Regulation] S-K requires disclosure of the material effects of environmental . . . costs; Item 103 requires disclosure of material pending or contemplated administrative or judicial proceedings, including those related to environmental . . . issues.”<sup>168</sup> However, the majority of companies have stated that they “will not [report] until a firm and substantial regulatory framework is in place—preferably through law.”<sup>169</sup> Companies that actually report rarely report on

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158. Gotanda et al., *supra* note 107; Paul Monaghan, *Put Up or Shut Up*, in *THE TRIPLE BOTTOM LINE: DOES IT ALL ADD UP?*, *supra* note 126, at 150, 151.

159. DOW JONES INDEXES, *supra* note 157.

160. *Id.*

161. *Id.*

162. *Id.*

163. KERR ET AL., *supra* note 7, at 205-06.

164. *Environmental Management: The ISO 14000 Family of International Standards*, ISO CENTRAL SECRETARIAT 6 (2009) [http://www.iso.org/iso/theiso14000family\\_2009.pdf](http://www.iso.org/iso/theiso14000family_2009.pdf) (emphasis removed).

165. Gotanda et al., *supra* note 107.

166. *Regulation S-K*, SECURITIES LAWYER’S DESKBOOK, <http://taft.law.uc.edu/CCL/regS-K/index.html> (last visited Feb. 18, 2011).

167. *Id.*

168. *Id.*

169. Gray & Milne, *supra* note 126, at 72.

all matters necessary for stakeholders to understand the whole picture of the company's performance. Therefore, incomplete reporting efforts can mislead stakeholders.<sup>170</sup> This illustrates that mandated legislation is required to force companies to implement TBL and to hold companies accountable for what they do report.

### C. Quantifying TBL and a Helpful Guideline<sup>171</sup>

Companies now realize that "failure in many non-financial areas can heavily damage the bottom line, perhaps irreparably."<sup>172</sup> Under current trends, businesses are "proving that . . . embracing, rather than [avoiding, environmental] concerns" can best maximize profits and the idea that profitability and responsibility are interdependent is redefining the purpose of businesses.<sup>173</sup> Nevertheless, how does one calculate this potential profit to show companies the benefit of using TBL?

Traditional accounting looks at a company's net profit because net profit has been considered the most important calculation to the company's shareholders. In other words, traditional accounting looks at the internal costs. However, TBL incorporates external costs above and beyond internal costs. These external costs, which can also be benefits, are externalities including economic and environmental aspects.<sup>174</sup> As scholar Julie Richardson states, "[c]alculating [TBL] in financial terms requires converting these externalities into monetary values."<sup>175</sup> This calculation is complicated because many environmental costs and benefits are intangibles and lack specific measurements.<sup>176</sup> Some organizations have offered guidance and frameworks, like those discussed above, to businesses pursuing TBL on quantifying external costs.

A good starting point is to calculate a business' traditional economic profitability and add to that what it perceives to be the environmental benefits—such as lower emissions, fewer materials sent

170. *Id.*

171. Julie Richardson's table entitled "Accounting for externalities" provides a helpful list of environmental costs. Julie Richardson, *Accounting for Sustainability: Measuring Quantities or Enhancing Qualities?*, in THE TRIPLE BOTTOM LINE: DOES IT ALL ADD UP?, *supra* note 126, at 34, 38.

172. KPMG, *Beyond the Numbers: How Leading Organisations are Linking Values with Value to Gain Competitive Advantage 2* (2000), available at <http://www.kpmg.com.au/aci/docs/beyond-numbers.pdf>.

173. Bennett Daviss, *Profits from Principle: Five Forces Redefining Business*, FUTUREIST, Mar. 1, 1999, available at <http://www.allbusiness.com/management/163027-1.html>.

174. Richardson, *supra* note 171, at 36.

175. *Id.*

176. *Id.* at 38.



to landfill, and reduced materials in the product itself.<sup>177</sup> This calculation should then be reduced by internal environmental expenses such as costs of monitoring emissions, permits and authorization costs, special insurance fees, payment of fines, costs of operating an environmental department, and spending that has an environmental component.<sup>178</sup> In other words, companies must assess their health as they always have—economically—and then tack on bonus points for eco-efficiency and reduce points for environmental inefficiency and degradation. If businesses are not using TBL as a strategic design tool, they are missing a rich opportunity to enhance their bottom line.

### 1. Global Reporting Initiative

Despite the seemingly simple calculation above, many environmental externalities are still unquantifiable. However, the Global Reporting Initiative (GRI) offers recommended guidelines and attempts to quantify the supposedly unquantifiable.

The GRI is an independent institution whose “mission is to create conditions for the transparent and reliable exchange of sustainability information through the development and continuous improvement of the GRI Sustainability Reporting Framework.”<sup>179</sup> It strives to make “disclosure on . . . environmental . . . performance . . . as commonplace . . . as financial reporting[ ] and as important to organizational success.”<sup>180</sup> The GRI incorporates active participation from various stakeholders including representatives from business, investment, and environmental organizations from around the world.<sup>181</sup> This useful framework allows stakeholders to evaluate companies and offer a third-party assessment of company performances on environmental issues.

This is a voluntary initiative, so companies may adopt the GRI guidelines as they wish. To use the GRI reporting framework, companies must commit themselves to specific reporting guidelines on all three pillars of sustainability.<sup>182</sup> The environmental reporting format is the “most highly developed of the GRI indicators and

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177. Rupert Howes, *Environmental Cost Accounting: Coming of Age? Tracking Organizational Performance Towards Environmental Sustainability*, in *THE TRIPLE BOTTOM LINE: DOES IT ALL ADD UP?*, *supra* note 126, at 99, 105 (Table 10.1).

178. *See id.*

179. *About GRI*, GLOBAL REPORTING INITIATIVE, [www.globalreporting.org/AboutGRI](http://www.globalreporting.org/AboutGRI) (last visited Feb. 18, 2011). For additional information about the GRI, including its reporting guidelines and applications, visit the GRI website at <http://www.globalreporting.org/Home>.

180. *Id.*

181. Williams, *supra* note 108, at 471.

182. *Id.* at 473.

seeks to provide a picture of a company's 'impacts on living and non-living natural systems[.]'"<sup>183</sup> Environmental reporting under the GRI requires a company to disclose information regarding its use of energy and water, emissions into water and air, waste management techniques, the environmental profile of its products and services, environmental information about its suppliers, and its effects on the land.<sup>184</sup> The GRI has also developed guidelines for reporting within particular industries.<sup>185</sup> This gives companies flexibility in accommodating to the needs of their industry. Legal structures should not restrict a company's flexibility to respond to the dynamic and competing values of all stakeholders.

Overall, companies use the GRI reporting guidelines because the guidelines give companies a means to qualitatively and quantitatively measure the effects of their decisions on stakeholders.<sup>186</sup> Moreover, stakeholders have begun to realize the importance of this reporting framework.

#### V. NECESSARY LEGAL CHANGES TO PROMOTE CSR

Federal, state, and local governments must make legal changes to increase CSR implementation because voluntary initiatives lack enforcement and consistency. However, the law is too narrow; it "does not account for a broad range of ethical positions or moral obligations."<sup>187</sup> The law does mandate and prohibit a range of conduct, but these are "minimal standards designed . . . to maintain basic social order."<sup>188</sup> This does not mean that law is unrelated to issues of morality and ethics. However, for businesses to implement CSR more regularly, the law and ethics need to be explicitly intertwined.<sup>189</sup>

"Nevertheless, while the law evolves to address changing societal conditions . . . , this is often a very slow and incremental process."<sup>190</sup> Necessary changes include overall changes to the corporate law structure—including the beliefs of maximizing shareholder profits and short-term productivity and the introduction of mandatory codes of conduct and safe harbor provisions. In addition, it is necessary to incorporate a mandatory TBL reporting

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183. *Id.* (quoting *Sustainability Reporting Guidelines*, GLOBAL REPORTING INITIATIVE 48 (2002)).

184. *Id.*

185. Gotanda et al., *supra* note 107.

186. Williams, *supra* note 108, at 473.

187. Seeger & Hipfel, *supra* note 39, at 155.

188. *Id.* at 157.

189. *See id.*

190. *Id.* at 164.

and accounting framework, such as that framed by the GRI and foreign countries.

*A. Tweaking the Corporate Law Structure*

Companies “often argue that they are [abiding by] the law with regard to specific activities and therefore have no other obligations to act in a socially responsible manner.”<sup>191</sup> This shows that “minimal legal responsibilities are often framed as the organization’s maximum ethical obligation[s]. . . . In some cases, [companies] may determine that it is actually cheaper to continue acting in [an environmentally] questionable [or] illegal manner and simply pay any fines or penalties as a cost of doing business.”<sup>192</sup> Companies may even “exploit loopholes or move their operations to jurisdictions with less strict regulation.”<sup>193</sup> In addition, “the structure of corporate law does not allow [companies] to look beyond shareholders [to] allow them to balance the interests of . . . stakeholders.”<sup>194</sup> The drive for shareholder profits, though not required as a matter of corporate law, has stood in the way of achieving CSR.<sup>195</sup>

One way to overcome this desire to maximize shareholder profits and produce a shift in the business culture is “to impose duties on directors to [assess] non-financial considerations while formulating policies and [making] decisions.”<sup>196</sup> Without increased duties, most companies will not live up to their potential for implementing CSR and promoting sustainable development. Intel has lived up to its potential by including corporate responsibility and sustainability performance as fiduciary duties.<sup>197</sup> Intel’s Governance and Nominating Committee’s duties now include, “reviews and reports to the Board on a periodic basis with regards to matters of [CSR] and sustainability performance, including potential long and short term trends and impacts to our business of environmental, social, and governance issues, including the company’s public reporting on these topics.”<sup>198</sup> Intel’s decision was influenced by the investing firm Harrington Investments, Inc. and an opinion from its corporate counsel, Gibson, Dunn & Crutcher LLP.<sup>199</sup> This

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191. *Id.* at 163.

192. *Id.*

193. *Id.*

194. Deva, *supra* note 44, at 748.

195. *See id.*

196. *Id.* (footnote omitted).

197. BC Upham, *Intel Makes Sustainability a “Fiduciary Duty” After Investor Campaign*, TRIPLEPUNDIT (Apr. 2, 2010), <http://www.triplepundit.com/2010/04/intel-sustainability-fiduciary-duty>.

198. *Id.*

199. *Id.*

opinion stated that “under Delaware law directors have a fiduciary duty to address corporate responsibility and sustainability performance.”<sup>200</sup> This opinion may prompt other companies to change their codes of conduct to reflect ethical fiduciary duties.<sup>201</sup>

The United States can follow Canada’s lead of creating more fiduciary duties. The Supreme Court of Canada interpreted the fiduciary duties of directors in a way the United States should adopt. The Canadian Supreme Court stated:

We accept as an accurate statement of law that in determining whether they are acting with a view to the best interests of the corporation it may be legitimate, given all the circumstances of a given case, for the board of directors to consider, *inter alia*, the interests of shareholders, employees, suppliers, creditors, consumers, governments and the environment.<sup>202</sup>

In addition to imposing additional fiduciary duties, some stakeholders “have attempted to encourage . . . corporations to adopt codes of conduct that commit [companies] to aspirational standards of conduct with regard to . . . stakeholders, rather than codes that merely reiterate the corporations’ existing obligations under the law.”<sup>203</sup> To encourage implementation of aspirational codes of conduct, state and federal governments must adopt laws that would grant companies who adopt these codes of conduct a safe harbor from litigation that might be brought if they fail to meet the higher standards set forth in their codes.<sup>204</sup> Safe harbors are important because the increased potential for liability discourages some companies from adopting codes of conduct. As described in the *Yale Law and Policy Review*,

[i]f a corporation adopts a code of conduct with aspirational standards [that are] higher than ones prescribed normally under existing statutes, regulations, or the common law[,] some courts will allow stakeholders to sue the corporation if it fails to meet those standards in its code of conduct. Thus, the law creates a perverse set of incentives that encourage

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200. *Id.*

201. *Id.*

202. KERR ET AL., *supra* note 7, at 172 (quoting Peoples Department Stores Inc. v. Wise, [2004]3 S.C.R. 461, at 482 (S.C.C.)).

203. Brown, *supra* note 134, at 368.

204. *See id.* at 375. To learn more about the various major federal and state laws that encourage corporations to adopt codes of conduct and compliance programs see *id.*

corporations to do the legal minimum rather than aspire to do more for their stakeholders.<sup>205</sup>

However, companies would only be entitled to these safe harbors as long as they adopted and monitored the implementation of such codes in good faith.<sup>206</sup>

Businesses and society will benefit from the creation of safe harbor provisions. First, it will lessen the costs companies might have to incur. As professor Elizabeth Brown states, “[t]hese acts would reduce the threat of litigation and its attendant costs . . . [and companies] would find that the benefits of adopting aspirational codes of conduct outweigh the costs.”<sup>207</sup> Second, “safe harbor [provisions] are likely to produce real and positive changes in corporate behavior.”<sup>208</sup> Safe harbor provisions will force companies to integrate more CSR policies, which will make businesses more responsible and environmentally aware. Third, companies adopting codes of conduct to obtain safe harbors will increase their profits in the long run due to increased positive reputation with consumers and investors.<sup>209</sup>

Critics of safe harbor provisions argue that they encourage “officers and directors . . . to manage corporations inefficiently.”<sup>210</sup> This criticism is based on the traditional belief that the goal of companies is profit maximization and that any other goal “will lead to less efficient business [practices].”<sup>211</sup> Similar to CSR policies, safe harbor provisions will also increase a company’s bottom line. Companies creating codes of conduct will experience higher profitability, and safe harbor provisions will not lessen this profit. Safe harbor provisions will decrease a company’s threat of litigation, which will lead to fewer violations of existing laws and regulations. A company with fewer violations will not incur the costs associated with litigation and penalties. Other critics argue that few companies will actually adopt safe harbor provisions because “[c]orporations in highly competitive markets with narrow profit margins will be reluctant to increase their costs of doing business[.]”<sup>212</sup> Mandating codes of conduct and subsequent safe harbor provisions will invalidate this criticism. If these are mandating through legislation, all companies will experience equal costs in

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205. *Id.* at 371-72 (footnote omitted).

206. *Id.* at 411.

207. *Id.* at 410.

208. *Id.* at 411.

209. For an example of a statute creating safe harbor provisions see *id.* at 422-30.

210. *Id.* at 414.

211. *Id.*

212. *Id.* at 415.

creating codes of conduct. Therefore, safe harbor provisions will not put any company at a competitive disadvantage.

In addition to the creation of mandatory codes of conduct and safe harbor provisions, there needs to be a shift in goal setting from short-term to long-term goals. Goals are mainly short term due to our society's emphasis on "short term financial performance and the need to maximize profits."<sup>213</sup> Therefore, these goals are never intended to be sustainable. The law does not mandate that a company must increase profits in the short term. Instead, this short-term goal comes from shareholder desire for companies to increase profits. For example, in *Shlensky v. Wrigley*,<sup>214</sup> a group of minority shareholders sued to force the directors to install lights in Wrigley Field.<sup>215</sup> The court held that the board of directors' decision not to install lights was "in the shareholders' long term interests, even if it harmed their short term financial [goals]."<sup>216</sup> To improve the long-term profitability—which has been proven possible—companies need to look beyond the shareholder to the stakeholder. Jim Sinegal, the CEO and co-founder of Costco, commented, "The last thing I want people to believe is that I don't care about the shareholder . . . . But I happen to believe that in order to reward the shareholder in the long term, you have to please your customers and workers."<sup>217</sup>

### *B. Mandating TBL Accounting/Reporting*<sup>218</sup>

Creating aspirational codes of conduct is not enough to adequately implement CSR and promote nationwide sustainable development. Companies must also be accountable for their codes. One way to hold companies accountable is to make them disclose non-financial matters related to their codes of conduct through a TBL reporting system. One study shows that less than ten percent of the companies surveyed reported a financial analysis of their environmental policies.<sup>219</sup> Codes of conduct depict the aspirations a company sets out to accomplish. However, there must be a legal mechanism or reporting procedure that companies complete to ensure these aspirations are being met, or at least are attempting to

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213. *Id.* at 399 (citing DAVID VOGEL, *THE MARKET FOR VIRTUE* 71-71 (2005)).

214. 237 N.E.2d 776 (Ill. App. Ct. 1968).

215. Brown, *supra* note 134, at 387.

216. *Id.* at 387-88 (citing *Shlensky*, 237 N.E.2d at 780).

217. *Id.* at 399 (alteration in original) (footnote omitted).

218. There are numerous CSR principles that can be legally mandated to increase corporate responsibility by businesses, and accountability is just one of these legal principles. See KERR ET AL., *supra* note 7, at 91.

219. See HOLLIDAY ET AL., *supra* note 14, at 67 (Figure 5: Adoption of Environmental Accounting).

be met through good faith. “Without a minimum regulatory framework enforcing [non-financial disclosures] . . . , stakeholders can only show their preference for . . . environmental performances to a limited extent.”<sup>220</sup> This mandatory accounting and reporting system must consider how companies will report, how often they will report, the content of the reports, the quality of the reports’ content, and how the contents will be verified.

Companies must be forced to report their TBL “through a stand-alone printed report, a web-based report, an annual report or an approach that combines each of these methods.”<sup>221</sup> The content and the quality of the reports will be determined based on the industry sector the company operates under, the company’s geographic location, and whether the company is subject to other reporting requirements.<sup>222</sup> To simplify the issue of choosing what content and quality to mandate, the United States should incorporate the criteria listed under the GRI to create a reporting framework to “guide companies in all sectors and geographic regions[.]”<sup>223</sup> Lastly, there must be a third party who verifies the contents of these reports and enforces them if the companies are not abiding by their codes.<sup>224</sup> The standards mentioned above, such as AccountAbility Standard AA10000 and the Dow Sustainability Index, offer processes for assessing credibility of a company’s environmental and social reporting practices.<sup>225</sup>

### *C. Foreign Countries: What Can We Learn from Them?*

“[S]everal countries have introduced legislation that mandates all or certain types of [companies] to disclose non-financial information[, including] . . . the United Kingdom, Belgium, Germany, France, and Australia[.]”<sup>226</sup> These countries are forcing companies to take into account stakeholder desires as well as shareholder interests.<sup>227</sup> The United States has lagged behind the member states of the European Union due in part “to the more individualist form of liberal capitalism practiced in the United States.”<sup>228</sup> Overall, the

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220. Valor, *supra* note 4, at 202.

221. KERR ET AL., *supra* note 7, at 243.

222. *Id.*

223. *Id.*

224. *Id.* at 244.

225. Gotanda et al., *supra* note 107.

226. Deva, *supra* note 44, at 731.

227. Pitts, *supra* note 12, at 417.

228. *Id.* at 389 (footnote omitted). This article gives good examples of what many different countries are doing to implement CSR policies into business activities. Companies in India have shown enthusiasm for CSR: “Precedents such as the long-standing mandatory environmental reporting and the support for the precautionary principle by the Supreme Court of India undoubtedly prepare the ground.” *Id.* at 404 (footnote omitted). Singapore’s

EU has been at the forefront of implementing CSR. In addition, Canada has led the way for companies to calculate the TBL.

The most significant EU initiative is the EU Green Paper on Promoting a European Framework for CSR (Green Paper).<sup>229</sup> “The Green Paper suggest[s] that [companies can] gain and maintain a competitive advantage over their competitors by practicing [CSR], something [the EU believes] ‘should be treated as an investment, not a cost.’”<sup>230</sup> The Green Paper offers guidance to companies regarding how to implement CSR, manage environmental impacts, report CSR, and evaluate CSR initiatives such as codes of conduct and TBL reporting.<sup>231</sup>

Because of the Green Paper and individual country initiatives in favor of TBL, the European countries have had much more success implementing CSR than has the United States.<sup>232</sup> The Rutgers *Journal of Law and Public Policy* states that “in Europe, ‘CSR has focused on the environmental and social impact of companies’ business functions,’ whereas in the United States, CSR historically was seen as mainly ‘donations to social and artistic causes and other such acts of corporate philanthropy.’”<sup>233</sup> The United States has shown some promise and leadership through its businesses’ implementation of codes of conduct from voluntary initiatives and stakeholder pressure; however, the United States is behind Europe in creating legal mandates to require adoption of codes of conduct and TBL reporting frameworks.<sup>234</sup>

The United States can mimic the successes of foreign countries’ reporting and disclosure requirements by mandating its own set of regulations.<sup>235</sup> The reporting framework in France, for example, “requires all French corporations listed on [the stock market] to annually report on the . . . environmental impact[s] of their [business] activities.”<sup>236</sup> This regulation “establishes . . . nine categories

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“Singapore Compact’ for CSR is affiliated with the U.N. Global Compact.” *Id.* at 406 (footnote omitted). Lastly, “Australian and Canadian lawmakers are likely to closely watch the implementation of the new U.K. directors’ duties mandating consideration of environmental and social issues according to . . . the 2006 U.K. Companies Act, weighing whether to move in the same direction.” *Id.* at 385 (footnote omitted).

229. See Deva, *supra* note 44, at 733 (footnote omitted).

230. See *id.* (quoting *Commission Green Paper on Promoting a European Framework for Corporate Social Responsibility*, § 12 (July 18, 2001), available at [http://eur-lex.europa.eu/LexUriServ/site/en/com/2001/com2001\\_0366en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2001/com2001_0366en01.pdf)).

231. Marks & Rapoport, *supra* note 83, at 1276-77.

232. See Pitts, *supra* note 12, at 382-85 (offering reasons why Europe is more successful in implementing CSR than the United States).

233. *Id.* at 389 (quoting Abid Aslam, *Backgrounder: Corporate Social Responsibility, INITIATIVE FOR POLY DIALOGUE* (2007), [http://www2.gsb.columbia.edu/ipdj\\_corporatesocial.html](http://www2.gsb.columbia.edu/ipdj_corporatesocial.html)).

234. *Id.*

235. See KERR ET AL., *supra* note 7, at 266 (Table 6: Summary of Danish “Green Accounts” Reporting Requirements) for an extensive example of regulatory requirements.

236. *Id.* at 257 (footnote omitted).



of environmental information for disclosure that must appear in the annual reports[.]”<sup>237</sup> A criticism of France’s regulation is that it lacks “clearly defined sanctions for non-compliance.”<sup>238</sup> However, to combat this issue, the United States could incorporate the United Kingdom’s reporting requirements that include penalties for non-compliance.<sup>239</sup>

## VI. CONCLUSION

Achieving sustainable development through company implementation of CSR can be a win-win situation. “[C]ompanies can simultaneously improve their environmental . . . performance as well as ‘[their] bottom line.’”<sup>240</sup> Studies show that “[p]ractices associated, for example, with energy efficiency and waste reduction may reduce costs, while the use of modern cleaner technologies may increase productivity.”<sup>241</sup> Furthermore, responsiveness to environmental concerns can also enhance a company’s competitive advantage through increased positive reputation.<sup>242</sup>

Businesses must recognize that they have more responsibilities than just that of maximizing shareholder profits and that incorporating long-term goals that look toward both the stakeholder as well as the shareholder can have financial benefits.<sup>243</sup> Furthermore, companies must make their activities transparent through reporting their environmental impacts, in addition to their financial health.<sup>244</sup> This can be done through the creation of a TBL accounting and reporting system, such as the GRI.

