

LSU Journal of Energy Law and Resources

Volume 6
Issue 1 *Fall 2017*

3-23-2018

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Repository Citation

Alexandra G. Morgan, *Fleur-De-LEED? The Status and Challenges of Green Building in Louisiana*, 6 LSU J. of Energy L. & Resources (2018)

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Fleur-De-LEED? The Status and Challenges of Green Building in Louisiana

INTRODUCTION

As 100-year floods are becoming 25-year floods, municipalities are ignoring the problem. One flood management official characterized the floods as coincidence, stating, “You can flip a coin and come up heads ten times in a row.”¹ In August 2016, the Baton Rouge area experienced over thirty inches of rain within a two-day period.² The historic flooding in the Baton Rouge area left many people without homes, and many more people with questions: what caused these unprecedented events, and how can we prevent them in the future? While these happenings could be isolated, natural phenomena, the more likely answer is that they were the combined result of climate change and urbanization.³ These unfortunate events beg the question—what advances can Louisiana lawmakers make to mitigate these ever-frequent catastrophes? The first step may be cutting emissions and stormwater runoff through green building codes.

Louisiana experiences the most frequent severe flooding events in the country.⁴ The damage is magnified due to development patterns and building practices that are not well adapted to the environment.⁵ Humans building in floodplains, not raising houses above historic flood levels, and urbanization have all contributed to this problem, but the cost of building

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1. A statement made by Mike Talbott, head of the Harris County Flood Control District, on the reason why Houston has experienced two 100-year floods within a two-week period. Neena Satija et al, *Boomtown, Flood Town*, PROPUBLICA (Dec. 7, 2016), <https://perma.cc/3W8N-JAQ4>.

2. Tom Di Liberto, *August 2016 Extreme Rain and Floods Along the Gulf Coast*, CLIMATE.GOV (Aug. 19, 2016), <https://perma.cc/Q3JD-ARHV>.

3. See *Climate Impacts in the Southeast*, U.S. ENVTL. PROT. AGENCY, <https://perma.cc/PY4L-J5GJ> (last visited Oct. 11, 2017) (Climate change is causing temperatures to rise in the Southeast, which also increases the frequency and intensity of rain events); see also C. P. Konrad, *Effects of Urban Development on Floods*, U.S. GEOLOGICAL SURV., <https://perma.cc/JMH2-APRT> (last visited Oct. 11, 2017) (Urbanization generally increases the size and frequency of floods).

4. Amy Wold, *Flood, Rebuild, Repeat: Louisiana Top State in Repetitive Flood Losses; Experts Cite 2 Key Reasons*, THE ADVOCATE, Oct. 8, 2016, http://www.theadvocate.com/baton_rouge/news/environment/article_8721adde-8742-11e6-aaa9-aba6cfaa21ba.html.

5. Edward Richards, *Why was the Louisiana Flood of August 2016 so Severe?* LSU L. CTR.: CLIMATE CHANGE L. AND POL’Y PROJECT (Aug. 24, 2016), <https://perma.cc/P4XT-YNZJ>.

smarter is high.⁶ Striking a balance between economic development and sustainability is difficult. To encourage the development that Louisiana needs, the Legislature will have to grow smarter by implementing green building principles into a mandatory green building code.

Green buildings are high-performance structures that use energy, water, and other materials to reduce the negative impact on the environment through efficient siting, design, construction, and maintenance.⁷ Buildings produce almost half of the United States' carbon dioxide emissions⁸ and also increase the volume of stormwater⁹ going into streams through the use of impervious surfaces, such as sidewalks, roofs, and streets. The purpose of green building is to leave as little of an environmental footprint as possible through the use of sustainable building practices.¹⁰ The United States Green Building Council's Leadership in Energy and Environmental Design (LEED) certification process has emerged as the most comprehensive and popular¹¹ green building code in the United States.¹²

6. *Id.*

7. Edna Sussman, *Reshaping Municipal and County Laws to Foster Green Building, Energy Efficiency, and Renewable Energy*, 16 N.Y.U. ENVTL. L. J. 1, 8 (2008).

8. *Id.*

9. Stormwater runoff is generated from rain that flows over impervious surfaces into drainage systems instead of percolating into the ground. *See NPDES Stormwater Program*, U.S. ENVTL. PROT. AGENCY, <https://perma.cc/CJ9U-XGBE> (last visited Oct. 11, 2017).

10. Green building has been used synonymously with sustainability. Sustainability is a more holistic approach, where the goals of improved environmental quality through land development account for the assimilation of human presence in an environment characterized by scarcity. Green building focuses more on reducing the impacts on the natural environment from the construction process itself, such as siting, the quantity and quality of materials used, waste generated from construction, and the long-term performance of buildings on both the natural and built environment. For an in-depth discussion on the subtleties of green building and sustainability, *see generally* Keith H. Hirokawa, *At Home with Nature: Early Reflections on Green Building Laws and the Transformation of the Built Environment*, 39 ENVTL. L. 507 (2009).

11. Nancy E. Shurtz, *Eco-Friendly Building from the Ground Up: Environmental Initiatives and the Case of Portland, Oregon*, 27 J. ENVTL. L. & LITIG. 237, 268 (2012).

12. Jamison E. Colburn, *Solidarity and Subsidiarity in a Changing Climate: Green Building as Legal and Moral Obligations*, 5 U. ST. THOMAS L.J. 232, 241 (2008).

While there are currently 106 LEED certified buildings in Louisiana,¹³ there is a lack of mandates and incentives to encourage homeowners and contractors to build green. Louisiana needs to be proactive in implementing green building practices. Statewide LEED green building codes will combat the negative externalities of local land use regulation in the state and in turn, reduce the damages from