Overall, society needs to encourage companies to engage in the agenda of sustainable development and CSR.<sup>245</sup> It is important to understand that we need both non-legal mechanisms, such as voluntary initiatives and standards from stakeholder pressure, as well as legal mechanisms. Business sectors are diverse from each other, so there needs to be some flexibility. Voluntary initiatives are important because governments are slow to take an active role in establishing regulatory regimes.<sup>246</sup> However, we must develop regulatory programs to complement these voluntary initia-

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237. *Id.*

238. *Id.* at 258.

239. *Id.* at 262.

240. Utting, *supra* note 26, at 20 (footnote omitted).

241. *Id.*

242. *Id.*

243. Peter Madsen, *Professionals, Business Practitioners, and Prudential Justice*, 39 MCGEORGE L. REV. 835, 841 (2008).

244. *See id.*

245. Deva, *supra* note 44, at 712.

246. *Id.* at 714.

tives. Laws mandating implementation of codes of conduct as well as safe harbor provisions are necessary to increase the number of companies that implement CSR and promote sustainable development.

For now, it is important for companies to realize that incorporating CSR into their business practices, in ways similar or different to TBL accounting, will increase their bottom line and generate revenue in the long run. Various stakeholders are already educating companies regarding this potential benefit.<sup>247</sup>

Overall, businesses are influential in achieving the goals of sustainable development, and they need to recognize that this influence can be accomplished while increasing their bottom line. Society does not need to compromise the economic pillar of sustainable development, CSR, and TBL to achieve the environmental pillar. As this Comment has argued, these pillars can stand in harmony. In fact, they must be harmonious if we are to sustain society's businesses and the environment for future generations.

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247. This statement reiterates the previous illustrations about the World Wildlife Fund, Wal-Mart, and Forest Stewardship Council that show that stakeholders are pressuring business to reevaluate their corporate responsibility. Another example not yet depicted is the Calvert Group. The Calvert Group "engages with companies via shareholder resolutions and direct dialogue with senior management to urge the adoption and implementation of policies and programs that promote sustainable solutions and reduce negative impacts. . . . [I]f [they] find evidence of poor disclosure or serious allegations of misconduct from companies, Calvert is prepared to use [its] investor tools . . . to engage with companies and promote further transparency for a particular project." *Advocacy for the Calvert Global Water Fund*, CALVERT INVESTMENTS, <http://www.calvertgroup.com/NRC/literature/documents/Calvert%20Water%20Fund%20Advocacy%20Overview.pdf> (last visited on Feb. 18, 2011).

**DRUGS IN OUR WATER:  
A LEGAL PROPOSAL FOR RESPONSIBLE NATIONWIDE  
PHARMACEUTICAL CONSUMPTION**

JOSEPH A. GORMAN

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“When the well is dr[ugged], we know the worth of water.”  
-Benjamin Franklin

I. INTRODUCTION

Many Americans would be shocked to realize residues of antibiotics, antidepressants, anabolic steroids, and anxiety medications are contained in their drinking water—and those are just the A’s. Studies taken together represent a “modern Noah’s Ark” of pharmaceuticals in our water supply.<sup>1</sup> The increased consumption of prescription and over-the-counter (OTC) medication has infiltrated the nation’s water system and there has been no adequate response or concerted effort to contain the proliferation of drugs in

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1. *Pharmaceuticals in the Nation’s Water: Assessing Potential Risks and Actions to Address the Issue Before the Subcomm. on Transp. Safety, Infrastructure Sec. and Water Quality of the S. Comm. on Env’t and Pub. Works*, 110th Cong. 4 (2008) [hereinafter *Pharmaceuticals*] (statement of David Pringle, Campaign Director, New Jersey Environmental Federation and Clean Water Action).

the water.<sup>2</sup> The federal government does not require any testing and has not set any safety limits for drugs in water.<sup>3</sup> Similarly, state and local governments have yet to seriously address the issue.<sup>4</sup> This inactivity may be due to a lack of public awareness and therefore lack of pressure on our elected officials.<sup>5</sup>

Attention skyrocketed in 2008, however, when the Associated Press first reported trace concentrations of pharmaceuticals<sup>6</sup> found in drinking water provided to at least forty-six million Americans.<sup>7</sup> Additionally, an independent study in 2009 from Baylor University tested fish in five major U.S. cities and found pharmaceutical residue—including medicines used to treat high cholesterol, high blood pressure, bipolar disorder, and depression—in the fish tissue.<sup>8</sup> Further, the Environmental Protection Agency (EPA)<sup>9</sup> and Congress have taken the first steps toward solving this dilemma, including the proposal of the Drug Free Water Act<sup>10</sup> in January of 2009 and various administrative rules.

Reaching an effective solution is sure to be a daunting task. First, there is little information regarding the quantity of drugs in the water supply and even less understanding of their effects on humans. Second, drugs reach the water supply through multiple avenues, only some of which pass through sewage treatment plants (STPs). Even when treatment is an option, inherent to their purpose, drugs are designed and exploited for their biological activity, often creating a resistance to conventional, and affordable, treatment methods.<sup>11</sup> Finally, the regulatory framework in the United States creates a morass of frequently conflicting and competing oversight and liability concerns, which stymie the creation of a cohesive approach.<sup>12</sup>

2. *See id.* at 2.

3. Jeff Donn et al., *Drugs Found in Drinking Water*, USA TODAY, Mar. 10, 2008, available at [http://www.usatoday.com/news/nation/2008-03-10-drugs-tap-water\\_N.htm](http://www.usatoday.com/news/nation/2008-03-10-drugs-tap-water_N.htm); *Pharmaceuticals*, *supra* note 1.

4. *Pharmaceuticals*, *supra* note 1, at 2.

5. *See id.*

6. The terms “drugs” and “pharmaceuticals” are used interchangeably in this Comment.

7. Donn et al., *supra* note 3.

8. *Fish Near Treatment Sites Have Drug Taint*, L.A. TIMES, Mar. 26, 2009, at A15. Bryan Brooks and Kevin Chambliss, researchers at Baylor University, “tested fish caught in rivers where wastewater treatment plants release treated sewage in Chicago, Dallas, Phoenix, Philadelphia and Orlando[.]” *Id.* The researchers “found trace concentrations of seven drugs and two soap scent chemicals in fish at all five of the urban river sites studied.” *Id.*

9. *Id.*

10. Drug Free Water Act of 2009, H.R. 276, 111th Cong. (2009).

11. *Pharmaceuticals*, *supra* note 1, at 3.

12. *See id.* In fact, “[t]he presence of pharmaceuticals in the nation’s waters highlights how severely flawed the nation’s current regulatory framework for water protection is and the challenge we face.” *Id.* at 5. The laws and agencies involved include the Resource Con-

This Comment examines some of the myriad solutions available and proposes an aggressive reaction within the existing regulatory framework, accompanied by federal legislative action, and focusing on the end user, the drug developer, and local municipal treatment facilities. Part I examines the limited—yet alarming—research regarding pharmaceuticals in the waters of the United States, and demonstrates the need for further studies sponsored by the EPA. Part II identifies the multiple sources of the pollution. Full understanding of these sources is imperative to reaching an effective solution. Finally, Part III examines some of the initial legislative and regulatory reactions, and suggests ways to improve those mechanisms in addition to advocating a more aggressive approach through the existing regulatory framework.

## II. DRUGS IN THE WATER

“In waterways from the Potomac to the Brazos River in Texas, researchers have found fish laden with estrogen and antidepressants, and many show evidence of major neurological or physiological changes.”<sup>13</sup> A 2002 U.S. Geological Survey sampling 139 waterways in thirty states found these types of contaminants in 80% of samples.<sup>14</sup> The hormones feminize male fish,<sup>15</sup> serotonin reuptake inhibitors inhibit growth rates in frogs and fishes,<sup>16</sup> and the antidepressants make the fish sluggish or disinterested in eating.<sup>17</sup> Some research also indicates that the drugs reduce a fish’s fear of predators.<sup>18</sup>

A March 10, 2008 report by the Associated Press revealed just how pervasive pharmaceuticals are in our water supplies.<sup>19</sup> The study examined water providers in America’s fifty largest cities, in smaller cities across the country, and twelve other major water providers.<sup>20</sup> It concluded that the presence of minute concentra-

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ervation and Recovery Act, Comprehensive Environmental Response, Compensation, and Liability Act (Superfund), the Clean Water Act, the Safe Drinking Water Act, the Food and Drug Administration, and the U.S. EPA. *Id.*

13. Juliet Eilperin, *Pharmaceuticals in Waterways Raise Concern—Effect on Wildlife, Humans Questioned*, WASH. POST, June 23, 2005, at A3.

14. *Id.*

15. *Id.*

16. Papun Pramanick, *Effective Approaches to Minimize the Problem of Pharmaceuticals and Other Personal Care Products in the Environment* 8 (Nov. 2007) (unpublished M.S. thesis, Rochester Institute of Technology) (on file with Wallace Library, Rochester Institute of Technology).

17. Eilperin, *supra* note 13.

18. George J. Mannina, Jr., *Medicines and the Environment: Legal and Regulatory Storms Ahead?*, LEGAL BACKGROUNDER, Mar. 24, 2006; *see also* Eilperin, *supra* note 13.

19. Donn et al., *supra* note 3.

20. *Id.*

tions of pharmaceuticals in the nation's drinking water supplies are "commonplace[,] . . . affecting at least 46 million Americans."<sup>21</sup> The Associated Press report garnered attention from the mainstream media and caused the EPA to call for "additional studies about the impact on humans of long-term consumption of minute amounts of medicine in their drinking water, especially in unknown combinations."<sup>22</sup> Additionally, Baylor University's 2009 study discovered residues of pharmaceuticals in fish tissue near wastewater treatment plants in five major U.S. cities, prompting the EPA to expand similar research to more than 150 locations.<sup>23</sup>

While the major identified concerns to date have been increased bacterial resistance to antibiotics and interference with growth and reproduction in aquatic organisms, the level of risk to humans and the environment is still being determined. Whether due to a lack of evidence, lack of research, or, less likely, that there are just no effects, there are currently no proven effects on humans from pharmaceuticals in water. There is, however, research suggesting a potentially worrisome situation.

For example, research at the University of Rouen Medical Center in France found thirty-one of thirty-eight wastewater samples containing pharmaceuticals had the ability to mutate human genes.<sup>24</sup> A Swiss study of hospital wastewater suggested fluoroquinolone antibiotics in the water could disfigure bacterial DNA, "raising the question of whether such drug concoctions can heighten the risk of cancer in humans."<sup>25</sup> In a similar study in Davis County, Utah, "scientists were able to link drug dumping to virulent antibiotic-resistant germs and genetic mutations that may promote cancers[.]"<sup>26</sup> Some waterborne drugs also promote antibiotic-resistant germs, especially when they are mixed with bacteria in human sewage.<sup>27</sup> These studies suggest exposure to accumulated pharmaceuticals may result in the development of drug resistant pathogenic (or disease producing) organisms.<sup>28</sup> Additionally, one study cited several cases in which children developed signs

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21. Jeff Donn et al., *AP Impact: Tons of Drugs Dumped into Wastewater*, HUFFINGTON POST (Sept. 14, 2008), [http://www.huffingtonpost.com/2008/09/14/ap-impact-tons-of-drugs-d\\_n\\_126330.html](http://www.huffingtonpost.com/2008/09/14/ap-impact-tons-of-drugs-d_n_126330.html).

22. Martha Mendoza, *Study: Range of Pharmaceuticals in Fish Across U.S.*, PHYSORG (Mar. 25, 2009), <http://www.physorg.com/news157200916.html>.

23. *Fish Near Treatment*, *supra* note 8.

24. Donn, *supra* note 21.

25. *Id.*

26. *Id.*

27. Pramanick, *supra* note 16, at 8.

28. *Id.*

of puberty long before the typical age.<sup>29</sup> The effects have been linked to personal care products (including skin creams used for sexual performance), as well as pharmaceuticals in water.<sup>30</sup>

Despite these alarming discoveries, some researchers make the claim that the human risk from current drug consumption patterns is “negligible.”<sup>31</sup> Pharmaceuticals are consumed in milligram quantities, and their physical impact is microscopic, making it difficult for scientists to detect.<sup>32</sup> This impact has long been assumed to be *de minimis*,<sup>33</sup> although recent advances in analytic tools have allowed detection of drug residues at concentrations in the low parts per trillion (ppt) range, which is 100 times lower than had previously been detectable.<sup>34</sup> Studies as early as 2003 began detecting levels approaching parts per billion (ppb).<sup>35</sup>

The first step in understanding the extent of the problem is to conduct further research. Current comprehensive environmental risk assessments and epidemiologic studies lack consideration of any long-term effects.<sup>36</sup> Additionally, gathering information with respect to geographic concentration, cumulative properties, and multi-generational impact may assist in future efforts to remedy and prevent further deleterious effects.

In addition to these practical benefits, taking a proactive approach to minimize the introduction of pharmaceuticals into the water supply has the benefit of serving:

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29. Darshak M. Sanghavi, *Preschool Puberty, and a Search for the Causes*, N.Y. TIMES, Oct. 17, 2006, at F1.

30. *Id.*

31. F. M. Christensen, *Pharmaceuticals in the Environment—A Human Risk?*, 28 REG. TOXICOLOGY & PHARMACOLOGY 212 (1998). Although it is becoming increasingly difficult to deny, Mary Buzby, director of environmental technology for drug maker Merck & Co. Inc., said: “[t]here’s no doubt about it, pharmaceuticals are being detected in the environment and there is genuine concern that these compounds, in the small concentrations that they’re at, could be causing impacts to human health or to aquatic organisms.” *Pharmaceuticals*, *supra* note 1, at 5.

32. Christopher T. Nidel, Comment, *Regulating the Fate of Pharmaceutical Drugs: A New Prescription for the Environment*, 58 FOOD & DRUG L.J. 81, 83 (2003).

33. *Id.*

34. WASH. SUBURBAN SANITARY COMM’N, EMERGING CONTAMINANTS 1, available at <http://www.wsscwater.com/file/Communications/EmergingContaminantsInfo.pdf>.

35. See N.J. Dep’t of Env’tl. Prot., Div. of Sci., Research & Tech., *The Characterization of Tentatively Identified Compounds (TICs) in Samples from Public Water Systems in New Jersey*, Mar. 2003; see also R. Lee Lippincott & Paul Stackelberg, *Occurrence, Distribution, and Concentration of Pharmaceuticals and Other Organic Wastewater-Related Compounds in New Jersey’s Surface-Water Supplies*, N.J. DEPT OF ENVTL. PROT., DIV. OF SCI., RESEARCH & TECH. 3-5, Feb. 2003 (detecting concentrations of caffeine, carbamazepine, flame retardants, plasticizers, fragrances, steroids, pesticides, and cotinine at levels of up to 81 ppb, with a median of 1.7 ppb).

36. See Nidel, *supra* note 32, at 90; See also *Pharmaceuticals*, *supra* note 1, at 3.

[F]our of the 10 goals that formed the basis of the U.S. EPA's (2000) Strategic Plan—Goal 2, (Clean and Safe Water), Goal 4 (Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces, and Ecosystems), Goal 5 (Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response), and Goal 8 (Sound Science—Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems). . . . In addition, one of the primary goals of the EPA's Office of Research and Development is to identify and foster investigation of previously “hidden” or potential environmental issues/concerns before they become critical ecologic or human health problems . . . .<sup>37</sup>

Finally, addressing the issue now has the potential to accrue a wide range of collateral benefits to both consumers and industry.<sup>38</sup>

### III. SOURCES OF POLLUTION

Pharmaceuticals are reaching the water supply through multiple avenues. A full understanding of these many sources is critical to reaching a comprehensive and effective solution.

This Comment examines four of the main sources by which pharmaceuticals reach the water supply: (1) unused drugs that are flushed down the toilet and travel through a sewage treatment system; (2) drugs that are consumed by humans but are not fully metabolized, also traveling through a sewage treatment system; (3) drugs consumed by humans, not fully metabolized, that do not enter a sewage treatment system; and (4) veterinary medicine, livestock and poultry hormones and antibiotics, and drugs used in fisheries that are not susceptible to treatment. Although this list is not exhaustive, it provides a framework to discuss the benefits and problems with many of the proposed solutions below.

#### *A. Unused Drugs Flushed Down the Toilet*

“U.S. hospitals and long-term care facilities annually flush millions of pounds of unused pharmaceuticals down the drain, pump-

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37. Christian G. Daughton, *Cradle-to-Cradle Stewardship of Drugs for Minimizing Their Environmental Disposition While Promoting Human Health: Part I. Rationale for and Avenues Toward a Green Pharmacy*, 111 ENVTL. HEALTH PERSP. 757, 762 (2003) (citation omitted).

38. *Id.*



ing contaminants into America's drinking water . . . ."<sup>39</sup> The discarded drugs "are expired, spoiled, over-prescribed, or unneeded."<sup>40</sup> It is not uncommon for an individual to pass away while living in a long-term care facility with over ninety days worth of multiple prescriptions.<sup>41</sup> Due to a complicated regulatory framework with which compliance is difficult and expensive, many hospitals are simply flushing these drugs down the toilet or throwing them in the trash.<sup>42</sup> The Associated Press estimates that potentially 250 million pounds of pharmaceuticals and contaminated packaging are disposed of improperly by health care facilities each year.<sup>43</sup>

The problem is exacerbated by the potential "toxic stew" of drugs pouring out of these institutions.<sup>44</sup> Health care facilities handle large quantities of powerful and potent drugs, all released from the same source. Sewage tests from hospitals in Paris and Oslo uncovered concentrations of "hormones, antibiotics, heart and skin medicines and pain relievers" at far higher levels than water tested in areas without such facilities.<sup>45</sup>

Drugs are commonly flushed down the toilet in households as well. Flushing is the recommended course of conduct on many pharmacy and health-care websites.<sup>46</sup> North Carolina actually recommends it in its administrative code,<sup>47</sup> and "the California Poison Control System advocates flushing unwanted drugs" as well.<sup>48</sup> Many countries utilize take-back programs to dispose of unused household pharmaceuticals.<sup>49</sup> In British Columbia, for example, most pharmacies participate in the Medications Return Program (MRP).<sup>50</sup> The MRP is a "consumer-oriented stewardship program, established voluntarily by British Columbia's pharmaceutical industry . . . . It is designed to accept the free return of all prescription and OTC medications[.]"<sup>51</sup> The MRP promotes the balanced

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39. Donn, *supra* note 21.

40. *Id.*

41. *Id.*

42. *See id.*

43. *Id.*

44. *Pharmaceuticals*, *supra* note 1, at 2.

45. Donn, *supra* note 21.

46. Teirney Christenson, Comment, *Fish on Morphine: Protecting Wisconsin's Natural Resources Through a Comprehensive Plan for Proper Disposal of Pharmaceuticals*, 2008 WIS. L. REV. 141, 142 (2008).

47. *Id.*

48. Christian G. Daughton, *Cradle-to-Cradle Stewardship of Drugs for Minimizing Their Environmental Disposition While Promoting Human Health: Part II. Drug Disposal, Waste Reduction, and Future Directions*, 111 ENVTL. HEALTH PERSP. 775, 780 (2003) [hereinafter Daughton II].

49. *Id.*

50. *Id.*

51. *Id.*

“concerns and objectives for ensuring or improving the health of the environment, consumer, and economy.”<sup>52</sup>

“The MRP has been embraced by Canada’s National Association of Pharmacy Regulatory Authorities (NAPRA) for a number of reasons, including consumer/child safety (accidental poisonings . . .), reduced costs (encouraging purchase of manageable drug amounts that are fully consumed), improved therapeutic outcomes, and [for] ‘reduced potential for environmental damage.’”<sup>53</sup> As an unforeseen collateral benefit, the Canadian take-back programs have allowed Pharmaceutical Associations to compile data regarding which drugs are being discarded by consumers.<sup>54</sup> For example, the study learned that “geriatric patients return the most medications,” which “led to the recommendation for ‘trial prescriptions’ that provide small initial quantities, enabling the physician to determine the suitability of the prescription for the patient before large quantities go unused.”<sup>55</sup>

The EPA’s proposed version of a take-back program is discussed below.

### *B. Consumed by People and Not Fully Metabolized*

Our own bodies are the second major avenue for pharmaceuticals entering the environment. A large amount of drugs we consume are actually not utilized by the body and are excreted, making their way to an STP.<sup>56</sup> Specifically, when a drug is consumed or injected, “a significant percentage of the drug actually leaves the body unchanged.”<sup>57</sup> In addition to metabolites left over from the body’s breakdown of pharmaceuticals, residual active compounds “leave the body in excreted urine or feces and make their way to the local STP.”<sup>58</sup>

Waste discharged to STPs is subjected to various levels of treatment-technology sophistication before discharge to receiving waters.<sup>59</sup> Commonly-used drugs display a broad range of removal efficiencies by waste and water treatment technologies. Some travel though sewage treatment facilities with only minor reductions

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52. *Id.*

53. *Id.*

54. *Id.*

55. *Id.*

56. Pramanick, *supra* note 16, at 11-12.

57. Nidel, *supra* note 32, at 83; *See also* Roman Hirsch et al., *Occurrence of Antibiotics in the Aquatic Environment*, 225 THE SCI. OF THE TOTAL ENV’T. 109, 110 tbl.1 (1999).

58. Nidel, *supra* note 32, at 84.

59. *See id.* at 84-85.

in concentration.<sup>60</sup> Essentially, one of three things can happen to a drug compound once it reaches the STP:<sup>61</sup> first, and ideally, the drug and its metabolites may be broken down and safely leave the plant;<sup>62</sup> second, the drug and its metabolites may persist through the process and remain in the sludge, which is discharged from the STP.<sup>63</sup> The solid waste is then either disposed of in landfills or spread on field surface in agriculture.<sup>64</sup> Runoff from fields and landfills eventually reaches the groundwater.<sup>65</sup> Third, “the drug and/or its metabolites are persistent but do not bind to solids and are discharged with the treated sewage effluent[,]” eventually reaching the drinking water.<sup>66</sup>

“[T]he removal efficiency of the treatment step is as low as seven percent and never provides complete elimination.”<sup>67</sup> In fact, “[a] 1998 study comparing samples taken before and after treatment through a German STP [found] drugs, representative of those found in a typical medicine cabinet, . . . in both the feed and the discharge of the facility.”<sup>68</sup>

Improving and adapting STPs to more effectively remove drug compounds is an enormous undertaking. “The American Society of Civil Engineers’ 2001 Report Card for America’s Infrastructure (ASCE 2001) assigned nationwide grades of “D” for both drinking water and wastewater infrastructures.”<sup>69</sup> Over \$20 billion each year would be needed to remedy the nation’s deteriorating water and waste infrastructures.<sup>70</sup> It is not even known whether sewage treatment facilities could scientifically, let alone cost-effectively, be modified to reduce the amount of drug compounds leaving with the effluent.<sup>71</sup> Moreover, building these idealized treatment plants would require remarkable flexibility to keep up with inevitable future pharmaceutical developments.<sup>72</sup>

In addition, improved STPs would fail to correct the root cause of the problem: drugs are finding their way into the environment from a variety of sources. As the next two sources of pharmaceutical pollution demonstrate, a large portion of drugs is

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60. *See id.* at 84.

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.*

66. *Id.*

67. *Id.* (footnote omitted).

68. *Id.* at 85.

69. Daughton, *supra* note 37, at 762.

70. *Id.*

71. *Id.*

72. Nidel, *supra* note 32, at 92.

reaching the environment without ever passing through any sort of treatment plant.

### *C. Untreated Wastewater*

In addition to the two above-mentioned sources that pass through treatment facilities, “large volumes of untreated wastewater are discharged to surface waters each year.”<sup>73</sup> The following sources of raw sewage are released to a variety of water bodies in “high but largely unknown volumes[:]” combined sewer overflows,<sup>74</sup> sanitary sewer overflows, leakage from sewage transport infrastructure, failing septic systems, unpermitted privies, and straight-piping.<sup>75</sup> “Straight piping is a process whereby untreated wastewater or sewage from a home is illegally deposited directly into the environment without passing through a septic system or undergoing treatment by a sewage plant.”<sup>76</sup> These sources affect groundwater quality regardless of whether efficiencies of water treatment can be improved, indicating that an effective solution requires action at the root of the problem.

### *D. Veterinary Drugs*

Finally, pharmaceuticals enter the environment in the form of veterinary drugs. These contaminants enter the environment in a variety of ways, but generally do so in a more direct path than drugs consumed by humans.<sup>77</sup> “Poultry and cattle are treated with hormones and antibiotics that are eventually excreted in manure and urine.”<sup>78</sup> As an example,

[c]attle . . . are given ear implants that provide a slow release of trenbolone, an anabolic steroid used by some body-builders, which causes cattle to bulk up . . . [N]ot all the trenbolone circulating in a steer is metabolized. A German study showed 10% of the steroid passed right through the animals. Water sampled downstream of a Nebraska feedlot had steroid levels four times as high as the water taken up-

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73. Daughton, *supra* note 37, at 761.

74. *Id.* (“[C]ombined sewer overflows (CSOs), which contribute more than  $4 \times 10^{12}$  L/year. [CSOs handle rainwater runoff, domestic sewage, and industrial wastewater, and are designed to discharge untreated sewage during adverse storm events . . .]”).

75. *Id.*

76. PROPEX.COM ENVIRO-INFO, [http://www.propex.com/C\\_f\\_env\\_straitpip.htm](http://www.propex.com/C_f_env_straitpip.htm) (last visited Feb. 18, 2011).

77. *See* Nidel, *supra* note 32, at 84.

78. *Id.*

stream. Male fathead minnows living in that downstream area had low testosterone levels and small heads.<sup>79</sup>

Fisheries also present a unique problem because the drugs are directly applied to source water. Studies of fish farms reveal that the use of antibiotics and hormones contaminate the local sediment.<sup>80</sup> One study found concentrations of oxytetracycline, an antibiotic used in fisheries, as high as 4.9 mg/kg dry matter.<sup>81</sup> It also found oxytetracycline to be extremely persistent, with an estimated half-life of up to ten weeks, meaning that after the sediment had been contaminated once, it would take ten weeks for the concentration to reach half the initial contamination levels.<sup>82</sup> Thus, with repeated exposure, even over relatively long time cycles, the contamination accumulates.

Finally, veterinary drugs given to pets now include treatment for “arthritis, cancer, heart disease, diabetes, allergies, dementia, and even obesity.”<sup>83</sup> Often these are chemically equivalent to the drugs given to humans.<sup>84</sup> The pet medicine industry is booming. The inflation-adjusted value of veterinary drugs rose by 8% to \$5.2 billion dollars over the past five years according to an analysis by the Animal Health Institute.<sup>85</sup> Although pets are now enjoying improved medical care, they do not enjoy the benefit of modern plumbing, and their excrement is released directly into the environment without treatment. The discussion of these four sources, and the unique challenges they each pose toward reaching a solution to the problems discussed in Part I, is included to demonstrate the complexities in solving this pharmaceutical dilemma. The following section attempts to delineate some of the major actions that could be taken to minimize the introduction of drugs into the environment with those challenges in mind.

#### IV. SOLUTIONS

The presence of unregulated pharmaceuticals in the nation’s surface, ground, waste, and drinking water is clearly cause for concern and timely action.<sup>86</sup> The challenges are immense. More research and common sense measures are some of the first steps that

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79. Donn et al., *supra* note 3.

80. Nidel, *supra* note 32 at 85.

81. *Id.*

82. *Id.*

83. Donn et al., *supra* note 3.

84. *Id.*

85. *Id.*

86. *Pharmaceuticals*, *supra* note 1, at 2.

need to be taken.<sup>87</sup> The development of targeted legislation and regulatory action—and more aggressive approaches within the scope of the current regulatory framework—are essential to reaching any real solution.

The sections that follow outline some of the currently proposed legislation and regulations. The recently introduced Drug Free Water Act of 2009 and two proposed rules by the EPA are examined. While they are helpful in addressing specific sources of the pollution, they must be viewed as pieces in a much larger plan.<sup>88</sup> Aggressive approaches within the current regulatory framework are available and should not be overlooked. One such approach, increased environmental scrutiny of drug applications by the Food and Drug Administration (FDA) of both new and previously approved drugs, is also detailed below. These actions should be utilized as the beginning of a “comprehensive multi-faceted response by policy makers, industry, science and consumers.”<sup>89</sup>

#### A. *The Drug Free Water Act of 2009*

United States Representative Candice Miller of Michigan recently introduced the Drug Free Water Act of 2009.<sup>90</sup> The Act has been referred to the House Committee on Transportation and Infrastructure.<sup>91</sup> The Act requires the Administrator of the EPA to convene a task force to develop further research and offer solutions to Congress.<sup>92</sup> Specifically, the Act provides for the EPA to:

*convene a task force . . . to develop . . . recommendations on the proper disposal of unused pharmaceuticals [and] . . . to prevent or reduce the detrimental effects on the environment and human health caused by introducing unused pharmaceuticals, directly or indirectly, into water systems; and . . . for limiting the disposal of unused pharmaceuticals through treatment works in accordance with the Federal Water Pollution Control Act; and . . . a strategy for the Federal Government to educate the public on such recommendations.*<sup>93</sup>

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87. *Id.*

88. *Id.* at 6.

89. *Id.*

90. Drug Free Water Act of 2009, H.R. 276, 111th Cong. (2009).

91. The Act was subsequently referred to the Subcommittee on Water Resources and Environment.

92. H.R. 276.

93. *Id.* (emphasis added).

The Act can be viewed as a major congressional recognition of the problem outlined above. It is, however, a rather modest response. At best, it will open legislative discussion, and perhaps expose some of the recently documented scientific information to members of Congress who are not fully informed. At worst, the Act will be viewed as the legislative response to the recent press surge, ending public discussion after its enactment. This outcome is especially unacceptable given the fact that the EPA is already acting on two of the Act's three proposals. Finally, because the Act only addresses one source of pharmaceutical pollution—namely, the disposal of unused drugs—it should be viewed as a piece of a larger solution.<sup>94</sup>

### *B. EPA Proposal to Regulate Disposal of Unused Drugs*

The EPA recently issued a proposed rule that would regulate the disposal practices for pharmaceutical waste.<sup>95</sup> The rule attempts to simplify disposal requirements—and therefore increase compliance—by classifying hazardous waste pharmaceuticals as “universal waste” under the Resource Conservation and Recovery Act (RCRA).<sup>96</sup>

Currently, facilities must characterize their waste as “hazardous” under Subtitle C of RCRA.<sup>97</sup> RCRA's list “has not been substantially updated since the rules went into effect in 1976.”<sup>98</sup> A pharmaceutical waste is “hazardous” if: (1) it is among substances specifically listed as such under the RCRA,<sup>99</sup> or (2) it exhibits a hazardous characteristic such as ignitability,<sup>100</sup> corrosivity,<sup>101</sup> reac-

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94. GovTrack.us, H.R. 276: Drug Free Water Act of 2009, <http://www.govtrack.us/congress/bill.xpd?bill=h111-276> (last visited Feb. 18, 2011). “This bill is in the first step in the legislative process. Introduced bills and resolutions first go to committees that deliberate, investigate, and revise them before they go to general debate. The majority of bills and resolutions never make it out of committee.” *Id.*

95. Amendment to Universal Waste Rule: Addition of Pharmaceuticals, 73 Fed. Reg. 73,520 (Dec. 2, 2008) (to be codified at 40 C.F.R. §§ 260, 261, 264, 265, 268, 270, 273).

96. Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–92 (2006).

97. 40 C.F.R. § 261.20–261.24 (2010).

98. Ron Seely, *Flushed Drugs Polluting Water—Complicated Rules for Disposal Result in Most Hospitals Taking Easy Way Out*, WISC. ST. J., Dec. 10, 2006, at A1.

99. 40 C.F.R. § 261.30–33.

100. 40 C.F.R. § 261.21. “Solutions containing more than 24% alcohol are examples of a pharmaceutical waste that exhibits the ignitability characteristic.” Gale Lea Rubrecht, *U.S. EPA Proposes to Add Hazardous Pharmaceutical Wastes to the Universal Waste Rule*, ENERGY AND ENV'T MONITOR (Jan. 26, 2009), <http://eem.jacksonkelly.com/2009/01/index.html>.

101. 40 C.F.R. § 261.22; see also Rubrecht, *supra* note 100 (stating that these “are generally limited to compounding chemicals, including strong acids, such as glacial acetic acid, and strong bases, such as sodium hydroxide.”).

tivity,<sup>102</sup> or toxicity.<sup>103</sup> There are approximately thirty-one chemicals on the hazardous waste list that have pharmaceutical uses.<sup>104</sup> Materials that are deemed “hazardous wastes” are subject to stringent management and disposal requirements.<sup>105</sup> Compliance is expensive and challenging for health care facilities.<sup>106</sup>

Hazardous waste managed under the Universal Waste Rule is subject to more streamlined and less stringent requirements.<sup>107</sup>

If a facility opts to manage its hazardous pharmaceutical waste under the universal waste option, then that facility will become a “handler” of pharmaceutical universal waste, rather than a “generator” of pharmaceutical [universal] waste. Compared to a generator of hazardous pharmaceutical waste, a handler . . . will have the following benefits: (1) an increased accumulation threshold; (2) an increased on-site accumulation limit;<sup>108</sup> (3) an increased storage

102. 40 C.F.R. § 261.23; *see also* Rubrecht, *supra* note 100 (“Nitroglycerin is an example of a pharmaceutical that may exhibit the reactivity characteristic.”).

103. 40 C.F.R. § 261.24; *see also* Rubrecht, *supra* note 100 (“Depending on the concentrations in different pharmaceutical preparations, pharmaceuticals may also exhibit the toxicity characteristic because of the use of arsenic (D004), barium (D005), cadmium (D006), chloroform (D022), chromium (D077), lindane (D013), m-cresol (D024), mercury (D009), selenium (D010), and silver (D011).” *Id.*

104. 40 C.F.R. § 261.33. These include Mitomycin C, Cytotoxan, Ephinephrine, Nicotine, and Warfarin. Kevin N. McMurray et al., *U.S. EPA Proposes Standards for Management of Pharmaceutical Wastes*, FROST BROWN TODD LLC RECENT PUBLICATIONS (Jan. 23, 2009), [http://www.frostbrowntodd.com/us\\_epa\\_proposes\\_standards\\_for\\_management\\_of\\_pharmaceutical\\_wastes\\_01-23-2009/](http://www.frostbrowntodd.com/us_epa_proposes_standards_for_management_of_pharmaceutical_wastes_01-23-2009/).

105. 40 C.F.R. §§ 264-265.

106. Hazardous pharmaceutical wastes are “regulated under the RCRA the same way [as] hazardous waste generated by industrial processes . . . [But] [u]nlike hazardous waste generated at industrial [processes], where there are typically a limited number of recurring and predictable waste streams, pharmaceutical waste is often generated at a large number of points in relatively small quantities across the facility . . . includ[ing] nursing stations, pharmacies, . . . [and] operating rooms.” McMurray, *supra* note 104.

107. Under the Universal Waste Rule, the definition of hazardous pharmaceutical waste is to include “any chemical product, vaccine or allergenic used in the diagnosis, cure, mitigation, treatment, or prevention of disease or injury or intended to affect the structure or function of the body in man or other animals.” It includes “containers such as bottles, vials, IV bags, tubes of ointment/gels/creams, and ampules that have held any regulated pharmaceutical waste.” It will not include “sharps or other infectious or biohazardous waste, dental amalgams, medical devices not used for delivery or dispensing purposes, equipment, or contaminated personal protective equipment or cleaning materials.” Therefore, these latter items will not be subject to less stringent requirements of the universal waste rule and must continue to be disposed under the RCRA as hazardous waste. This distinction is much clearer than the one it is replacing. *Id.*

108. “[A] small quantity handler of universal waste (SQHUW) may accumulate less than 5,000 kg or 11,000 lb on site at any one time and a large quantity handler of universal waste (LQHUW) may accumulate 5,000 kg or more on site at any one time.” Rubrecht, *supra* note 100. In contrast, the generator is subject to a fluidly-stringent level of regulatory requirements as the quantity of hazardous waste produced each month increases. “[A] conditionally exempt small quantity generator (CESQG) generates less than or equal to 1,000 kg or 220 lb per month . . . ; a small quantity generator (SQG) generates less than 1,000 kg



time limit;<sup>109</sup> (4) no manifest requirement; and (5) basic training requirements.<sup>110</sup>

If adopted, the EPA expects the proposal will “affect more than 600,000 facilities, including more than 7,000 hospitals and 300,000 physician and dental offices.”<sup>111</sup> The EPA anticipates many generators will “choose to manage their hazardous and non-hazardous pharmaceutical waste as universal waste [in order] to avoid the difficult and often expensive effort to properly characterize their waste” under RCRA.<sup>112</sup> Additionally, the EPA estimates the cost savings, largely reflecting reduced disposal costs, “will range from \$33.9 million to \$35.2 million per year for hospitals and reverse distributors combined.”<sup>113</sup>

The proposed rule is a major advancement in addressing one of the largest sources of pharmaceutical pollution. The rule reflects an understanding of the problems facing health care facilities: they are not consciously seeking to violate their obligations under RCRA. Indeed, many facilities and their staff simply do not have the resources to comply with RCRA’s burdensome, expensive, and complicated requirements. To the extent the proposed rule acknowledges this situation and attempts to remedy it, it is a step in the right direction. However, it is unclear to what extent the rule will achieve the goals of simplification and uniform compliance envisioned by the EPA.

First, because the proposed rule is less stringent than current RCRA generator regulations, “authorized states are not required to modify their programs to adopt this regulation. Therefore, the [members of the] regulated community cannot choose to manage their pharmaceutical wastes as universal wastes until the rule is adopted in their particular states.”<sup>114</sup> The only states in which the universal waste rule took effect immediately were Iowa and Alas-

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per month; and a large quantity generator (LQG) generates equal to or greater than 1,000 kg per month . . .” *Id.* Therefore, under RCRA, LQGs are subject to the most stringent regulatory requirements.

109. “For SQGs and LQGs, the storage time is less than or equal to 180 days or 20 days, depending upon the transportation distance, and less than or equal to 90 days, respectively.” The storage time for SQHUW and LQHUW “would be increased . . . to one year unless for proper recovery, treatment or disposal.” *Id.*

110. ENVTL. PROT. AGENCY, PHARMACEUTICALS, <http://www.epa.gov/osw/hazard/wastetypes/universal/pharm-rule.htm> (last visited Feb. 18, 2011).

111. Julie Solmer Stine & Richard G. Stoll, *Forthcoming Environmental Regulations Affecting the Health Care Industry*, FOLEY & LARDNER LLP LEGAL NEWS ALERT (Dec. 2008), [http://www.foley.com/publications/pub\\_detail.aspx?pubid=5548](http://www.foley.com/publications/pub_detail.aspx?pubid=5548).

112. McMurray, *supra* note 104.

113. ENVTL. PROT. AGENCY, PHARMACEUTICALS, *supra* note 110.

114. *Id.*

ka, which are the only two states not RCRA-authorized.<sup>115</sup> Ideally, all states will swiftly adopt identical pharmaceutical universal waste laws, giving the rule the effect of a statute.

Second, just as the states have the option to adopt the Pharmaceutical Universal Waste Rule,<sup>116</sup> they had the option of adopting the 1995 Universal Waste Rule.<sup>117</sup> This is because the rules are considered “less stringent” than the requirements under RCRA, legislation enacted by Congress.<sup>118</sup> In fact, states are permitted to create different standards under these universal waste rules.<sup>119</sup> The states may adopt the entire rule or certain provisions. State-adopted universal waste rules following the 1995 EPA Universal Waste Rule illustrate the point. Aerosol cans are considered universal waste in California and Colorado, while antifreeze is considered universal waste in Louisiana and New Hampshire.<sup>120</sup> Similarly, ballasts are considered universal waste in Maine, Maryland, and Vermont, while barometers are considered universal waste in New Hampshire and Rhode Island.<sup>121</sup> Michigan is the only state that decided to include pharmaceutical waste as universal waste under its state regulation.<sup>122</sup> Despite these challenges, the proposed rule represents a step in the right direction.

### C. EPA Regulation of Wastewater Discharge

The EPA has also indicated it is moving toward imposing controls on the healthcare industry’s pharmaceutical disposal practices under the Clean Water Act (CWA).<sup>123</sup>

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115. ENVTL. PROT. AGENCY, STATE-SPECIFIC UNIVERSAL WASTE REGULATIONS, <http://www.epa.gov/waste/hazard/wastetypes/universal/statespf.htm> (last visited Feb. 18, 2011).

116. OFF. OF INFO. & REG. AFF., VIEW RULE, <http://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201004&RIN=2050-AG39> (last visited Feb. 18, 2011) (“because this rule is less stringent than current RCRA hazardous waste regulations, authorized states are not required to modify their programs to adopt this regulation, if finalized. Therefore, the regulated entities that could opt-in to the universal waste regime include those in authorized states that have adopted the universal waste rule and amended their programs to include hazardous pharmaceutical wastes.”).

117. ENVTL. PROT. AGENCY, STATE-SPECIFIC *supra* note 115.

118. *Id.*; *see also* Amendment to Universal Waste Rule: Addition of Pharmaceuticals, 73 Fed. Reg. 73,520, 73,538 (Dec. 2, 2008) (to be codified at 40 C.F.R. §§ 260, 261, 264, 265, 268, 270, 273).

119. ENVTL. PROT. AGENCY, STATE-SPECIFIC, *supra* note 115.

120. *Id.*

121. *Id.*

122. *Id.*

123. Notice of Final 2008 Effluent Guidelines Program Plan, 73 Fed. Reg. 53,218, 53,234-37 (Sept. 15, 2008).

Under the CWA, EPA controls both “direct” discharges to waterways (such as a pipe leading directly to a river, lake, or ocean), and “indirect” discharges to publicly owned treatment works (such as a pipe leading to the municipal sewer system), which [eventually] discharge[s] to waterways after treating the collected wastewater.<sup>124</sup>

In a recent Federal Register notice, the EPA announced it is actively considering the health services industry for indirect discharge regulation known as pretreatment standards.<sup>125</sup> The EPA “has never before regulated indirect discharge from” hospitals.<sup>126</sup> It is considering regulating the following sectors within the health care industry: “offices and clinics of dentists, doctors, and mental health practitioners; nursing and personal care facilities; hospitals, hospices, and clinics; medical laboratories and diagnostic centers; and veterinary care services.”<sup>127</sup>

“Standard practice at many health care facilities [is] to dispose of unused pharmaceuticals by flushing them down the toilet or drain.”<sup>128</sup> Even then, regulations like “the Controlled Substances Act . . . encourage sewer disposal of pharmaceuticals (e.g., by establishing witnessed disposal of controlled substances to a toilet as an acceptable method of destruction).”<sup>129</sup> Because these products pass through STPs and end up in the surface water and groundwater, the EPA is presently investigating the best means of improving water treatment capabilities at these facilities.<sup>130</sup> The EPA published a separate Federal Register notice soliciting comment on the scope of the request,<sup>131</sup> and it is currently gathering information through health care industry surveys.<sup>132</sup>

This proposed rule demonstrates the EPA’s commitment to addressing the problem of pharmaceutical pollution. Although the rule is in the very early stages, it has the potential to immensely alter the harmful effects of health care facilities on the water supply. Health care facilities do represent a major source of pharmaceutical pollution, but they are only one piece of a

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124. *Id.*

125. Notice of Final 2008 Effluent Guidelines Program Plan, 73 Fed. Reg. at 53,219.

126. Stine, *supra* note 111.

127. *Id.*

128. *Id.*

129. *Id.*

130. *Id.*

131. Comment Request for Agency Information Collection, 73 Fed. Reg. 46,903 (Aug. 12, 2008).

132. Stine, *supra* note 111.

larger picture. An effective resolution to the dilemma must address the root of the problem.

#### *D. Rigorous FDA Review of Environmental Impact*

A reinvigorated drug approval process by the FDA is a regulatory option that has the potential to improve the environmental impact from all of the above sources of pharmaceutical pollution. Requiring a more rigorous assessment when applying for new drug approval would shift the focus to the root cause of the problem. Since the passage of the National Environmental Policy Act of 1969 (NEPA), the FDA has been required to assess the environmental impact of all of its actions including the pre-approval marketing of drug compounds.<sup>133</sup>

The recent studies outlined in Part I should provide an impetus for the FDA to reconsider the congressionally mandated NEPA environmental considerations, including the long-term impacts of drugs in the water system. If the FDA fails to act on the new information, it may be possible to seek judicial review of the failure under the Administrative Procedure Act (APA) and NEPA.<sup>134</sup> Successful judicial review spurred by private-party challenges could potentially compel the agency to take this approach. Significant legal challenges arise in such a suit; however, given the increased public awareness of recent studies, a court could very well interfere against what it would perceive as arbitrary and capricious agency action.

#### 1. FDA Drug Approval Process

Under the Federal Food, Drug, and Cosmetic Act (FDCA), the FDA ensures the safety and effectiveness of both human and animal drugs.<sup>135</sup> Through the enactment of NEPA, Congress expanded the FDA's responsibility by requiring it to take environmental considerations into account when taking a variety of agency action, including approval of a new drug for marketing.<sup>136</sup> NEPA's central purpose is to bring these environmental considerations into agency decisionmaking at an early stage.<sup>137</sup> To achieve these ends, NEPA requires agencies to conduct environmental reviews on federal ac-

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133. National Environmental Policy Act, 42 U.S.C. §§ 4321-4370f (2006); 21 C.F.R. § 25.10 (2010).

134. Nidel, *supra* note 32, at 95 (first proposing this solution).

135. 21 U.S.C. § 355; Nidel, *supra* note 32, at 92.

136. 42 U.S.C. § 4321; Nidel, *supra* note 32, at 92-93.

137. *See id.*; Nidel, *supra* note 32, at 93.

tion significantly affecting the environment, including actions raising “ecological . . . aesthetic, historic, cultural, economic, social, or health [concerns] whether direct, indirect, or cumulative.”<sup>138</sup> Due to categorical exclusions in the evaluation system, however, many new drug applicants are not required to submit an environmental assessment of their drug.<sup>139</sup>

When a manufacturer submits a new drug application (NDA) with the FDA it is required to file an Environmental Assessment (EA) or obtain a categorical exclusion.<sup>140</sup> The EA must contain enough information for the agency to determine whether the drug approval will “significantly affect the quality of the human environment.”<sup>141</sup> The FDA then reviews the application for objectivity and accuracy. If the FDA determines that there are “significant effects” on the quality of the human environment, it will prepare an Environmental Impact Statement (EIS).<sup>142</sup> An EIS is a “clear, concise, and detailed” statement describing the impact of the drug, its adverse affects, and any alternatives to approval of the drug.<sup>143</sup> The FDA then decides whether to approve the drug, summarizing how it plans to minimize and monitor any environmental harm.<sup>144</sup> Interestingly, not until after the drug is approved is the FDA required to receive comments on the EIS.<sup>145</sup> Those comments can then form the basis for the FDA to withdraw approval of the drug.<sup>146</sup>

If the FDA determines that there are no significant effects, then it issues a Finding of No Significant Impact (FONSI).<sup>147</sup> After a FONSI is issued, the assessment of environmental impact of the drug is over, and the manufacturer proceeds with obtaining approval for the marketing of the drug.<sup>148</sup>

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138. Rebecca M. Bratspies, *Glowing in the Dark: How America's First Transgenic Animal Escaped Regulation*, 6 MINN. J. L. SCI. & TECH. 457, 481 (2005) (alteration in original) (quoting 40 C.F.R. § 1508.8).

139. 21 C.F.R. § 25.30 (2010).

140. 21 C.F.R. § 25.15(a).

141. *Id.* (“An EA adequate for filing is one that addresses the relevant environmental issues. An EA adequate for approval is one that contains sufficient information to enable the agency to determine whether the proposed action may significantly affect the quality of the human environment.”).

142. *Id.* § 25.15(b).

143. *Id.* §§ 25.42(a)(1)-(3).

144. *Id.* § 25.43(b)(4).

145. *Id.* § 25.52(b).

146. *Id.*

147. *Id.* § 25.15(b).

148. *See id.* § 25.41. A FONSI is composed of a brief statement “why an action . . . will not significantly affect the human environment” and a copy or summary of the original EA and a reference to any other related environmental documents. *Id.* § 25.41(a). The responsible agency official signs the FONSI document, which, in turn establishes approval of the

A manufacturer is not required to submit an EA with its NDA (and therefore avoids the EIS) if it satisfies a categorical exclusion.<sup>149</sup> The most significant categorical exclusion occurs when “the estimated concentration of the substance at the point of entry into the aquatic environment will be below 1 part per billion.”<sup>150</sup> In contrast to the EPA’s trigger value of one ppb, the European Agency for the Evaluation of Medicinal Products (EMA) utilizes a trigger value of ten ppt.<sup>151</sup> The EPA’s categorical exclusion at this high level creates an exception for an alarming number of NDAs, including the low-level compounds discussed above.<sup>152</sup> Several categorical exclusions from the filing of an EA also exist for the approval of animal drugs.<sup>153</sup>

Regardless of the actual value, the scientific validity of these triggers is unquestionably problematic.<sup>154</sup> Despite a dearth of scientific information, the responsibility of both the FDA and the potential drug manufacturer are greatly reduced based largely on predictive information. Additionally, the current method fails to take into account several critical factors. First, the biological persistence and interactions among multiple drugs are not considered when determining the trigger amount.<sup>155</sup> Second, the trigger method currently employed assumes a universal geographic usage.<sup>156</sup> In reality, the environmental concentration is a function of the population size, population age, confluence of hospitals, and local prescribing practices.<sup>157</sup> Therefore, a metropolitan area with several hospitals or long-term care facilities would have a much higher drug concentration, probably meeting the trigger level of one ppb. Finally, the trigger method does not take into account a variety of contributing unaccounted sources, for example: physician

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conclusion to forego preparing an EIS. *Id.* § 25.41(b). In only limited circumstances will an agency make the FONSI and EA reviewable by the public. *Id.* § 25.51(b)(3).

149. *Id.* § 25.30.

150. *Id.* § 25.31(b).

151. Daughton, *supra* note 35, at 760.

152. *Id.*

153. 21 C.F.R. § 25.33 (2010) (including approval of drugs used for animal feeds, individually administered anesthetics, drugs to be prescribed by veterinarians, and drugs intended for minor species).

154. Daughton, *supra* note 35, at 760.

155. *Id.* at 761.

156. *Id.* at 760.

157. *Id.*

samples,<sup>158</sup> black market sales,<sup>159</sup> internet drug sales,<sup>160</sup> and the little-publicized prescription drug patient assistance program.<sup>161</sup>

Rather than attempt to come up with a more precise trigger amount, the FDA should rely on an exception to the exclusion provided in 21 C.F.R. § 25.21. Under that provision, the FDA must require “at least an EA” for any action that would otherwise be excluded, if the approval would “significantly affect the quality of the human environment[.]”<sup>162</sup> Examples that would satisfy the standard are laid out in the provision, including when there is “potential for serious harm to the environment[.]”<sup>163</sup> Therefore, if the EPA determines that there is the *potential* for serious harm to the environment, it should require at least an EA and possibly an EIS.

The studies discussed in Part I undoubtedly recognize at least the *potential* for serious harm to the environment from the unregulated flow of pharmaceuticals from numerous sources. With the increased quantity and accuracy of scientific research, in conjunction with public awareness, it becomes more impracticable for the EPA to deny the impending harm to the environment.<sup>164</sup> As soon as the EPA begins requiring more EAs, the dialogue between drug manufacturers and the agency will begin. Rather than fall into a far-reaching loophole by simply asserting that the product will be released at less than one ppb, manufacturers would be required to investigate the effects of their proposed drug. “A more stringent FDA assessment would lead to the generation of toxicological data and analytical techniques previously not necessary for approval.”<sup>165</sup> With this information, in conjunction with EPA-funded university studies—and the Associated Press—the FDA will inevitably require more EISs. Although the FDA has never rejected a

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158. In 2003, more than 12% of Americans received free drug samples. Among those already taking prescription drugs, 20% received free samples. In 2004, medical professionals distributed \$16.4 billion worth of free samples, calculated based on retail value. Tara Parker-Pope, *Who Gets Free Drug Samples*, N.Y. TIMES WELL BLOG (Jan. 7, 2008, 10:26 AM), <http://well.blogs.nytimes.com/2008/01/07/who-gets-free-drug-samples/>.

159. Most stolen drugs end “up for sale on the internet to elderly people who have no prescription drug coverage.” Robert Hanley, *11 Charged with Stealing Prescription Drugs for Resale*, N.Y. TIMES, Mar. 19, 2004, at 5B.

160. *Id.*

161. Pharmaceutical companies recently expanded their prescription drug patient assistance programs. In 2009, Merck “increased the income eligibility of its assistance plan to 400 percent of the federal poverty level, from its previous 200 percent level.” Additionally, “Rx Outreach has added more than 100 drugs to the nearly 300 generics that it will provide for anyone with a U.S. address whose income is no greater than 300 percent of the federal poverty level.” Francesca Lunzer Kritz, *Drugmakers Ease Eligibility for Discounts*, WASH. POST, Apr. 7, 2009, at F2.

162. 21 C.F.R. § 25.21 (2010).

163. 21 C.F.R. § 25.21(a).

164. Nidel, *supra* note 32, at 94.

165. *Id.*

NDA on the basis of an EA, the combination of a better scientific understanding and public pressure may cause it to change course.

## 2. Judicial Review to Compel Agency Action

If the FDA fails to begin considering the congressionally-mandated NEPA environmental factors in its drug approval process, it may be possible for an interested party to seek judicial review and compel the agency to act.<sup>166</sup> Under the APA, agency action, such as the approval for marketing of a new drug, is presumed to be subject to judicial review.<sup>167</sup>

Courts review agency action under an arbitrary and capricious standard.<sup>168</sup> Judicial review under the arbitrary and capricious standard is meant to determine whether the agency taking action:

[H]as relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.<sup>169</sup>

The standard is deferential to the agency, but the court still has the discretion to consider changes in the relevant facts or “the agency’s failure to consider relevant information at the time” of its decision, especially if the considerations are mandated by statute.<sup>170</sup> The Supreme Court has stated that NEPA “merely prohibits uninformed—rather than unwise—agency action.”<sup>171</sup> By utterly failing to consider environmental effects of NDAs, as congressionally mandated, it is arguable that the FDA has, under the *Motor Vehicle Manufacturers Association* standard, “failed to consider an important aspect”<sup>172</sup> and a court would thus have the authority to ensure an EA is prepared.<sup>173</sup>

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166. *Id.* at 95.

167. 5 U.S.C. § 702 (2006) (“A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof.”).

168. *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402, 413-14 (1971).

169. *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

170. Nidel, *supra* note 32, at 99.

171. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989).

172. *Motor Vehicle Mfrs. Ass’n*, 463 U.S. at 43.

173. *See, e.g., Found. on Econ. Trends v. Heckler*, 756 F.2d 143 (D.C. Cir. 1985). In this case, researchers at the University of California sought to field test bacteria—the ice-minus bacteria—that were genetically modified to retard frost damage in plants. Because the re-



Before obtaining judicial review, a party must exhaust its administrative remedies if there are any available under the relevant statute.<sup>174</sup> In this situation, the administrative remedy to be exhausted, provided by the relevant agency, is a “citizen petition[.]” which serves as a mechanism for petitioning to modify existing rules.<sup>175</sup> The citizen petition allows the agency to consider the action within the agency and decide whether to revisit the action before it is subject to judicial review. The FDA may approve, deny, or provide a tentative response to the petition within 180 days.<sup>176</sup> Once the agency responds, the response is considered a final agency action and is thus subject to judicial review.<sup>177</sup>

After obtaining final agency action through a citizen petition, there exists another significant hurdle to challenging FDA action. The APA provides judicial review to all final agency action “except to the extent that (1) statutes preclude judicial review; or (2) agency action is committed to agency discretion by law.”<sup>178</sup>

To find preclusion, courts look for “clear and convincing evidence” of legislative intent to preclude judicial review within the structure of the statute.<sup>179</sup> A viable argument could be made that because the FDCA does explicitly provide for judicial review for one party, the applicant of the drug, the silence with regard to interested third parties should be construed as impliedly precluding judicial review.<sup>180</sup> In *Block v. Community Nutrition Institute*, the Court found that because the Agricultural Marketing Agreement Act (AMAA) expressly allowed milk producers and handlers to bring suit, but was silent as to consumers, judicial review was impliedly precluded.<sup>181</sup> Salient to that decision, however, was the fact

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searchers received government research support, they applied for National Institutes of Health (NIH) approval of the field tests. When the NIH approved the application in 1983 after nearly a year of review, environmental activists sued, charging that the NIH violated the procedural requirements of NEPA by failing to conduct an environmental impact assessment of the test. The district court enjoined the test until an assessment was prepared. *Id.*

174. 5 U.S.C. § 704 (2006).

175. 21 C.F.R. § 10.30 (2010); 21 C.F.R. § 10.45(b) (2010) (noting that if a case is complaining of action or failure to act before citizen petition, the “Commissioner shall request dismissal of the court action . . . on the grounds of a failure to exhaust administrative remedies . . . and the lack of an actual controversy . . .”). A form petition is available at 21 C.F.R. § 10.30(b).

176. 21 C.F.R. § 10.30(e)(2) (requiring the agency to give some indication of the status of the petition within 180 days of its filing).

177. 21 C.F.R. § 10.45(d) (“[T]he Commissioner’s final decision constitutes final agency action . . .”); see also Nidel, *supra* note 32, at 95.

178. 5 U.S.C. §§ 701(a)(1)-(2).

179. *Abbott Labs. v. Gardner*, 387 U.S. 136, 141 (1967) (quoting *Rusk v. Cort*, 369 U.S. 367, 379-80 (1962)).

180. Nidel, *supra* note 32, at 96.

181. 467 U.S. 340, 347 (1984).

that the AMAA laid out a detailed and complex statutory scheme on how the handlers and producers were each to exhaust their extensive administrative remedies before obtaining judicial review.<sup>182</sup> The Court gathered that Congress could not have intended that consumers not be required to exhaust their administrative remedies, and because there was no method for them to do so in the statute, the only conclusion was that Congress wished to preclude them from obtaining judicial review.<sup>183</sup> No such statutory judicial scheme exists here. The exhaustion of administrative remedies contained in the FDCA is nonspecific to any party.<sup>184</sup>

Subsequent decisions indicate that the Court's finding of preclusion in *Block* was indeed based primarily on the AMAA's unique statutory scheme. In *Bowen v. Michigan Academy of Family Physicians*, the Court reaffirmed its strong presumption that Congress intends judicial review of administrative action absent clear and convincing legislative intent.<sup>185</sup> There, the Court found that Congress's authorization of judicial review under certain portions of the Medicare program did not prevent the doctors from asserting claims under portions not mentioning judicial review at all.<sup>186</sup> No such clear and convincing evidence can be derived from the statute here or from its legislative history, and therefore interested third parties should not be impliedly precluded from judicial review challenging FDA drug approvals.

As mentioned above, the APA further precludes judicial review when the "agency action is committed to agency discretion by law."<sup>187</sup> The Supreme Court has interpreted this standard to mean that judicial review is unavailable when there is no law to apply.<sup>188</sup> In other words, the Court cannot review an agency action if there is no meaningful standard to measure the action against.<sup>189</sup> Examples of action committed to agency discretion include granting funds from a lump sum appropriation<sup>190</sup> and failure to take enforcement action.<sup>191</sup> In a third-party citizen suit challenging the

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182. *Id.* at 346.

183. *Id.* at 348 ("Allowing consumers to sue . . . would severely disrupt this complex and delicate administrative scheme.").

184. 21 U.S.C. § 355(q)(2)(B) (2006) ("If a civil action is filed against the Secretary with respect to any issue raised in the petition before the Secretary has taken final agency action on the petition within the meaning of subparagraph (A), the court shall dismiss without prejudice the action for failure to exhaust administrative remedies.").

185. 476 U.S. 667, 680-81 (1986).

186. *Id.*

187. 5 U.S.C. § 701(a)(2).

188. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 410 (1971).

189. *Heckler v. Chaney*, 470 U.S. 821, 830 (1985).

190. *Lincoln v. Vigil*, 508 U.S. 182, 193 (1993).

191. *Heckler*, 470 U.S. at 831.

FDA drug approvals, the court would apply the congressionally mandated NEPA requirement that the FDA take into consideration the environmental impact of all of its actions, including the pre-approval marketing of drug compounds. Therefore, the action is not committed to agency discretion.

A potential third-party challenger, depending on his injury, could bring one of two claims.<sup>192</sup> In either case, the governing substantive statute would be the NEPA mandate that the FDA “insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations[.]”<sup>193</sup>

The first claim would challenge the FDA’s action in approving a new drug.<sup>194</sup> When the FDA fails to take into account environmental factors and put them on the administrative record, it fails to comply with a congressionally-mandated requirement and acts arbitrarily.<sup>195</sup>

The second, somewhat more complicated, claim would challenge the FDA’s failure to reevaluate a previous drug approval in light of new scientific evidence.<sup>196</sup> This type of claim would be subject to a comparison with *Heckler v. Chaney*.<sup>197</sup> In *Heckler*, a group of prison inmates on death row petitioned the FDA, requesting various enforcement actions to prevent the use of lethal injection drugs.<sup>198</sup> The prisoners claimed the drugs were being used in violation of the FDCA.<sup>199</sup> The FDA refused the request.<sup>200</sup> The Supreme Court held that there were no standards to apply in reviewing an agency’s decision not to exercise enforcement authority.<sup>201</sup> Such cases are presumptively committed to agency discretion.<sup>202</sup> However, “the presumption may be rebutted where the substantive statute has provided guidelines for the agency to follow[.]”<sup>203</sup> In contrast to the lack of standards in *Heckler*, NEPA lays out factors for the FDA to consider, which if disregarded result in arbitrary agency action.<sup>204</sup>

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192. Nidel, *supra* note 32, at 96-97.

193. 42 U.S.C. § 4332(2)(B) (2006).

194. Nidel, *supra* note 32, at 96.

195. *Id.*

196. *Id.*

197. 470 U.S. 821, 830 (1985).

198. *Id.* at 823.

199. *Id.*

200. *Id.*

201. *Id.* at 831.

202. *Id.* at 832.

203. *Id.* at 832-33.

204. 42 U.S.C. § 4332(2)(B) (2006).

In *American Horse Protection Association, Inc. v. Lyng*, a similar claim was upheld, compelling agency action following publication of new scientific data.<sup>205</sup> In this case, the court held that the Department of Agriculture's failure to revisit a rule allowing padded shoes on show horses was arbitrary and capricious in light of a university study supporting findings that such use resulted in "soring," in violation of the Horse Protection Act.<sup>206</sup> Before remanding the case, the D.C. Circuit stated,

a refusal to initiate rulemaking naturally sets off a special alert when a petition has sought modification of a rule on the basis of a radical change in its factual premises. . . . "[A]n agency may be forced by a reviewing court to institute rulemaking proceedings if a significant factual predicate of a prior decision on the subject . . . has been removed."<sup>207</sup>

Because the EPA originally failed to take into account environmental impacts of drugs, it should do so now in light of the significant factual findings indicating that they are, in fact, harming the aquatic environment. If the FDA does not take the environmental impact of drugs into account, a court could force the agency to institute rulemaking proceedings just as the court did in *American Horse Protection*.<sup>208</sup>

The final challenge in obtaining judicial review of the FDA's failure to take into account environmental factors as congressionally mandated by NEPA is meeting the standing requirements of Article III and the APA. There are three requirements for Article III standing: (1) injury in fact; (2) causal relationship between injury and challenged conduct; and (3) likelihood that a favorable decision will redress the injury.<sup>209</sup> To establish standing under the APA, a plaintiff must satisfy the "zone of interest" test.

First, "[t]he relevant showing for purposes of Article III [injury in fact] . . . is not injury to the environment but injury to the plaintiff."<sup>210</sup> In *Friends of the Earth v. Laidlaw*, the Supreme Court found sufficient injury in fact for a plaintiff who used to recreationally use a river, but was now discouraged from doing so because he was concerned that the water was polluted.<sup>211</sup> In other

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205. 681 F. Supp. 949, 958 (D.C. Cir. 1988).

206. *Id.*

207. *Am. Horse Prot. Ass'n v Lyng*, 812 F.2d 1, 5 (D.C. Cir. 1987) (quoting *WWHT, Inc., v. Fed. Comm'ns Comm'n*, 656 F.2d 807, 819 (D.C. Cir. 1981)).

208. *Id.*

209. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992).

210. *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc.*, 528 U.S. 167, 181 (2000).

211. *Id.* at 181-82, 193.

words, injury in fact was satisfied because the plaintiffs were “persons ‘for whom the aesthetic and recreational values of the area will be lessened’ by the challenged activity.”<sup>212</sup> Thanks to several new studies revealing the harmful effects of pharmaceuticals, there are millions of potential plaintiffs. As long as a plaintiff could present an actual, concrete injury, such as the damage to local fishing, the plaintiff would satisfy the injury in fact requirement.<sup>213</sup>

Second, a potential plaintiff must demonstrate a causal relationship between the injury and the challenged conduct, which means that the injury can be fairly traced to the challenged action of the defendant.<sup>214</sup> These drugs would not be in the environment, and in the water supply, at least at present levels and concentrations, if not for FDA approval. The presence of these drugs is, therefore, “fairly traceable” to the FDA.

Finally, a party must establish a likelihood that the injury will be redressed by a favorable decision, which means that the prospect of obtaining relief from the injury as a result of a favorable ruling is not too speculative.<sup>215</sup> This requirement leads to a narrowing of the potential plaintiff’s claim. For example, a plaintiff living downstream from a cattle farm, where large amounts of hormones and antibiotics in the groundwater have substantially affected the fish and other wildlife, would claim that the FDA’s decision to reevaluate (or evaluate the introduction of a new hormone or antibiotic) the environmental impact of the drug would significantly change the status of the injury suffered by that particular plaintiff.

Of course, there does remain an element of speculation to judicial action. Even if the court requires the FDA to evaluate the environmental impact, the agency may nonetheless approve the drug, thereby providing no redressability to the aforementioned plaintiff. This argument was presented to, and rejected by, the Supreme Court in *Federal Election Commission v. Akins*.<sup>216</sup> In *Akins*, a group of voters requested that the Federal Election Commission

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212. *Id.* at 183 (quoting *Sierra Club v. Morton*, 405 U.S. 727, 735 (1972)).

213. Of course, an environmental association could bring the suit, as was the case in *Friends of the Earth*. As the Supreme Court has stated, “an association has standing to bring suit on behalf of its members when . . . its members would otherwise have standing to sue in their own right[,] . . . the interests it seeks to protect are germane to the organization’s purpose[,] and . . . neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.” *Hunt v. Wash. State Apple Adver. Comm’n*, 432 U.S. 333, 343 (1977).

214. *Lujan*, 504 U.S. at 560.

215. *Id.* at 561.

216. 524 U.S. 11 (1998).

(FEC) declare the American Israel Public Affairs Committee (AIPAC) a “political committee,” so as to subject it to regulation and reporting requirements.<sup>217</sup> The voters argued that the Federal Election Commission Act required information regarding spending habits to be made public if a group was declared a “political committee.”<sup>218</sup> The FEC declared the AIPAC was not a political committee.<sup>219</sup> The voters sought review.<sup>220</sup> The Court found that even if the FEC agreed with the voters that the AIPAC was a political committee, it still had the discretion not to require AIPAC to produce the relevant information.<sup>221</sup> The Court recognized that agencies frequently exercise discretion in taking action.<sup>222</sup> But it further recognized that “those adversely affected by a discretionary agency [action still] have standing to complain that the agency based its decision upon an improper legal ground.”<sup>223</sup> The Court stated that “[i]f a reviewing court agrees that the agency misinterpreted the law, it will set aside the agency’s action and remand the case—even though the agency . . . might later . . . reach the same result for a different reason.”<sup>224</sup>

The Court’s reasoning in *Akins* applies here. If a reviewing court finds that the EPA acted arbitrarily by not considering congressionally mandated NEPA factors, and that the EPA essentially rubber-stamped a NDA, it could set aside the agency action, even though the EPA could have approved the drug application after extensive environmental analysis. Therefore, a plaintiff bringing suit in this way would satisfy the third requirement of Article III standing.

To establish standing under the APA, a person bringing suit must satisfy the zone of interest test.<sup>225</sup> Under this test, a plaintiff must first demonstrate that he or she has suffered a legal wrong or is adversely affected or aggrieved by agency action of a relevant statute.<sup>226</sup> As listed above in Part I, there are endless adverse effects of the FDA’s failure to regulate the environmental impact of pharmaceuticals in the water.

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217. *Id.* at 15-16.

218. *Id.* at 16.

219. *Id.* at 13.

220. *Id.*

221. *Id.* at 15, 25.

222. *Id.*

223. *Id.*

224. *Id.*

225. “Because NEPA does not provide for a private right of action, plaintiffs challenging an agency action based on NEPA must do so under the . . . APA.” *Ashley Creek Phosphate Co. v. Norton*, 420 F.3d 934, 939 (9th Cir. 2005) (citation omitted).

226. *Id.*

Second, plaintiffs must also show that they are within the zone of interests sought to be protected.<sup>227</sup> A plaintiff can still be within the “zone of interest” even if the class is not specifically mentioned in the statute or its legislative history.<sup>228</sup> But, if the interest asserted by the party is one intended by Congress to be protected or regulated by the statute, it will not matter that the plaintiff was not the subject of the contested regulatory action.<sup>229</sup>

“It is well settled that the zone of interests protected by NEPA is environmental.”<sup>230</sup> NEPA itself indicates that the protection of water quality is an important policy,<sup>231</sup> and the zone of interest protected by NEPA has been interpreted to include detrimental effects on water quality.<sup>232</sup> For example, in *Sabine River Authority v. U.S. Department of Interior*, the Fifth Circuit found that plaintiffs asserting injuries due to “harmful effects on the quality and quantity of East Texas’ water supply [were] among the *sorts* of interests that NEPA was specifically designed to protect.”<sup>233</sup> Similarly, a party asserting injuries due to harmful effects on the water supply from pharmaceuticals is representing an interest Congress sought to protect through NEPA. In failing to take those effects into account, especially in light of recent scientific findings, the EPA has acted arbitrarily and capriciously.

### 3. “Green” Drug Design

Of course, the ultimate goal in obtaining a vigorous environmental review process for NDAs is not to prevent otherwise beneficial drugs from entering the market. Advances in pharmaceutical science in recent years have produced countless benefits, ranging from vaccines to Viagra. Over the next decade, scientists hope to make major advancements in Alzheimer’s prevention and designer chemotherapy. The goal of the heightened review process is to improve the overall approach to drug design. Twenty-first century “drug design (chemical structure and properties) and formulation

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227. *Ass’n of Data Processing Serv. Orgs., Inc. v. Camp*, 397 U.S. 150, 153 (1970).

228. *See Clarke v. Sec. Indus. Ass’n*, 479 U.S. 388, 399 (1987) (“In cases where the plaintiff [was] not . . . the subject of the contested regulatory action, [as here,] the [zone of interest] test denies [the] right of review if the plaintiff’s interests are so marginally related to or inconsistent with the purposes [of] the statute[.]”).

229. *Id.*

230. *Nuclear Info. and Res. Serv. v. Nuclear Regulatory Comm’n*, 457 F.3d 941, 950 (9th Cir. 2006).

231. *See* 42 U.S.C. §§ 4321, 4332(c) (2006); *see also Metro. Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 773 (1983) (quoting from statements of two principal sponsors of NEPA which identify water supply and quality as a concern of NEPA).

232. *Sabine River Auth. v. U.S. Dep’t of Interior*, 951 F.2d 669, 675 (5th Cir. 1992).

233. *Id.* (internal quotations omitted).

(combination of the active . . . [with] nonactive ingredients . . .) should factor in new considerations [such as] ‘environmental friendliness’ or ‘environmental proclivity.’”<sup>234</sup> This movement toward “green pharmacy” provides significant collateral benefits for consumers, unrelated to the environmental imperative.<sup>235</sup>

Recent years have already seen tremendous progress in advancing the practice of “green chemistry.”<sup>236</sup> It has been noted that “the pharmaceutical industry has a strong history of applying environmentally responsible chemistry . . . to drug synthesis and manufacturing[,]” as it has also been economically advantageous.<sup>237</sup> The same principles could be extended and applied to drug design. For example, “[d]rugs could be designed with better physiologic sorption characteristics (to lessen direct excretion of the parent compound).”<sup>238</sup> Rapid-dissolve tablets, a relatively new development, are an example of a formulation improvement.<sup>239</sup>

Veterinary medicine, especially antibiotics and hormones administered to cattle and poultry and used in fisheries, is an area with significant room for improvement. The example mentioned in Part III-D of cattle given ear implants that provide a slow release of trenbolone (the anabolic steroid used by some bodybuilders) is instructive.<sup>240</sup> The “study showed 10% percent of the steroid passed right through the animals.”<sup>241</sup> Without the FDA requiring it, there is little incentive for the manufacturer to modify the implant, or to specialize it to individual cows. With the NEPA factors imposed by the FDA, however, this is an area where minor improvements in drug design could eliminate the direct flow of pharmaceuticals into the water supply.

Additionally, developments in the ability of drugs to reach the target site or receptor will provide for smaller doses, therefore eliminating a current broad array of metabolites, many of which are environmentally persistent. “Increasing the specificity of drug action at the . . . receptor” also provides the benefit of reducing adverse reactions.<sup>242</sup> Such sophisticated “green” drugs are more susceptible “to biodegradation, photolysis, or other physiochemical al-

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234. Daughton, *supra* note 35, at 765.

235. *Id.*

236. *Id.*

237. *Id.*

238. *Id.*

239. *Id.*

240. Donn et al., *supra* note 3.

241. *Id.*

242. Daughton, *supra* note 35, at 765.



terations to yield innocuous end products[,]” while maintaining or improving therapeutic efficacy.<sup>243</sup>

#### IV. CONCLUSION

The prevalence of drugs in America’s water supply is sure to be an issue that our country will grapple with as we consume an increasing amount of pharmaceutical products.<sup>244</sup> Drugs have the distinctive capability to cure disease, ease human suffering, and improve the quality of life. But, as is demonstrated above, irresponsible and reckless consumption of drugs can cause tremendous harm to our environment and potential harm to our health.

Currently, we know little about the exact repercussions of a drug-laden water supply. In order to increase our understanding of the challenges ahead, the EPA and other government agencies should continue to fund and react to studies that improve upon this collective knowledge. Specifically, we need to know more information about the effects of the combination of drugs once they enter the ecosystem, both with each other and with naturally occurring compounds. Additionally, research should focus on long-term effects and the effects drugs can have on those most vulnerable, including young children and pregnant women.

One of the first steps that needs to be taken is to reduce—and eventually eliminate—the unnecessary discharge of unused drugs into the water supply. Both Congress and the EPA have already taken significant action toward this goal. To improve upon its efforts, Congress should consider including the Universal Waste Rule’s goals of simplification and uniform compliance into the Drug Free Water Act of 2009. This will provide consistency in all states, something the EPA cannot mandate. Additionally, Congress should consider enacting a take-back program modeled after those used in Canada. At the very least, Congress should modify the Controlled Substances Act so that state and local governments will have the ability to adopt their own take-back programs. These programs will have the collateral benefit of allowing doctors to collect data on the quantity of drugs being consumed, and, therefore, more accurately issue prescriptions.

The FDA needs to take a more active role in reviewing the environmental impact of NDAs, and—where scientific evidence calls for it—previously approved drugs. Working in conjunction with the

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243. *Id.*

244. “Over the past five years, the number of U.S. prescriptions rose 12% to a record 3.7 billion, while non-prescription drug purchases held steady around 3.3 billion[.]” Donn et al., *supra* note 3.

National Environmental Policy Act, the FDA already has the authority to take action. With an increase in EAs and scrutiny of these applications, a dialogue will begin between the government and manufacturers regarding the impact of drugs on the environment where no dialogue previously existed. Unfortunately, the FDA has demonstrated that it is not willing to aggressively consider environmental impacts during NDAs or otherwise.<sup>245</sup> If this course of action continues in light of new evidence, interested parties should seek judicial review to compel the FDA to act.

It is not solely the government's responsibility to keep our waters free from pharmaceutical pollution. Consumers need to take action to prevent further harm to our environment by consuming drugs in appropriate doses. Consumers should seek out the limited take-back programs that are currently available and attempt to start new ones where they are not.

The manufacturers of pharmaceuticals also have a responsibility to keep drugs out of the water. They should work closely with the FDA to develop smarter, "greener" drugs. It has already proven economically advantageous to apply environmentally responsible chemistry to drug synthesis and manufacturing. Pharmaceutical companies should employ those same strategies with regard to the impact of the end product in an effort to yield similar economically beneficial results. New regulations are on the horizon, and the companies that anticipate their impact will prosper in the new regulatory environment.

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245. The FDA has similarly failed to conduct any environmental risk analysis in other areas demanding assessment. See Bratspies, *supra* note 138, at 480 (arguing that the FDA's decision to allow genetically modified fish to enter into interstate commerce wholly unregulated "flatly contradicts the FDA's duties under the National Environmental Policy Act (NEPA)").

## RECENT DEVELOPMENTS

EYAL SHARON\*

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### I. NOTABLE FEDERAL CASES

#### A. *Monsanto Company v. Geertson Seed Farmers*

The district court abused its discretion in enjoining the U.S. Department of Agriculture from effecting a partial deregulation of Roundup Ready Alfalfa and in entering a permanent injunction prohibiting the possibility of planting according to the partial deregulation procedures.

*Monsanto Company v. Geertson Seed Farmers* addressed the breadth of the injunctive relief that the district court granted in response to actions taken by the Animal and Plant Health Inspection Service (APHIS).<sup>1</sup> Under the Plant Protection Act (PPA),<sup>2</sup> the

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1. *Monsanto Co. v. Geertson Seed Farmers*, 130 S. Ct. 2749, 2749 (2010).

2. 7 U.S.C. § 7701 (2006).

Secretary of the Department of Agriculture (USDA) has the authority to prevent harmful plants (also known as “plant pests”) from being introduced within the United States.<sup>3</sup> The Secretary has delegated this regulatory power to APHIS (a division within USDA).<sup>4</sup> APHIS, in turn, used its delegated authority to promulgate regulations for “plant pests.”<sup>5</sup> Under these regulations, certain genetically engineered plants are presumed to be “plant pests” within the meaning of the PPA unless APHIS decides otherwise.<sup>6</sup> In its deregulation decision process, APHIS is required to comply with the National Environmental Protection Act (NEPA), “which requires federal agencies ‘to the fullest extent possible’ to prepare an environmental impact statement (EIS) . . . [for] ‘major Federal action significantly affecting the quality of the human environment.’”<sup>7</sup> If the agency, using a shorter environmental assessment (EA), finds “that the proposed action will not have a significant [environmental] impact[,]” it is not required to complete an EIS for that particular proposal.<sup>8</sup>

Monsanto Company owns the intellectual property rights for Roundup Ready Alfalfa (RRA), a genetically engineered alfalfa crop that is tolerant of the herbicide glyphosate.<sup>9</sup> Monsanto sought deregulation of RRA from APHIS in 2004, which APHIS granted unconditionally after preparing a draft EA finding no significant impact to the environment.<sup>10</sup> Conventional alfalfa seed farmers and environmental groups (Respondents) filed a suit in federal district court challenging APHIS’s decision to completely deregulate RRA.<sup>11</sup> Although the district court accepted APHIS’s finding that RRA is not harmful to humans or livestock, the court held that APHIS did violate NEPA by not preparing an EIS prior to its decision.<sup>12</sup> The district court then proceeded to the remedial phase of the lawsuit and permitted Monsanto to intervene during this phase by allowing the parties to submit proposed judgments that included “their preferred means of remedying the NEPA violation.”<sup>13</sup> APHIS’s proposed judgment would have done the following: “. . . order[] the agency to prepare and EIS, vacate[] the agency’s deregulation decision, and replace[] it with the terms of the judg-

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3. *Geertson*, 130 S. Ct. at 2749.

4. *Id.*

5. *Id.*

6. *Id.* at 2749-50.

7. *Id.* at 2750 (quoting 42 U.S.C. § 4332(2)(C) (2010)) (internal alteration omitted).

8. *Id.* (citing 40 C.F.R. §§1508.9(a), 1508.13 (2009)).

9. *Id.*

10. *Id.*

11. *Id.* at 2750-51.

12. *Id.* at 2751.

13. *Id.*

ment itself.”<sup>14</sup> This proposed judgment by APHIS was rejected by the district court.<sup>15</sup> Instead, the court entered a permanent injunction and judgment and “(1) vacated APHIS’s deregulation decision; (2) ordered APHIS to prepare an EIS before it made any decision on Monsanto’s deregulation petition; (3) enjoined the planting of any RRA in the United States after March 30, 2007, pending APHIS completion of required EIS; and (4) imposed certain conditions . . . on the handling and identification of already-planted RRA.”<sup>16</sup> The Government and Monsanto appealed the district court’s decision and challenged the scope of relief that the court granted.<sup>17</sup> The Court of Appeals for the Ninth Circuit affirmed and the Supreme Court granted certiorari.<sup>18</sup>

Before examining the merits of the case, the Supreme Court addressed Respondents’ and Monsanto’s standing arguments. Respondents claimed that Monsanto lacked standing to seek the Court’s review of the ruling at issue, but the Supreme Court disagreed.<sup>19</sup> The Court found that Monsanto satisfied the three requirements of constitutional standing.<sup>20</sup> Respondents’ main standing argument was that the injury of which Monsanto complained was caused independently by a portion of the district court order, which Monsanto failed to challenge.<sup>21</sup> The Court found that Respondents’ claim failed for two independent reasons.<sup>22</sup> First, the Court found that Monsanto preserved its objection even though it did not bring a direct challenge.<sup>23</sup> Second, Monsanto had standing to challenge the part of the district court’s order enjoining partial deregulation because even Respondents concede that the judgment went beyond APHIS decision to deregulate.<sup>24</sup> After rejecting Respondents’ challenge of Monsanto’s standing, the Court considered Monsanto’s claim that Respondents lacked standing to obtain injunctive relief.<sup>25</sup> Monsanto’s main argument claimed Respondents failed to show that they are likely to “suffer a constitutionally cognizable injury absent injunctive relief.”<sup>26</sup> In rejecting Monsanto’s

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14. *Id.*

15. *Id.*

16. *Id.* at 2751-52.

17. *Id.* at 2752.

18. *Id.*

19. *Id.*

20. *Id.* (Article III of the United States Constitution requires that for a party to have standing a party must have: 1) suffered an injury that is “concrete, particularized, and actual or imminent”; 2) the injury is “tracable to the challenged action”; and 3) can be “redressable by a favorable ruling.” *Id.* (citing *Horne v. Flores*, 129 S. Ct. 2579 (2009)).

21. *Id.*

22. *Id.* at 2753.

23. *Id.*

24. *Id.*

25. *Id.* at 2754.

26. *Id.*

position, the Court found that Respondents (which included conventional alfalfa farmers) had established to the district court that a reasonable probability existed that their organic and conventional alfalfa crop would be contaminated by a completely deregulated RRA.<sup>27</sup> Furthermore, the Court found that Respondents demonstrated that they would have to take certain measures to monitor for and minimize any cross-contamination in order to ensure conventional (i.e., non-genetically-modified) alfalfa supply was adequately maintained.<sup>28</sup> According to the Court such potential harms were sufficiently concrete to satisfy that prong of the constitutional standing requirements, and that injunctive relief would alleviate Respondents' injury.<sup>29</sup>

Upon concluding that both Monsanto and Respondents had standing, the Court then turned to examine the case on its merits. In order for a Court to grant a permanent injunction, a plaintiff must satisfy a four-factor test.<sup>30</sup> The plaintiff must show:

“(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.”<sup>31</sup>

Before applying the injunctive relief standard to the present case, the Court considered whether the district court erred in enjoining APHIS from partially deregulating RRA during the pendency of the EIS process.<sup>32</sup> According to the plain text of the district court's order, it prohibits *any partial deregulation*, and “not just the particular partial deregulation embodied in APHIS's proposed judgment.”<sup>33</sup> After establishing that the district court order did not allow for any exceptions to the injunction, the Court found that “none of the traditional four factors governing the entry of permanent injunctive relief supports the District Court's injunction prohibiting partial deregulation.”<sup>34</sup> The Court reasoned that the traditional four-factor test was not met because Respondents did not show that they would suffer irreparable harm if APHIS

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27. *Id.*

28. *Id.* at 2755.

29. *Id.*

30. *Id.* at 2756 (citing *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006)).

31. *Id.* (quoting *MercExchange*, 547 U.S. at 391).

32. *Id.* at 2757.

33. *Id.*

34. *Id.* at 2758.

was allowed to proceed with any partial deregulation.<sup>35</sup> The Court provided two main reasons for Respondents' inability to show irreparable harm.<sup>36</sup> First, action by APHIS was not taken and it is not even known if it would violate NEPA.<sup>37</sup> If it does end up violating NEPA, Respondents can, at that point, challenge the action and seek from the court the appropriate relief.<sup>38</sup> Second, if the partial deregulation is "sufficiently limited," the risk of gene flow to Respondents' crop might be minimal to nonexistent.<sup>39</sup> Since APHIS has not taken action, and until it decides "whether and how to exercise its regulatory authority," the court has no reason to intervene.<sup>40</sup> Thus, the Court held that the district court's order in enjoining any partial regulation while APHIS prepared an EIS was not a proper exercise of its discretion.<sup>41</sup> As a result, the court of appeals erred in affirming that portion of the district court's order.<sup>42</sup>

Finally, the Court examined Monsanto's claim as to whether the district court erred in entering a nationwide injunction against planting RRA.<sup>43</sup> The Court held that the nationwide injunction went too far and provided two reasons for such finding.<sup>44</sup> First, since it was inappropriate for the district court to enjoin the partial deregulation, it was also inappropriate to enjoin "any and all parties" from acting in concert with the deregulation decision.<sup>45</sup> Second, since there might have been a less drastic remedy to redress Respondents' injury, the district court should not have imposed an injunction.<sup>46</sup> The Court reversed the Ninth Circuit's Judgment, and remanded the case for additional proceeding consistent with the Court's holding.<sup>47</sup>

*B. Stop the Beach Renourishment, Inc. v.  
Florida Department of Environmental Protection*

Florida did not violate the Fifth and Fourteenth Amendments because the Florida Supreme Court's decision did not implicate established property rights.

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35. *Id.* at 2759.

36. *Id.* at 2759-60.

37. *Id.* at 2760.

38. *Id.*

39. *Id.*

40. *Id.*

41. *Id.* at 2761.

42. *Id.*

43. *Id.*

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.* at 2762.

The United States Supreme Court, in *Stop the Beach Renourishment, Inc. v. Florida Department of Environmental Protection*, addressed whether a decision of the Florida Supreme Court constituted a property taking without just compensation in violation of the Takings Clause of the Fifth Amendment, as applied to the States under the Fourteenth Amendment.<sup>48</sup> Writing for the Court, Justice Scalia stated that property interests and property rights in navigable waters and the lands underneath them are generally defined under state law.<sup>49</sup> Florida law establishes that “the State owns in trust for the public the land permanently submerged beneath navigable waters and the foreshore[.]”<sup>50</sup> Furthermore, littoral property owners have certain “special rights” relating to water and the foreshore in addition to the rights of the public.<sup>51</sup> According to Justice Scalia, Florida includes within these “special rights” the right to accretions and relictions, which are at the center of this case.<sup>52</sup> Florida considers these rights to be property “akin to easements[.]”<sup>53</sup> In 1961, Florida passed the Beach and Shore Preservation Act (BSPA), which established procedures for “beach restoration and nourishment projects’ designed to deposit sand on eroded beaches (restoration) and to maintain the deposited sand (nourishment).”<sup>54</sup>

Stop the Beach Renourishment, Inc. (STBR), a nonprofit organization established by owners of beach-front property bordering the project area brought suit against City of Destin and Walton County (City and County).<sup>55</sup> The City and County, under the authority of the BSPA, proposed a project to restore 6.9 miles of beach which had been eroded by hurricanes.<sup>56</sup> Florida Department of Environmental Protection (DEP), issued notice of intent to approve the project, and the Board of Trustees of the Internal Improvement Trust Fund (The Board)<sup>57</sup> approved the proposed erosion control line (ECL).<sup>58</sup> STBR challenged the project in an administrative

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48. *Stop the Beach Renourishment, Inc., v. Fla. Dep’t of Env’tl. Prot.*, 130 S. Ct. 2592, 2597 (2010).

49. *Id.* (citing *Phillips v. Washington Legal Found.*, 524 U.S. 156, 164 (1998); *United States v. Cress*, 243 U.S. 316, 319-20 (1917)).

50. *Id.* at 2598. (citing FLA. CONST., art. X, § 11).

51. *Id.* (citing *Broward v. Mabry*, 50 So. 826, 830 (1909)).

52. *Id.* (citing *Thiesen v. Gulf, Florida & Alabama Ry. Co.*, 75 Fla. 28, 58-59 (1918)).

53. *Id.*

54. *Id.* at 2599 (citing FLA. STAT. §§ 161.088, 161.021(3), (4) (2007)).

55. *Id.* at 2600.

56. *Id.*

57. *Id.* at 2599. (The Board holds title to land submerged by water and therefore must provide approval to projects such as the one by the City and County in this case). *Id.*

58. *Id.* at 2600. The BSPA required the Board to establish an ECL, a fixed erosion control line to replace the “fluctuating mean high-water line as the boundary between [privately owned] littoral [property] and [publicly owned] state property.” *Id.* at 2599.



proceeding.<sup>59</sup> This challenge proved to be unsuccessful and the DEP subsequently issued the associated permits to the City and County.<sup>60</sup> STBR then challenged DEP's action in state court.<sup>61</sup> The First District Court of Appeal held that DEP's final order approving the project took away two of STBR's members' littoral rights: First, the right to accretion; and second, the "right to have the contact of their property with the water remain intact."<sup>62</sup> The First District also certified the following question to the Florida Supreme Court: "On its face, does the Beach and Shore Preservation Act unconstitutionally deprive upland owners of littoral rights without just compensation?"<sup>63</sup> The Florida Supreme Court answered the certified question in the negative and reasoned that the First District failed to consider the doctrine of avulsion.<sup>64</sup> The Florida Supreme Court concluded that this doctrine "permitted the State to reclaim the restored beach on behalf of the public."<sup>65</sup> The Florida Supreme Court quashed the First District's remand.<sup>66</sup> STBR sought rehearing from the Florida Supreme Court, alleging that "the Florida Supreme Court's decision itself effected a taking of the Members' littoral rights contrary to the Fifth and Fourteenth Amendments[.]"<sup>67</sup> The request was denied, leading STBR to seek review by the United States Supreme Court, which granted certiorari.<sup>68</sup>

Before addressing all parties' arguments on the merits, the Supreme Court addressed the threshold issue by clarifying the general principles of takings jurisprudence.<sup>69</sup> According to Justice Scalia, the Takings Clause is concerned with the act, not with the government actor, thus "[i]t would be absurd to allow a State to do by judicial decree what the Taking Clause forbids it to do by legislative fiat."<sup>70</sup> According to Justice Scalia, "no matter which branch is the instrument of the taking . . . 'a State, by *ipse dixit*,

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59. *Id.* at 2600.

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.* The Doctrine of Avulsion states that when there is a "sudden or perceptible loss of or addition to land by the action of the water or a sudden change in the bed of a lake or the course of a stream' . . . the formally submerged land that has become dry land by avulsion continues to belong to the owner of the seabed (usually the state)." *Id.* at 2598. (quoting *Bd. of Trs. of Internal Improvement Trust Fund v. Sand Key Assoc.*, 512 So. 2d 934, 936-37 (Fla. 1987)).

65. *Id.*

66. *Id.*

67. *Id.* (emphasis removed).

68. *Id.* at 2601.

69. *Id.*

70. *Id.* (citing *Stevens v. Cannon Beach*, 510 U.S. 1207, 1211-12 (1994)).

may not transform private property to public property without compensation.”<sup>71</sup>

The City and County argued that in order to find a judicial taking, the Court should require that the decision at issue have no “fair and substantial basis.”<sup>72</sup> Justice Scalia stated that the fair and substantial basis requirement was no different from the Court’s requirement that petitioners must prove “the elimination of an established property right.”<sup>73</sup> The City and County made a number of additional arguments including: 1) that “federal courts lack the knowledge of state law required to decide whether a judicial decision that purports merely to clarify property rights has instead taken them[;]”<sup>74</sup> and 2) that “applying the Takings Clause to judicial decisions would force lower federal courts to review final state-court judgments, in violation of” established doctrine.<sup>75</sup> The Court dismissed these arguments by stating that under the finality principle that the Court regularly applies, the claimant of an alleged taking would appeal a judicial taking to the state supreme court, and after the state supreme court’s decision was rendered, certiorari could come to the United States Supreme Court.<sup>76</sup> If the Court denied certiorari, *res judicata* would bar the claimant from filing suit in federal court to challenge the state court’s action.<sup>77</sup>

STBR proposed that the Court apply the unpredictability test, under which “a judicial taking consists of a decision that ‘constitutes a sudden change in state law, unpredictable in terms of relevant precedent.’”<sup>78</sup> The Court stated that the focus of STBR’s test was misguided because the relevant focus was “whether the property right allegedly taken was established” and not “whether there is precedent for the allegedly confiscatory decision[.]”<sup>79</sup>

The Court then moved on to examine the merits of the case. STBR first contended that the Florida Supreme Court, by declaring that the right to accretion and the right to have littoral proper-

71. *Id.* at 2602 (quoting *Webb’s Fabulous Pharmacies v. Beckwith*, 449 U.S. 155, 164 (1980)) (internal alterations omitted).

72. *Id.* at 2608.

73. *Id.*

74. *Id.* at 2609.

75. *Id.* (emphasis removed). The established doctrine that the Court refers to is the Rooker-Feldman Doctrine, which came from two cases: *Rooker v. Fidelity Trust*, 263 U.S. 413, 415-16 (1923) and *Dist. of Columbia Court of Appeals v. Feldman*, 460 U.S. 462, 476 (1983). According to *Black’s Law Dictionary*, under the Rooker-Feldman Doctrine a federal court cannot consider claims that were either decided by state court or claims that are “inextricably intertwined with an earlier state-court judgment.” *BLACK’S LAW DICTIONARY* 1355 (8th ed. 2004). Yet, this doctrine precludes the ability to seek appellate review. *Id.*

76. *Stop the Beach Renourishment*, 130 S. Ct. at 2609.

77. *Id.*

78. *Id.* at 2610 (quoting *Hughes v. Washington*, 389 U.S. 290, 296 (1967) (Stewart, J., concurring)).

79. *Id.*

ty touch the water did not exist, took two property rights of STBR's Members.<sup>80</sup> Under STBR's theory, since there was no Florida precedent that held that "the State's filling of submerged tidal land could have the effect of depriving a littoral owner of contact with the water and denying him future accretions, the Florida Supreme Court's judgment in the present case abolished those two easements to which littoral property owners had been entitled."<sup>81</sup> Addressing STBR's first contention, the Court stated that STBR's theory placed the burden on the wrong party.<sup>82</sup> According to the Court, a taking would not exist "unless *petitioner* [could] show that, before the Florida Supreme Court's decision, littoral-property owners had rights to future accretions and contact with the water superior to the State's right to fill in its submerged land[,]"<sup>83</sup> and the Court stated that such a showing could not be made.<sup>84</sup>

The Court stated that "two principles of Florida property law intersect" in the present case.<sup>85</sup> First, the State's right to fill submerged land adjacent to littoral property exists so long as rights of the public and littoral landowners are not interfered with.<sup>86</sup> Second, when an avulsive event exposes land that was previously submerged, it belongs to the State "even if it interrupts the littoral owner's contact with the water."<sup>87</sup> The Court found that the decision by the Florida Supreme Court was "consistent with these background principles of state property law."<sup>88</sup>

STBR further contended that the "State took the Members' littoral right to have their property continually maintain contact with the water."<sup>89</sup> The Court rejected that argument stating that the Florida Supreme Court did not "contravene[] established property law by rejecting it."<sup>90</sup>

The Court concluded that the Florida Supreme Court's decision did not eliminate a right of accretion established under Florida law<sup>91</sup> and a decision rejecting Petitioner's claim of a littoral right where the property must continually maintain contact with the water did not breach established property law.<sup>92</sup> Since the Court believed that the decision by the Florida Supreme Court did not

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80. *Id.*

81. *Id.* at 2610-11.

82. *Id.* at 2611.

83. *Id.* (emphasis added).

84. *Id.*

85. *Id.*

86. *Id.*

87. *Id.*

88. *Id.* at 2612.

89. *Id.*

90. *Id.* at 2613.

91. *Id.* at 2612.

92. *Id.* at 2613.

take away any established property rights of STBR's members, the Court concluded that Florida did not violate the Takings Clause within the meaning of the Fifth and Fourteenth Amendments of the U.S. Constitution.<sup>93</sup> The Court went on to affirm the judgment of the Florida Supreme Court.<sup>94</sup>

Justice Kennedy, who concurred in part and in judgment, and with whom Justice Sotomayor joined, stating that the court is not required by this case "to determine whether, or when, a judicial decision determining the rights of property owners can violate the Takings Clause[.]"<sup>95</sup> He points out that it is unclear "what remedy a reviewing court could enter after finding a judicial taking."<sup>96</sup> However, since under the Court's precedent it appears that "a party who suffers a taking is only entitled to damages, not equitable relief[.]" it is questionable if "reviewing courts could invalidate judicial decisions deemed to be judicial takings[.]"<sup>97</sup> Therefore, the concurrence stated that "the Court . . . not reach beyond the necessities of the case" to recognize a judicial takings doctrine.<sup>98</sup>

Additionally, Justice Kennedy found due process to be the more appropriate vehicle for addressing a judicial decision which may eliminate an established property right.<sup>99</sup> A long line of caselaw evidences the Court's use of Due Process to invalidate property regulation, supporting his assertion that "[t]he Due Process Clause, in both its substantive and procedural aspects, is a central limitation upon the exercise of judicial power."<sup>100</sup>

Justice Breyer, with whom Justice Ginsberg joined in a concurrence, expressed concern that many of the Court's holdings could invite "a host of federal takings claims without the mature consideration of potential procedural or substantive legal principles that might limit federal interference in matters that are primarily subject to state law."<sup>101</sup> Thus, the concurrence stated that the court does not need to decide more than "that the Florida Supreme Court's decision in this case did not amount to a 'judicial taking.'"<sup>102</sup>

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93. *Id.*

94. *Id.*

95. *Id.*

96. *Id.* at 2617.

97. *Id.*

98. *Id.*

99. *Id.* at 2614.

100. *Id.*

101. *Id.* at 2618-19.

102. *Id.* at 2619.

C. In re *Tri-State Water Rights Litigation (Phase 2)*

The non-federal parties' ESA claims were without merit and their NEPA claims were moot. The court dismissed the claims and granted the federal defendants' motion for summary judgment.

Phase Two of In re *Tri-State Water Rights Litigation* required the United States District Court for the Middle District of Florida to "evaluate the actions of the U.S. Army Corps of Engineers (the 'Corps') in light of the requirements of the National Environmental Policy Act ('NEPA'), . . . the Endangered Species Act ('ESA'), . . . and other similar statutes."<sup>103</sup> Phase Two challenged the Corps' operations at Jim Woodruff Dam, the southernmost dam in the tri-river system, located on the Apalachicola River where Georgia and Florida meet.<sup>104</sup> In the 1990s "the Environmental Protection Agency listed four Apalachicola River Species as threatened or endangered[:]"<sup>105</sup> the Chipola slabshell, the purple bankclimber mussel, and the Gulf sturgeon were listed as threatened; and the fat threeridge mussel was listed as endangered.<sup>106</sup> These actions "triggered the statutory requirements that the Corps consult with the [U.S. Fish and Wildlife Service (FWS)] regarding the Corps's operations" in the Apalachicola-Chattahoochee-Flint (ACF) basin.<sup>107</sup> To meet this statutory requirement, in 2006 the Corps initiated consultation with the FWS and it proposed an "Interim Operations Plan ('IOP') for the operation of Jim Woodruff Dam."<sup>108</sup>

In the 2006 consultation letter, the suggested IOP proposed two differing operations for Jim Woodruff Dam.<sup>109</sup> First, "depending on the amount of water flowing into the ACF Basin[.]" the IOP established "the minimum outflow, or releases, from the dam at different times of the year," and second, the plan described "the procedure for . . . reducing outflows from the dam in a controlled manner."<sup>110</sup> In 2008, the Corps adopted a revised version of the 2006 IOP, which "changed the parameters of the 2006 IOP in fairly significant ways."<sup>111</sup> Under the 2008 IOP the yearly flow period

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103. In re *Tri-State Water Rights Litig.*, No. 3:07-md-01 (PAM/JRK), 2010 U.S. Dist. LEXIS 108931, at \*5-\*6 (M.D. Fla. July 21, 2010).

104. *Id.* (citations omitted).

105. *Id.* at \*6-\*7.

106. *Id.* at \*7 (citing 63 Fed. Reg. 12,664 (Mar. 16, 1998) and 56 Fed. Reg. 49,653 (Sept. 30, 1991)).

107. *Id.* (citing 50 C.F.R. § 402.14(a) (1989)).

108. *Id.*

109. *Id.* at \*7-\*8.

110. *Id.* at \*8.

111. *Id.* at \*11.

changed from two to three distinct periods and the IOP provided “more variation in outflow depending on basin inflows.”<sup>112</sup> In its Biological Opinion (BiOp) of the revised IOP, the FWS concluded that, similar to the original IOP, the “2008 IOP . . . would not jeopardize the listed species or adversely modify their habitat.”<sup>113</sup> The FWS issued a final BiOp in June of 2008, which is at issue in Phase Two of the litigation.<sup>114</sup>

According to the court, two statutory schemes are at issue in Phase Two of the litigation.<sup>115</sup> First, NEPA imposes specific procedural requirements—such as preparing environmental impact statements (EISs) and consultation with federal agency—on every federal actor.<sup>116</sup> Second, the ESA supplements NEPA’s requirements by imposing substantive limitations on actions by federal agencies.<sup>117</sup> Under the ESA, the “take” of any endangered species by anyone, including federal agencies, is prohibited.<sup>118</sup> Yet, in order for a federal action to fall within the ESA’s requirements, the action must be discretionary.<sup>119</sup>

The parties to this litigation made legal claims that were, for the most part, similar, even though substantively, they made “different arguments with respect to the various statutes[.]”<sup>120</sup> The court first considered the parties’ ESA claims. The Georgia parties asserted that the Corp’s activities would constitute a take of the protected mussel species.<sup>121</sup> The court declined to consider the Georgia parties’ ESA claims because it found that the Georgia parties lacked standing to challenge the Incidental Take Statement (ITS) for the mussels.<sup>122</sup> The Court reasoned that the Georgia parties “do not claim to be injured by the ITS, and the Court cannot discern any potential injury the Georgia parties could have suf-

112. *Id.*

113. *Id.* at \*12. Section 7 of the Endangered Species Act establishes the procedures for consultation. A Biological Opinion is a formal consultation procedure that may be required by a federal agency when the action is likely to have an adverse effect on listed species. The FWS is required to prepare a Biological Opinion on “whether the proposed activity will jeopardize the continued existence of a listed species.” *Endangered Species, Section 7 Consultation*, U.S. FISH & WILDLIFE SERVICE, <http://www.fws.gov/midwest/endangered/section7/section7.html> (last visited on Jan. 26, 2011) (emphasis omitted).

114. *In re Tri-State Water Rights Litig.*, 2010 U.S. Dist LEXIS 108931, at \*13.

115. *Id.* at \*15.

116. *Id.* at \*15-\*16.

117. *Id.* at \*16.

118. *Id.* at \*17. Under the meaning of the ESA, a “take” means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect . . .” *Id.* (citing 16 U.S.C. § 1538(a)(1)(B) (2006)).

119. *Id.* at \*16 (citing 50 C.F.R. §402.03 (2010)).

120. *Id.* at \*18.

121. *Id.* at \*21-22.

122. *Id.* at \*22. An ITS is a document that the FWS prepares when “an action may adversely affect a species, but not jeopardize its continued existence.” *Section 7 Consultation*, *supra* note 113.

ferred.”<sup>123</sup> Thus the Court found the Georgia parties failed to meet the injury and causation elements of standing.<sup>124</sup>

As to the other parties in Phase Two of the litigation, the court also considered their ESA claims. The non-federal parties contended that the ESA required the Corps to evaluate the effects of its actions under both the 2008 IOP and the 1989 Water Control Plan (WCP) on which the IOP was based.<sup>125</sup> Furthermore, the parties asserted that in examining the IOP, “the Corps used the wrong ‘environmental baseline[.]’”<sup>126</sup> The FWS regulation and the FWS Consultation Handbook<sup>127</sup> require examination of the aggregate effect of actions when considering “whether the action is ‘likely to jeopardize the continued existence of the species or result in destruction or adverse modification of critical habitat.’”<sup>128</sup> While the federal defendants do not dispute the allegation that the FWS segmented its analysis, they contend that the ESA expressly permits this segmentation.<sup>129</sup> The federal defendants argued that the FWS complied with its own Consultation Handbook and the ESA, noting that the “BiOp’s determination regarding jeopardy to the species and habitat ‘is the sum of the effects evident in the baseline plus effects of the action and cumulative effects.’”<sup>130</sup> The court concluded that this portion of the ESA claim failed because “the FWS did not rely on an improper baseline or improperly segment its analysis.”<sup>131</sup>

Next, the Court considered the ITS contained in the 2008 Bi-Op.<sup>132</sup> The ITS addressed three species: the purple bankclimber mussel and the fat threeridge mussel, and the Gulf sturgeon.<sup>133</sup> According to the Court, in an ITS, “the FWS must examine not only whether the action will reduce the species’ survival or recovery, but also whether that action can reasonably be expected to have that effect.”<sup>134</sup>

The Florida parties argued that the FWS’s decision to ultimately decline to issue an ITS for the Gulf sturgeon was arbitrary and

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123. *In re Tri-State Water Rights Litig.*, 2010 U.S. Dist LEXIS 108931, at \*22.

124. *Id.* at \*22-\*23.

125. *Id.* at \*23.

126. *Id.*

127. *Id.* at \*23-\*24. According to the holding by Eleventh Circuit Court of Appeals in *Miccossukee Tribe of Indians v. United States*, 566 F.3d 1257, 1273 (2009), the Consultation Handbook has the same binding effect as would a regulation on the FWS *In re Tri-State Water Rights Litig.*, 2010 U.S. Dist LEXIS 108931, at \*24, n.4.

128. *Id.* at \*24 (citation omitted).

129. *Id.*

130. *Id.* at \*25.

131. *Id.*

132. *Id.* at \*26.

133. *Id.* at \*26-\*32.

134. *Id.* at \*26.

capricious.<sup>135</sup> The decision not to issue the ITS came after the FWS could not determine if the rapid fall rates would occur due to lack of data, and a consultation between the FWS and the Corps resulting in an agreement that the Corps would not “allow rapid declines in river stage.”<sup>136</sup> The court found that the FWS and the Corps resolved the issue by changing their actions and the Florida parties presented “no evidence that this ultimate conclusion was incorrect[.]”<sup>137</sup> Furthermore, the Florida parties failed to show that that FWS’s conclusion was arbitrary and capricious.<sup>138</sup> The court deferred to the scientific conclusion of the FWS.<sup>139</sup> The Court stated that reviewing an agency decision is not the court’s role and that the “[c]ourt is not free to make its own independent judgment.”<sup>140</sup>

Unlike the Gulf sturgeon, the FWS did issue an ITS for both the fat threeridge mussel and the purple bankclimber mussel.<sup>141</sup> The Florida parties contend that the “ITSs for the mussels are void because of a failure of analysis.”<sup>142</sup> The court disagreed, stating that the lack of data does not preclude an ITS, rather “the FWS is required to use the ‘best scientific and commercial data available.’”<sup>143</sup> The Florida parties also disagreed with the ITS for the fat threeridge mussel.<sup>144</sup> The Florida parties first claimed that the Corps had a duty to stop the decline of the species, and second that “the take of . . . the fat threeridge population must be evaluated in light of the large-scale die-off of these mussels” during a recent drought.<sup>145</sup> Once again the court stated the Florida parties only contended that the ultimate conclusion was incorrect, yet the Florida parties failed to present scientific evidence to negate the evidence that the FWS relied on in reaching its determination.<sup>146</sup>

Upon completing the examination of the ESA claim, the court went on to consider the NEPA claims asserted in Phase Two of the litigation.<sup>147</sup> All non-federal parties asserted that the Corps “violated NEPA by implementing the initial 2006 IOP prior to seeking the FWS’s advice” and that the Corps should have prepared an EIS for the 2006 IOP or the 2008 IOP that included the isolated effects of the IOP along with the entire operation plan for the ACF basin

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135. *Id.* at \*27.

136. *Id.*

137. *Id.*

138. *Id.* at \*28.

139. *Id.*

140. *Id.*

141. *Id.* at \*28-\*29.

142. *Id.* at \*29.

143. *Id.* at \*30.

144. *Id.* at \*30-\*31.

145. *Id.* at \*31.

146. *Id.* at \*31-32.

147. *Id.* at \*32.



under the 1989 WCP.<sup>148</sup> While the federal defendants basically admitted that the Corps violated NEPA by not seeking the FWS's advice prior to implementing the 2006 IOP, the federal defendants "contend[ed] that all of the NEPA challenges to any version of the IOP are moot and that challenges to the 1989 WCP [were] beyond the statute of limitations."<sup>149</sup> The court, troubled by the Corps' refusal to take responsibility for failing to conduct any sort of environmental analysis,<sup>150</sup> found that the NEPA violations outlined by the non-federal parties were violations without remedy.<sup>151</sup> The court reasoned that since "[t]he IOP is a temporary plan of operation[]; it will expire when the new WCP is in place. Thus, the harms suffered [were] no longer redressable."<sup>152</sup> The court agreed with the federal defendants that the NEPA claims were moot.<sup>153</sup>

The court held that the ESA claims were without merit, and the NEPA claims were moot.<sup>154</sup> The court entered an order denying all of the non-federal parties' motions for summary judgment.<sup>155</sup> The court granted the federal defendants' motion for summary judgment and dismissed the claims arising in Phase Two of the litigation.<sup>156</sup> The court concluded by "encourag[ing] the parties to work together toward an analysis that will advance the ultimate resolution of this litigation."<sup>157</sup>

#### *D. United States v. Aerojet General Corporation*

A non-settling PRP may intervene in litigation to oppose a consent decree incorporating a settlement that would bar contribution from a settling PRP.

The Comprehensive Environment Response, Compensation, and Liability Act (CERCLA) was enacted to require polluters to pay for cleaning up contaminated sites.<sup>158</sup> To ease cleanup efforts CERCLA allows potentially responsible parties (PRPs) "to seek contribution from one another in order to apportion response costs equitably."<sup>159</sup> Yet CERCLA does not allow "contribution claims

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148. *Id.*

149. *Id.* at \*33.

150. *Id.* at \*37.

151. *Id.* at \*38.

152. *Id.*

153. *Id.* at \*39.

154. *Id.* at \*39-\*40.

155. *Id.* at \*41.

156. *Id.* at \*40.

157. *Id.* at \*25.

158. *United States v. Aerojet Gen. Corp.* 606 F.3d 1142, 1145 (9th Cir. June 2, 2010).

159. *Id.*

against PRPs that have obtained administratively or judicially approved settlements with the government.”<sup>160</sup> Thus, CERCLA gives PRPs an incentive to settle “leaving non-settling PRPs liable for all of the response costs not paid by the settling PRPs.”<sup>161</sup>

In 1979, the Environmental Protection Agency (EPA) discovered that the San Gabriel Basin groundwater reservoir in eastern Los Angeles County had been contaminated.<sup>162</sup> Five years later, in 1984, the basin was designated on the “CERCLA National Priority List for investigation and cleanup.”<sup>163</sup> After EPA’s investigation and some initial agency action, thirteen PRPs (Group of 13) and the local water providers came together in July 2002 to reach an Agreement (G13 Agreement) under which the PRPs would pay \$4.7 million to fund the cleanup.<sup>164</sup> In return, the local water providers agreed “not to bring suit against the group during the period the funds were being used.”<sup>165</sup> While negotiations continued with the Group of 13, the local water providers filed suit against four other PRPs (the SEMOU Cases).<sup>166</sup> In March of 2007, the EPA, the Water Entities, the state, and ten PRPs (Group of 10) from the G13 Agreement entered into an agreement (G10 Agreement) where the “Group of 10 agreed to provide an additional \$3.4 million to pay for cleanup” of an additional contaminant not covered by the G13 Agreement.<sup>167</sup> Seven months later, the EPA filed a suit against the Group of 10 and proposed a consent decree seeking to consolidate the G10 and G13 agreements; “if approved by the court, [it] would protect the Group of 10 from contribution claims by non-settling PRPs.”<sup>168</sup>

A group of PRPs not part of the Group of 10 or Group of 13, including defendants from the SEMOU Cases, came together to object to the consent decree.<sup>169</sup> Termed “Applicants” by the court,<sup>170</sup> this group sought “to intervene as of right in the EPA’s suit against the Group of 10 under *Federal Rule of Civil Procedure* 24(a)(2)” and a CERCLA provision.<sup>171</sup> The district court denied Applicants’ motion to intervene and “entered the consent decree the next day.”<sup>172</sup> Applicants timely appealed the district court’s deci-

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160. *Id.*

161. *Id.*

162. *Id.* at 1146.

163. *Id.*

164. *Id.*

165. *Id.*

166. *Id.* at 1147.

167. *Id.*

168. *Id.*

169. *Id.*

170. *Id.*

171. *Id.* at 1148.

172. *Id.*

sion.<sup>173</sup> The Ninth Circuit has been called upon to address a question that has split the federal circuits: “May a non-settling PRP intervene in litigation to oppose a consent decree incorporating a settlement that, if approved, would bar contribution from the settling PRP?”<sup>174</sup>

The Ninth Circuit held that in order for Applicants to intervene as of right, they must meet the following four-part test: First, the applicant must make a timely motion; second, “the applicant must claim a ‘significantly protectable’ interest relating to the property or transaction which is the subject of the action;” third, “the applicant must be so situated that the disposition of the action may as a practical matter impair or impede its ability to protect that interest;” and lastly, “the applicant’s interest must be inadequately represented by the parties to the action.”<sup>175</sup> In determining whether intervention is appropriate, the court is guided by both practical and equitable considerations and it should widely construe the requirements in favor of intervention.<sup>176</sup>

The Ninth Circuit applied the four-part test to the case at hand.<sup>177</sup> Since the parties did not dispute the fact that the Applicants have made a timely motion to intervene, the court did not entertain a lengthy discussion of this portion of the test.<sup>178</sup> The court moved on to determine whether applicants met the “significantly protectable interest” requirement.<sup>179</sup> Here, Applicants sought to intervene in order to protect “their rights to contribution under CERCLA, and to ensure that the consent decree embodie[d] a fair and reasonable allocation of liability.”<sup>180</sup> The EPA contended that CERCLA creates “only a contingent or speculative interest in non-settling PRPs, and that Applicants’ interest is therefore not significantly protectable.”<sup>181</sup> The court disagreed, holding that “[t]hese interests are sufficient to satisfy the requirements of [the relevant civil procedure rule] and [CERCLA contribution provision] that the interest be ‘significantly protectable.’”<sup>182</sup> The Ninth Circuit joined the Eighth and Tenth Circuits in holding that “non-settling PRPs have a significant protectable interest in litigation between the government and would-be settling PRPs[,]” since

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173. *Id.*

174. *Id.* at 1146.

175. *Id.* at 1148 (quoting *California ex rel. Lockyer v. United States*, 450 F.3d 436, 440 (9th Cir. 2006)).

176. *Id.*

177. *Id.* 1149.

178. *Id.*

179. *Id.*

180. *Id.*

181. *Id.* at 1150.

182. *Id.*

the non-settling PRPs here were “potentially liable for response costs[.]”<sup>183</sup>

Upon finding that the Applicants had a “substantially protectable interest,” the Ninth Circuit moved on to consider the third prong of the four-part test: whether the disposition of the action would impair or impede applicants’ ability to protect their interest.<sup>184</sup> According to the court, it is undisputed that “disposition of the present litigation could bar or reduce the monetary value of the contribution claims of the prospective intervenors against the settling PRPs.”<sup>185</sup> The Ninth Circuit rejected the EPA’s contention that “CERCLA’s notice and comment procedure provided Applicants with an ‘other means’ by which to protect their interests.”<sup>186</sup> According to the court, the notice and comment procedure was not sufficient “other means” to allow Applicants to protect their interests.<sup>187</sup>

Lastly, the Ninth Circuit considered the final prong: whether existing parties adequately represented Applicants’ interests.<sup>188</sup> The court considered three factors to determine the adequacy of applicants’ representation: First, whether the interest of the current party was such that it would make all the arguments of the Applicants; second, whether “the present party . . . [was] capable and willing to make such arguments” on behalf of the Applicants; and third, did the Applicants “offer any necessary elements to the proceeding” that other parties would fail to address.<sup>189</sup> Since the interests of the parties in the present case were “directly opposed to those of the non-settling PRPs,” the court found “that the interests of the non-settling PRPs [were] not adequately represented by the existing parties.”<sup>190</sup> In reversing and remanding the lower court’s opinion, the Ninth Circuit thus held that Applicants had a right to intervene in order to protect their interest in contribution.<sup>191</sup>

*E. North Carolina ex rel. Cooper v. Tennessee Valley Authority*

The district court erred in entering an injunction requiring TVA plants in Tennessee and Alabama to in-

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183. *Id.*

184. *Id.* at 1151-52.

185. *Id.* at 1152. (quoting *United States v. Union Elec. Co.*, 64 F.3d 1152, 1167 (8th Cir. 1995)) (internal alternations omitted).

186. *Id.*

187. *Id.* 1152-53.

188. *Id.* at 1153.

189. *Id.* (quoting *Arakaki v. Cayetano*, 324 F.3d 1078, 1086 (9th Cir. 2003)).

190. *Id.*

191. *Id.*

stall pollutant controls based on North Carolina law establishing the air pollutant as a public nuisance.

The Tennessee Valley Authority (TVA) was established in 1933 as an agency of the executive branch with the primary objective to “produce, distribute, and sell electric power.”<sup>192</sup> To do so, TVA generates power through its eleven “coal-fired power plants located in Tennessee, Alabama, and Kentucky.”<sup>193</sup> The EPA, pursuant to the Clean Air Act (CAA), which regulates air pollutants, issues regulations to “keep air pollutants at or below safe levels.”<sup>194</sup> States have also enacted additional rules to implement the CAA and other EPA requirements.<sup>195</sup> North Carolina’s approach was the North Carolina Clean Smokestacks Act,<sup>196</sup> which was designed to force “implement[ation of] more stringent controls on in-state coal-fired plants . . . as it is allowed to do under the Clean Air Act.”<sup>197</sup> The North Carolina Clean Smokestacks Act came in response to the historical choice made by North Carolina power plants to purchase emissions under EPA’s cap and trade program, established by Congress in 1990, rather than placing “sufficient controls on their emissions[.]”<sup>198</sup> TVA instead installs emissions control devices directly on its plants.<sup>199</sup>

This action began when North Carolina brought a public nuisance suit against TVA in the Western District of North Carolina.<sup>200</sup> North Carolina chose this particular venue because “weather systems in the states where TVA operates tend to cause emissions to move eastward into North Carolina[.]”<sup>201</sup> North Carolina sought an “injunction against all eleven of TVA’s coal-fired power plants.”<sup>202</sup> TVA appealed after the district court enjoined four of the eleven power plants, “requiring immediate installation of emissions controls at [these] four TVA electricity generating plants[, located] in Alabama and Tennessee” based on the court’s “determination that the TVA plants’ emissions constitute[d] a public nuisance in North Carolina.”<sup>203</sup> The Fourth Circuit, therefore, was asked to examine whether the district court ruling to enter the

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192. North Carolina *ex rel.* Cooper v. Tenn. Valley Auth., 615 F.3d 291, 296 (4th Cir. 2010) (quoting 16 U.S.C. §§831d(l), 831i, 831n-4(f)(2006)).

193. *Id.*

194. *Id.*

195. *Id.*

196. *Id.* at 297 (referencing N.C. Gen. Stat. § 143-215.107D (2010)).

197. *Id.*

198. *Id.*

199. *Id.*

200. *Id.*

201. *Id.*

202. *Id.*

203. *Id.* at 296.

injunction was proper.<sup>204</sup> The Fourth Circuit Stated that the district court's ruling was flawed for a number of reasons.<sup>205</sup>

First, if established as case law, the Fourth Circuit contends that the injunction could encourage courts "to use vague public nuisance standards to scuttle the nation's carefully created system for accommodating the need for energy production and the need for clean air."<sup>206</sup> According to the court, North Carolina, which is dissatisfied with air quality standards which were "authorized by Congress, established by the EPA, and implemented through Alabama and Tennessee permits," is asking the "federal courts to impose a different set of standards."<sup>207</sup> Yet, citing to the district court's opinion, the Fourth Circuit held that the common law of public nuisance was not the means to resolve modern conflicts between governmental entities.<sup>208</sup> Furthermore, the Fourth Circuit adhered to the Supreme Court holding that "nuisance standards often are vague and indeterminate."<sup>209</sup> The court found a stark contrast between the "defined standards of the Clean Air Act and an ill-defined omnibus tort of last resort"<sup>210</sup> which explains "why Congress preferred that emissions standards be set through agencies in the first instance rather than through courts."<sup>211</sup>

Second, the Fourth Circuit found that "the injunction improperly applied home state law extraterritorially, in direct contradiction to the Supreme Court's decision in *International Paper Co. v. Ouellette*."<sup>212</sup> Under the Supreme Court's decision in *Ouellette* "a 'court must apply the law of the State in which the point source is located.'"<sup>213</sup> While North Carolina attempted to argue that the district court did not "impose the Clean Smokestacks Act extraterritorially[,] "<sup>214</sup> the Fourth Circuit notes that "North Carolina repeatedly affirmed its desire to apply the standards found in the Clean Smokestacks Act to TVA."<sup>215</sup>

Lastly, the Fourth Circuit held that even if the district court applied Alabama and Tennessee law, "it is difficult to understand how an activity expressly permitted and extensively regulated by both federal and state government could somehow constitute a

204. *Id.*

205. *Id.*

206. *Id.*

207. *Id.* at 301.

208. *Id.* (citing North Carolina *ex rel.* Cooper v. Tenn. Valley Auth., 593 F. Supp. 2d 812, 815 (W.D.N.C. 2009)).

209. *Id.* (quoting *Int'l Paper Co. v. Ouellette*, 479 U.S. 481, 496 (1987)).

210. *Id.* at 302.

211. *Id.* at 306.

212. *Id.* at 296.

213. *Id.* at 306 (quoting *Ouellette*, 479 U.S. at 487).

214. *Id.* at 308.

215. *Id.* at 307.

public nuisance.”<sup>216</sup> The Fourth Circuit found that the Alabama Supreme Court recognized that “there can be no abatable nuisance for doing in a proper manner what is authorized by law.”<sup>217</sup> Furthermore, the Fourth Circuit noted that Tennessee recognized a similar principle: “[a]n activity that is explicitly licensed and allowed by Tennessee law cannot be public nuisance.”<sup>218</sup> Thus, the Fourth Circuit went on to reverse the judgment of the district court, and remanded the case back “with directions to dismiss the action.”<sup>219</sup>

## II. NOTABLE FLORIDA CASES

### A. *Kuvin v. City of Coral Gables*

A zoning ordinance in a residential area that prohibited trucks from parking on the street by requiring them to be parked in an enclosed space or garage between the hours of 7:00 p.m. and 7:00 a.m. did not violate the First Amendment right of association.

Lowell Joseph Kuvin, the owner and driver of a Ford F-150 (“Truck”) for personal use, rented a home without a garage in the City of Coral Gables.<sup>220</sup> Kuvin routinely parked the Truck on the street in front of his home.<sup>221</sup> “After several warnings, Kuvin was issued a citation alleging a violation” of sections 8-11 and 8-12 of the City zoning code (“Code”).<sup>222</sup> Section 8-11 of the Code “prohibits the parking of trucks in residential areas of the City unless parked in an enclosed garage.”<sup>223</sup> Furthermore, section 8-12 of the Code “prohibits the parking of trucks, trailers, and commercial and recreational vehicles upon the streets or other public places in the City between the hours of 7:00 p.m. and 7:00 a.m. the following morning.”<sup>224</sup> The City’s Building and Zoning Board (Board) held a hearing in which it found Kuvin “guilty of the violation and fined him \$50 plus costs.”<sup>225</sup>

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216. *Id.* at 296.

217. *Id.* at 309. (quoting *Fricke v. City of Guntersville*, 36 So. 2d 321, 322 (1948) (emphasis removed)).

218. *Id.* at 310 (citing *O’Neil v. State ex rel. Baker*, 206 S.W.2d 780, 781 (1947)).

219. *Id.* at 312.

220. *Lowell Joseph Kuvin v. City of Coral Gables*, 45 So. 3d 836, 838-39 (Fla. 3d DCA 2010).

221. *Id.* at 839.

222. *Id.*

223. *Id.* (citation omitted).

224. *Id.* (citation omitted).

225. *Id.*

Kuvin appealed to the circuit court, seeking a “declaration that sections 8-11 and 8-12 of the City’s Zoning Code were unconstitutional.”<sup>226</sup> Since the facts were not in dispute,<sup>227</sup> Kuvin moved for summary judgment.<sup>228</sup> In his motion for summary judgment, Kuvin “assert[ed] that: (1) sections 8-11 and 8-12 of the City’s Zoning Code violated his right of freedom of association; and (2) sections 8-11 and 8-12 of the City’s Zoning Code [were] unconstitutionally vague, arbitrary, capricious, and selectively enforced as applied to pickup trucks.”<sup>229</sup> The City filed its own cross-motion for summary judgment.<sup>230</sup> “The trial court granted the City’s [cross] motion [for summary judgment] and entered a final declaratory judgment in favor of the City.”<sup>231</sup> Kuvin appealed the trial court’s order denying his motion for summary judgment.<sup>232</sup> Kuvin also appealed the court’s decision to grant the City’s motion, and issued “a final declaratory judgment in favor of the City.”<sup>233</sup> On appeal, Kuvin asserts that since the Code Sections “infringe on his fundamental First Amendment right of freedom of association” the trial court erred in not applying strict scrutiny analysis to determine the constitutionality of the Code sections.<sup>234</sup> Furthermore, Kuvin argued that the Code sections were “unconstitutionally vague and unreasonable as applied to pickup trucks.”<sup>235</sup>

The Third District found Kuvin’s argument that the Code sections infringed upon his fundamental right of freedom of association to be without merit.<sup>236</sup> The court noted that the United States Supreme Court recognized “two types of freedom of association. . . as [being] protected by the Constitution[:.]”<sup>237</sup> First, “the right of association to enter into and to maintain certain intimate human relationships”<sup>238</sup> and second, “the right to associate for the purpose

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226. *Id.*

227. *Id.* at 838.

228. *Id.* at 839.

229. *Id.*

230. *Id.*

231. *Id.*

232. *Id.* at 838.

233. *Id.*

234. *Id.* at 839.

235. *Id.*

236. *Id.* at 840.

237. *Id.*

238. *Id.* (citing *City of Dallas v. Stanglin*, 490 U.S. 19, 24 (1989)). The Third District pointed out that while the U.S. Supreme Court did not set the “precise boundaries necessary to meet the ‘intimate relationship’ protection[.]” “[c]ourts. . . have accorded constitutional protection to marriage, the begetting and bearing of children, child rearing and education, and cohabitation with relatives.” *Id.* (citing *Bd. of Dirs. of Rotary Int’l v. Rotary Club of Duarte*, 481 U.S. 537, 546 (1987); *Wallace v. Texas Tech Univ.*, 80F.3d 1042, 1051 (5th Cir. 1996)).



of engaging in those expressive activities protected by the First Amendment.”<sup>239</sup>

As the court stated, “Kuvin was cited for parking his truck in front of the house he was renting during the prohibited time, not for visiting a close friend or relative in the City.”<sup>240</sup> The court noted that Kuvin does not claim that the Code sections prevented his family and friends from visiting him while he lived in the City.<sup>241</sup> Furthermore, the court noted that Kuvin “has never been ticketed for visiting a friend in the City[.]”<sup>242</sup> Accordingly, the Third District found there was no violation of Kuvin’s first protected right of association.<sup>243</sup>

Kuvin then asserted two rights of “expressive association.”<sup>244</sup> First, “his occasional visits to the homes of his friends who reside in the City between the hours of 7:00 p.m. and 7:00 a.m. or on the weekends in his” truck; and second, “the occasional visits by a friend who also drives a pickup truck.”<sup>245</sup> The court stated that Kuvin failed to allege that the Code sections “restrict the type of ‘expressive associations’ protected under the *First Amendment*[.]”<sup>246</sup> As to the assertion regarding friends with pickup trucks visiting him, the court held that Kuvin “lack[ed] standing to raise any concerns a friend may have had[.]”<sup>247</sup> In sum, the Code sections did not restrict Kuvin’s associations, nor did the Code section prohibit Kuvin’s ownership or operation of his truck.<sup>248</sup> Rather, the Code sections simply required Kuvin to “garage the vehicle at night.”<sup>249</sup> As the Court found that the Code sections did not infringe upon either aspect of the fundamental right of association and Kuvin did “not assert that he [was], nor is he, a member of a suspect class[.]” the court found that the trial court correctly examined the City Code sections under rational basis review standard.<sup>250</sup>

The court then reviewed the Code sections under rational basis, stating that “the City’s zoning ordinances must be upheld if it can be shown that they bear a rational relationship to a legitimate

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239. *Id.* at 840. (citing *City of Dallas v. Stanglin*, 490 U.S. 19, 24 (1989)). The Court terms this right as “the right of ‘expressive association.’” *Id.*

240. *Id.*

241. *Id.* at 840-41.

242. *Id.* at 841.

243. *Id.*

244. *Id.* at 841-42.

245. *Id.* at 842.

246. *Id.*

247. *Id.*

248. *Id.*

249. *Id.*

250. *Id.* at 840.

public purpose.”<sup>251</sup> The City argued that the Code sections “are a valid exercise of the City’s police powers” since they “seek to preserve the integrity of the residential areas and the unique aesthetic qualities of the City.”<sup>252</sup> The Court noted that “Florida has long recognized that local governments may legislate to protect the appearance of their communities as a legitimate exercise of their inherent police power.”<sup>253</sup> Furthermore, the court’s own precedent recognized the principle that “a Florida county may enforce zoning requirements which primarily regulate aesthetic appearances.”<sup>254</sup> Accordingly, the court held that there was “clear and binding precedent . . . [that actions] to preserve the residential character of a neighborhood and/or to enhance the aesthetic appeal of a community” are a valid exercise of the police power.<sup>255</sup>

In response to the City’s argument, Kuvin argued that the Code sections are “unconstitutional as applied to his” truck, since “it is not a recreational vehicle nor a vehicle used for commercial purposes.”<sup>256</sup> The court stated that basing the constitutionality of the Code sections “solely on whether a person uses his vehicle for personal or commercial purposes would create an irrational classification, lead to absurd results, and be impractical if not impossible, to enforce.”<sup>257</sup> To support its reasoning, the court looked to *Henley v. City of Cape Coral*.<sup>258</sup> In *Henley*, the Second District upheld the constitutionality of an ordinance which prohibited “trucks and house trailers of any kind from being parked in the subdivision for more than four hours, and trucks from being parked overnight in all areas zoned residential.”<sup>259</sup> The Second District reasoned that the ordinance “intended ‘to protect [the city’s] residential neighborhoods against the lingering presence of commercial vehicles’” and did not constitute a “total ban since it provide for a ‘garage exception.’”<sup>260</sup> Thus, the Second District found that the ordinance was not “unreasonable nor overbroad” and was “rationally related to a legitimate governmental interest[.]”<sup>261</sup>

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251. *Id.* at 842 (citing *City of Dallas v. Stanglin*, 490 U.S. 19, 23 (1989)).

252. *Id.* at 843.

253. *Id.* at 844 (emphasis omitted) (quoting *City of Sunrise v. D.C.A. Homes*, 421 So. 2d 1084, 1085 (Fla. 4th DCA 1982)).

254. *Id.* (emphasis omitted) (quoting *Campbell v. Monroe County*, 426 So. 2d 1158, 1160 (Fla. 3d DCA 1983)).

255. *Id.* at 845.

256. *Id.* (emphasis omitted).

257. *Id.*

258. *Id.* at 847. (citing *Henley v. City of Cape Coral*, 292 So. 2d 410 (Fla. 2d DCA 1974)).

259. *Id.* (emphasis omitted) (citing *Henley*, 292 So. 2d at 411).

260. *Id.* (citing *Henley*, 292 So. 2d at 411).

261. *Id.* (citing *Henley*, 292 So. 2d at 411).

Lastly, Kuvin asserted that the Code sections were “void for vagueness.”<sup>262</sup> Kuvin alleged that the Code sections were sufficiently vague so as to fail to meet the standard of “whether a statute or ordinance ‘gives a person of ordinary intelligence fair notice of what constitutes forbidden conduct.’”<sup>263</sup> The court noted that the Code prohibits “overnight parking of ‘trucks’ except in enclosed space or garage.”<sup>264</sup> The Code then defines truck to include: “any motor vehicle having space designed for and capable of carrying property, cargo, or bulk material and which space is not occupied by passenger seating.”<sup>265</sup> After examining the code itself, the court emphasized that Kuvin admitted his truck fell within the meaning of the Code’s definition of “truck.”<sup>266</sup> Also important to the court’s reasoning was the fact that Kuvin received several warnings regarding his conduct prior to being given a citation.<sup>267</sup> Taken together, the court held that the code itself and the citations Kuvin received provided him with adequate notice that his actions were in violation of the Code sections.<sup>268</sup> Finding that Kuvin had sufficient notice and that the Code language was not void for vagueness, the Third district affirmed the trial court order upholding the constitutionality of the Code.<sup>269</sup>

*B. Z.K. Mart, Inc. v. Department of Environmental Protection*

DEP does not need to consider financial status of party responsible for the cleanup activities.

This action commenced after petroleum contamination was discovered at Z.K. Mart, Inc., a gas station, and reported to the Department of Environmental Protection (DEP).<sup>270</sup> Z.K. Mart’s owners subsequently began the cleanup activities required by Florida Statutes section 376.305.<sup>271</sup> Florida Administrative Code (FAC) also required that Z.K. Mart submit a Site Assessment Report.<sup>272</sup> Although Z.K. Mart did submit the report, the report itself was incomplete and DEP requested that Z.K. Mart will file an adden-

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262. *Id.* at 850.

263. *Id.* (quoting *Jones v. Williams Pawn & Gun, Inc.*, 800 So. 2d 267, 270 (Fla. 4th DCA 2001)).

264. *Id.*

265. *Id.* (quoting CORAL GABLES, FLA., CODE § 2-128 (2010)).

266. *Id.*

267. *Id.*

268. *Id.*

269. *Id.*

270. *Z.K. Mart, Inc. v. Dep’t of Env’tl. Prot.*, 38 So. 3d 857, 858 (Fla. 1st DCA 2010).

271. *Id.*

272. *Id.*

dum.<sup>273</sup> When Z.K. Mart failed to continue cleanup activities and declined to file the addendum, DEP “issued a notice of violation, and the matter proceeded to a hearing before an administrative law judge.”<sup>274</sup> After the hearing, the judge entered an order finding Z.K. Mart in violation of the FAC Site Assessment Report provision<sup>275</sup> and ordered the following: that an administrative fine be imposed on Z.K. Mart to complete the site assessment report, and that it proceed with the cleanup of the contamination.<sup>276</sup>

Z.K. Mart appealed the order, alleging that it had limited financial means and that DEP should consider the responsible party’s financial situation along with the obligation imposed under the statutes and rules.<sup>277</sup> Essentially, Z.K. Mart asked the court to extend to its situation the provision contained in section 376.303(1)(i), which specifies that DEP will “pursue the recovery of such expenses and costs from the responsible party ‘unless it finds the amount involved too small or the likelihood of recovery is too uncertain’” when the agency itself arranges for the cleanup of the contamination.<sup>278</sup>

The court declined to extend section 376.303(1)(i) to the facts of *Z.K. Mart*. Rather, the court found that Z.K. Mart’s situation was “outside the ambit of that statute” and that the legislature had not contemplated such an exception to the statute.<sup>279</sup> The court explained that the statute provided DEP with a number of options it could pursue when pollutants are discharged or a party is in violation of its obligations connected with a certain contamination.<sup>280</sup> Under the Florida Statutes, DEP may choose an administrative remedy pursuant to section 403.121(2), may enforce compliance through a civil action pursuant to section 403.121(1)(b), or may “itself arrange for the removal of the pollutant” pursuant to section 376.305(2).<sup>281</sup> The court stated that DEP is only required to consider the financial situation of the responsible party<sup>282</sup> when DEP chooses to arrange for the removal of the pollutant itself.<sup>283</sup> Thus, the financial provision in 376.303(1)(i) is inapplicable when DEP seeks an administrative remedy under 403.121(2), as it did in this case.<sup>284</sup> The court, therefore, affirmed the decision of the ad-

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273. *Id.*

274. *Id.*

275. *Id.*

276. *Id.*

277. *Id.* at 858-59.

278. *Id.* at 859 (quoting FLA. STAT. § 376.303(1)(i) (2010)).

279. *Id.*

280. *Id.*

281. *Id.*

282. FLA. STAT. § 376.303(1)(i) (2010).

283. *Id.* § 376.305(2).

284. *Z.K. Mart, Inc.*, 38 So. 3d at 859.

ministrative law judge holding that the “proceeding in the present case was properly brought against appellant in accordance with section 403.121(2).”<sup>285</sup>

*C. Orange County v. Liggatt*

The structure at issue fell within the meaning of a “dock” under the Orange County Code, and even if the meaning is in dispute, deference should be given to the decision of the Special Magistrate.

This case arose after the Liggatts, owners of residential property in Orlando, Florida, were charged with a code enforcement violation for replacing “pilings below a landing area of their dock located along a canal adjacent to the main portion of their property.”<sup>286</sup> Along with the Notice of Violation, Orange County’s Environmental Protection Division (EPD) sent a Proposed Consent Agreement to the Liggatts, which informed them of the corrective action that must be taken and of the fact that they could appeal the decision to the Environmental Protection Commission (EPC).<sup>287</sup> The Liggatts appealed, and the EPC entered a recommendation against them.<sup>288</sup> As the matter remained unresolved, Orange County’s EPD proceeded to a hearing in front of a Special Magistrate, alleging that the Liggatts had violated Orange County code by completing an “unauthorized repair on a grandfathered dock structure.”<sup>289</sup> The Liggatts claimed that the structure was not a “dock”<sup>290</sup> and that they had not made repairs, but instead had only performed “maintenance.”<sup>291</sup> After the Special Magistrate found that the Liggatts had violated Section 15-346(c), the Liggatts once again appealed, this time to the circuit court.<sup>292</sup>

The circuit court accepted the Liggatts position and reversed the Special Magistrate’s decision, “concluding that there was no substantial competent evidence that the structure in question [was] a ‘dock’ within the purview of the Code.”<sup>293</sup> In its reasoning, the circuit court noted that “[t]he mere fact that a boat or other

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285. *Id.*

286. *Orange Cnty. v. Liggatt*, 46 So. 3d 130, 131 (Fla. 5th DCA 2010).

287. *Id.*

288. *Id.*

289. *Id.* (quoting ORANGE CNTY., FLA., CODE § 15-346(C) (2007)) (internal quotation marks omitted).

290. They argued that the structure was “a boardwalk to the water with a gazebo at the end and should [thus] be referred to as a ‘picnic deck.’” *Id.*

291. *Id.* at 132.

292. *Id.*

293. *Id.*

watercraft could pull alongside . . . , and remain there while tied to a railing was not enough to bring the structure within the definition of a dock[.]”<sup>294</sup> The circuit court read “capable of use for vessel mooring”<sup>295</sup> “to mean keeping a boat in a designated place more permanently than just tying it up to something briefly and occasionally[.]”<sup>296</sup>

Orange County sought certiorari review of the circuit court decision.<sup>297</sup> The Fifth District granted the writ,<sup>298</sup> and was asked to determine “whether the circuit court exceeded its review authority in rejecting the Special Magistrate’s decision that the structure at issue is a ‘dock,’ subject to the County’s regulation.”<sup>299</sup> Upon reading the language of the Code, the Fifth District determined that “Orange County’s definition of a ‘dock’ may be expansive, but it is not at all ambiguous.”<sup>300</sup> The Fifth District concluded that since “[t]he structure at issue has the capacity to moor a boat[, it] therefore, is covered by the ordinance.”<sup>301</sup> The Fifth District noted that “if . . . this point is disputed, the Magistrate’s finding on this issue is supported by record evidence and entitled to deference.”<sup>302</sup> The Fifth District accordingly quashed the decision of the circuit court.<sup>303</sup>

#### *D. Curd v. Mosaic Fertilizer, LLC*

Florida allows recovery by fishermen for economic losses caused by negligent release of pollutants despite lack of ownership of any real property damaged by the negligent release under both common law and statutory approached.

Howard Curd and other commercial fishermen (Fishermen) brought a suit against Mosaic Fertilizer, LLC (Mosaic) alleging that a phosphogypsum storage area owned or controlled by Mosaic leaked into Tampa Bay.<sup>304</sup> As a result of the spilled pollutants, the Fishermen claim that “underwater plant life, fish, bait fish, crabs, and other marine life” has been lost.<sup>305</sup> While the Fishermen did

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294. *Id.*

295. *Id.* at 133 (quoting ORANGE CNTY., FLA., CODE § 15-346(c) (2007)).

296. *Id.*

297. *Id.* at 131.

298. *Id.*

299. *Id.* at 133.

300. *Id.*

301. *Id.*

302. *Id.* at n.2.

303. *Id.* at 133.

304. *Curd v. Mosaic Fertilizer, LLC*, 39 So. 3d 1216, 1218 (Fla. 2010).

305. *Id.*

not claim that they had ownership over the damaged marine and plant life, they did claim “it resulted in damage to the reputation of the fishery products the Fishermen are able to catch and attempt to sell.”<sup>306</sup> Fishermen thus alleged “monetary damages in the nature of lost income or profits.”<sup>307</sup> The three counts of Fishermen’s complaint included: first, an allegation claiming “statutory liability under section 376.313(3), Florida Statutes[.]”<sup>308</sup> Second, the Fishermen alleged “common law strict liability based upon damages resulting from Mosaic’s use of its property for an ultrahazardous activity[.]”<sup>309</sup> and third, an “alleged claim of simple negligence.”<sup>310</sup> The trial court stated that “chapter 376 [of the Florida Statutes] did not permit a claim by these Fishermen for monetary losses when they did not own any real or personal property damaged by the pollution[.]” but initially allowed the Fishermen “to proceed on their claims of negligence and strict liability[.]”<sup>311</sup> However, the trial court ultimately decided that the economic loss rule barred those claims, and dismissed Fishermen’s complaint.<sup>312</sup> The Fishermen appealed to the Second District, which affirmed the order dismissing the class action.<sup>313</sup> Yet, the Second District did certify two questions for the Florida Supreme Court.<sup>314</sup>

First, the Florida Supreme Court was asked to address whether or not “Florida recognize[s] a common law theory under which commercial fishermen can recover for economic losses proximately caused by the negligent release of pollutants despite the fact that the fishermen do not own any property damaged by the pollution[.]”<sup>315</sup> The second certified question was whether “the private cause of action recognized in section 376.313, Florida Statutes (2004), permit[ed] commercial fishermen to recover damages for their loss of income despite the fact that the fishermen do not own any property damaged by the pollution[.]”<sup>316</sup>

The court first addressed whether Florida Statutes section 376.313(3) permitted the Fishermen’s cause of action.<sup>317</sup> As it strove to effectuate legislative intent when construing the statute, the court began by evaluating the plain language of the statute.<sup>318</sup>

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306. *Id.* at 1218-19.

307. *Id.* at 1219.

308. *Id.*

309. *Id.*

310. *Id.*

311. *Id.*

312. *Id.*

313. *Id.*

314. *Id.* at 1218.

315. *Id.*

316. *Id.*

317. *Id.* at 1219-20.

318. *Id.* at 1220.

Controlling precedent required that “when the statute is clear and unambiguous, courts will not look behind the statute’s plain language for legislative intent or resort to rules of statutory construction to ascertain intent.”<sup>319</sup>

Section 376.313(3) provides in pertinent part:

*nothing contained in ss. 376.30-376.319 prohibits any person from bringing a cause of action in a court of competent jurisdiction for all damages resulting from a discharge or other condition of pollution covered by ss. 376.30-376.319. . . . [I]n any such suit, it is not necessary for such person to plead or prove negligence in any form or manner. Such person need only plead and prove the fact of the prohibited discharge or other pollutive condition and that it has occurred.*<sup>320</sup>

As this section is found in chapter 376, the court read it in context with the other sections in that chapter.<sup>321</sup> Section 376.315 required that “[s]ections 376.30-376.319 . . . shall be liberally construed to effect the purposes set forth under ss. 376.30-376.319 and the Federal Water Pollution Control Act, as amended.”<sup>322</sup> Furthermore, section 376.30 provides “that the preservation of surface and ground waters ‘can only be served effectively by . . . taking into account multiple-use accommodations necessary to provide the broadest possible promotion of public and private interests.’”<sup>323</sup> This section further declared “escapes of pollutants ‘pose threats of great danger and damage . . . to citizens of the state, and to *other interests deriving livelihood from the state.*”<sup>324</sup> Thus, the court concluded that because the language used in sections 376.313(3) and 376.30 was clear and unambiguous, it would only consider the statutory language to determine the legislative intent.<sup>325</sup>

Under the court’s analysis, the statute created a strict liability cause of action,<sup>326</sup> which allowed “any person to recover for damages suffered as a result of pollution.”<sup>327</sup> The court concluded that the legislature created a “far-reaching statutory scheme” to prevent, remedy, and remove discharge of pollutants “from Florida’s

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319. *Id.* (quoting *Daniels v. Fla. Dep’t of Health*, 898 So. 2d 61, 64 (Fla. 2005)).

320. *Id.* (quoting FLA. STAT. § 373.313(3)).

321. *Id.* at 1221.

322. *Id.* (quoting FLA. STAT. § 376.315 (2004)).

323. *Id.* (quoting FLA. STAT. § 376.30 (2004) (emphasis omitted)).

324. *Id.* (quoting FLA. STAT. § 376.30(2)(b) (2004)).

325. *Id.*

326. *Id.* at 1222.

327. *Id.* at 1221 (emphasis omitted).



waters and lands.”<sup>328</sup> To effectuate these goals, the legislature established a “private cause[] of action to any person who can demonstrate damages as defined under the statute.”<sup>329</sup> The court, therefore, found “nothing in these statutory provisions that would prevent commercial fishermen from bringing an action pursuant to chapter 376.”<sup>330</sup>

The court then addressed whether Fishermen could recover for economic losses under a common law theory.<sup>331</sup> Under the holding of the Second District, the Fishermen’s common law negligence and strict liability claims “were barred by the economic loss rule and general tort law principles” because the Fishermen did not own the damaged property and as a result Mosaic “did not owe the fishermen an independent duty of care to protect their purely economic interests.”<sup>332</sup> The court cited *Indemnity Insurance Company v. American Aviation, Inc.*, which outlined the two situations where the economic loss rule is applicable in Florida.<sup>333</sup> First, the economic loss rule applies when “the parties are in contractual privity and one party seeks to recover damages in tort for matters arising out of the contract,” or second, when “the defendant is a manufacturer or distributor of a defective product which damages itself but does not cause personal injury or damage to any other property.”<sup>334</sup> Herein, since Fishermens’ situation did not involve a contractual privity between the parties nor did it involve a defendant who is a manufacturer or distributor of a defective product, the economic loss rule should not have served to preclude the fishermen from bringing this cause of action.<sup>335</sup>

Along with its finding that the economic loss rule did not apply to the Fishermens’ situation, the Florida Supreme Court found, once again contrary to the decision of the Second District, that Mosaic “did owe a duty of care to the fishermen, a duty that was not shared by the public as a whole.”<sup>336</sup> According to the court, Florida law links analysis of the duty question to foreseeability.<sup>337</sup> Thus, in Florida, “duties may arise from four general sources: (1) legislative enactments or administrative regulations; (2) judicial interpretations of such enactments or regulations; (3) other judicial prece-

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328. *Id.* at 1222.

329. *Id.*

330. *Id.*

331. *Id.*

332. *Id.* at 1223.

333. *Id.*

334. *Id.* (citing *Indem. Ins. Co. v. Am. Aviation, Inc.*, 891 So. 2d 532, 536 (Fla. 2004)).

335. *Id.*

336. *Id.*

337. *Id.* at 1227.

dent; and (4) a duty arising from the general facts of a case.”<sup>338</sup> It is under the fourth category that the “class of cases in which the duty arises because of a foreseeable zone of risk arising from the acts of the defendant.”<sup>339</sup>

Due to the nature of Mosaic’s business, it owed a duty to the fishermen because its activities created the zone of risk within which Mosaic “was obligated to protect those who were exposed to harm.”<sup>340</sup> The court noted that it was foreseeable that the storage of pollutants and hazardous materials, if released into public waters, “would cause damage to marine and plant life[.]”<sup>341</sup> Furthermore, since the Fishermen “were licensed to conduct commercial activities in the waters of Tampa Bay, and were dependent on those waters to earn their livelihood[.]” they had a special interest that was not shared by the general public, which was directly within the zone of risk which Mosaic had created by its activities.<sup>342</sup> Mosaic’s discharge of the pollutants into the bay constituted “a tortious invasion that interfered with the special interest of the commercial fisherman to use those public waters to earn their livelihood.”<sup>343</sup> According to the court, that constituted a breach of duty, which supported the Fishermens’ cause of action in negligence.<sup>344</sup> Yet, the court noted that in order for the fishermen to be entitled to compensation for lost profits, they “must prove all of the elements of their causes of action, including damages.”<sup>345</sup> In quashing the Second District’s decision, the Florida Supreme Court answered both of the lower court’s questions in the affirmative, holding that the Fishermen had both statutory and common law causes of action.<sup>346</sup>

### III. NOTABLE FLORIDA LEGISLATION

#### *A. Solid Waste Disposal* *Chapter 2010-276/House Bill No. 569*

This Act amended section 403.708(12)(c), Florida Statutes, to authorize disposal of yard trash at Class I landfills if the landfill

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338. *Id.* at 1227-28 (citing *Clay Elec. Coop., Inc. v. Johnson*, 873 So. 2d 1182, 1185 (Fla. 2003)).

339. *Id.* at 1228 (quoting *McCain v. Fla. Power Corp.*, 592 So. 2d 500, 503 n.2 (Fla. 1992)).

340. *Id.*

341. *Id.*

342. *Id.*

343. *Id.*

344. *Id.*

345. *Id.*

346. *Id.*

uses “an active gas-collection system” that collects the landfill gas generated at the disposal facility, and makes “beneficial use of the gas.”<sup>347</sup> The Class I landfill is allowed to “accept yard trash for the purpose of mulching and . . . to provide landfill cover for municipal solid waste disposed at the landfill.”<sup>348</sup> The amendment directs the Department of Environmental Protection (DEP) to promulgate a methodology that it will use to award recycling credits.<sup>349</sup> Qualifying Class I landfills “must obtain a minor permit modification to its operating permit . . . before receiving yard trash[.]”<sup>350</sup> The Class I landfill which has obtained a permit to accept yard trash must certify that the gas collection activities and beneficial use will continue even after the closure of the disposal facility.<sup>351</sup> DEP must give notice to the county and allow it to comment on the permit modification application if the location of the landfill is in a county which owns and operates “a compost facility, waste-to-energy facility, or biomass facility that sells renewable energy to a public utility and that is authorized to accept yard trash[.]”<sup>352</sup> Paragraph (c)(2) clarified to whom the limited exception applies.<sup>353</sup>

### *B. State Parks*

#### *Chapter 2010-178/House Bill No. 1145*

The legislature took two distinct actions have by this act. First, it created section 258.0145, Florida Statutes. Section 258.0145, entitled “Military state park fee discounts,” requires the Division of Recreation and Parks (DRP) to provide discounts on park fees or free entry to persons who provide DRP with written documentation of eligibility.<sup>354</sup> The discounts are available to those who have served in the United States Armed Forces, the National Guard, or the reserves.<sup>355</sup>

The second portion of the Act amended section 258.004, Florida Statutes, to expand the duties of the DRP.<sup>356</sup> Under the added provisions, DRP must study, appraise, and disseminate information regarding the recreation needs of the state.<sup>357</sup> DRP must assist the

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347. Act effective July 1, 2010, Ch. 2010-276 § 1, 2010 Fla. Laws (amending FLA. STAT § 403.708(12)(c) (2010)).

348. *Id.*

349. *Id.*

350. *Id.*

351. *Id.*

352. *Id.*

353. *Id.*

354. Act effective July 1, 2010, Ch. 2010-178, §1, 2010 Fla. Laws 2275 (amending FLA. STAT. §258.0145 (2010)).

355. *Id.*

356. *Id.* § 2, 2010 Fla. Laws at 2275 (amending FLA. STAT 258.004 (2010)).

357. FLA. STAT. § 258.004(3).

Department of Community Affairs (DCA) and local governing units by providing consultation on how to design, organize, administer, and protect local recreation areas and facilities.<sup>358</sup> DRP must assist in the recruiting, training, and placement of recreation personnel<sup>359</sup> as well as promote and sponsor workshops, seminars and conferences, and institutes throughout the state.<sup>360</sup> Last, DRP is now required to cooperate with other state and federal agencies, private organizations, and commercial interests in order to promote recreation programs in the state.<sup>361</sup>

*C. City of Clearwater, Pinellas County  
Chapter 2010-250/House Bill No. 1047*

The legislature passed this bill in recognition of the important interest the state has in maintaining both water-dependant support facilities and access to navigable water for the purposes of maintaining commerce and transportation.<sup>362</sup> The legislature supported the City of Clearwater's wish to address "physical and economic decline of its existing coastal and working waterfront areas by revitalizing" those areas.<sup>363</sup> This Act allows the City of Clearwater to authorize the use of filled upland for recreational and commercial working waterfronts.<sup>364</sup> It further requires the City of Clearwater to continue the use of submerged portions of the property in accordance with the 1925 legislative document granting those areas<sup>365</sup> requiring the use of any revenues from that ownership for the public's benefit.<sup>366</sup> The City of Clearwater must develop and use the waterfronts in accordance with the Florida Coastal Management Program, the Waterfronts Florida Program, the City of Clearwater Comprehensive Plan, the City of Clearwater Code of Ordinances, and other applicable law.<sup>367</sup> If the City of Clearwater has any provisions in its charter requiring referendum for the use of the waterfront property owned by the City, this bill does not suspend or modify that requirement.<sup>368</sup> Section five of the bill establishes that certain actions that change the ownership, establish a long term lease, or alter the public land use designation of the

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358. *Id.* § 258.004(4).

359. *Id.* § 258.004(5).

360. *Id.* § 258.004(6).

361. *Id.* § 258.004(7).

362. Act effective May 26, 2010, Ch. 2010-250, 2010 Laws of Fla. 127.

363. *Id.*

364. *Id.* § 1.

365. *Id.* § 2.

366. *Id.* § 2.

367. *Id.* § 3.

368. *Id.* § 4.

waterfront property of the City of Clearwater must be approved first through a referendum.<sup>369</sup>

*D. Biodiesel Fuel*  
*Ch 2010-195/Senate Bill No. 1730*

This act amends section 206.874, Florida Statutes, which discusses taxation exemptions on biodiesel fuels.<sup>370</sup> The act adds a tax exemption on “biodiesel fuel manufactured by a public or private secondary school” if the school manufactures the biodiesel fuel for its own use and the amount manufactured is less than 1,000 gallons per year.<sup>371</sup> The act exempts those schools that manufacture less than 1,000 gallons of biodiesel fuel annually from the registration requirement.<sup>372</sup>

*E. Florida Forever Program Trust Fund*  
*Ch. 2010-18/Senate Bill No. 1640*

With this bill, the Florida legislature reenacted and amended section 380.5115, Florida Statutes, relating to the Florida Forever Program Trust Fund (trust) within the Department of Community Affairs (DCA).<sup>373</sup> The trust “further[s] the purpose” specified in sections 259.105(3)(c) and (j), Florida Statutes.<sup>374</sup> Section 259.105(3)(c), Florida Statutes, designates 21% of the trust to “local governments or nonprofit environmental organizations that are tax-exempt . . . for the acquisition of community-based projects, urban open spaces, parks, and greenways to implement local government comprehensive plans.”<sup>375</sup> Section 259.105(3)(j), Florida Statutes, allocates 2.5% of the trust to “acquisition of land and capital project expenditures necessary to implement the Stan Mayfield Working Waterfronts Program within the Florida communities trust.”<sup>376</sup>

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369. *Id.* § 5.

370. Fla. Stat. § 206.874(1) (2010).

371. *Id.* § 206.874(1)(7).

372. *Id.*

373. Act effective July 1, 2010, Ch. 2010-195, 2010 Fla. Laws 2377 (reenacting FLA. STAT. § 206.874 (2010)).

374. FLA. STAT. § 380.5115(1).

375. *Id.* § 259/205(3)(c).

376. *Id.* § 259.105(3)(j).

*F. Petroleum Contamination Site Cleanup*  
*Ch. 2010-278/House Bill No. 1385*

This act amended section 376.3071, Florida Statutes, revising site selection and cleanup criteria of petroleum contamination sites.<sup>377</sup> The act removed provisions related to the funding of soil-source removals for obsolescence.<sup>378</sup> The amendment requires DEP to determine if a “site qualifies for natural attenuation monitoring, long term attenuation monitoring, or no further action.”<sup>379</sup> The bill requires DEP to evaluate which of the monitoring strategies better protect the environment and public health while maintaining cost effectiveness, as well as to evaluate “site-specific characteristics that would allow for higher natural attenuation or long-term natural attenuation concentration levels.”<sup>380</sup> The amendment restricts local governments from denying, based solely on the presence of petroleum contamination, a building permit for “any construction, repairs, or renovations performed in conjunction with tank upgrade activities to an existing retail fuel facility . . . if the construction, repair, or renovation is performed by a licensed contractor.”<sup>381</sup>

The act also amends the language of section 376.3071(11)(b), Florida Statutes.<sup>382</sup> This section has been amended to allow “any site with a priority ranking score of 10 points or less” to choose to “voluntarily participate in the low-scored site initiative, whether or not the site is eligible for state restoration funding.”<sup>383</sup> In order to participate in the low-scored site initiative, the property owner or responsible party must “affirmatively” demonstrate several conditions:<sup>384</sup> The site must retain “a priority ranking of 10 points or less” upon reassessment;<sup>385</sup> that there is no excessive contamination of the site’s soil from petroleum product release;<sup>386</sup> a groundwater monitoring period of at least six months proving that “the plume is shrinking or stable;”<sup>387</sup> the site’s petroleum products release does not adversely affect “adjacent surface waters, including their effects on human health and the environment;”<sup>388</sup> the area of groundwater with petroleum chemicals spans less than a quarter acre, and “is confined to the source property boundaries of the real

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377. Fla. HB 1385 (2010) (amending FLA. STAT. § 376.3071(5) (2010)).

378. FLA. STAT. § 376.3071(5)(c)(2).

379. *Id.*

380. *Id.* § 376.3071(5)(c)(3).

381. *Id.* § 376.3071(5)(c)(4).

382. *Id.* § 376.3071(11)(b).

383. *Id.*

384. *Id.* § 376.3071(11)(b)(1).

385. *Id.* § 376.3071(11)(b)(1)(a).

386. *Id.* § 376.3071(11)(b)(1)(b).

387. *Id.* § 376.3071(11)(b)(1)(c).

388. *Id.* § 376.3071(11)(b)(1)(d).

property;<sup>389</sup> onsite soils that “are subject to human exposure” and are found between “land surface and 2 feet below land surface” meet DEP’s “soil cleanup target levels” or “human exposure is limited by appropriate institutional or engineering controls.”<sup>390</sup> Upon making an affirmative showing that all the above conditions are met, DEP shall, either, “issue a determination of ‘No Further Action,’”<sup>391</sup> or “issue a site rehabilitation completion order” if contamination was not detected.<sup>392</sup> The amended statute also allows sites that are eligible to receive state restoration funding the ability to collect “payment of preapproved costs for the low-scored site initiative.”<sup>393</sup>

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389. *Id.* § 376.3071(11)(b)(1)(e).

390. *Id.* § 376.3071(11)(b)(1)(f).

391. A determination of “No Further Action” means that the contamination onsite is minimal and does not pose a threat to either “human health or the environment.” *Id.* § 376.3071(11)(b)(2).

392. *Id.*

393. *Id.* § 376.3071(11)(b)(3).

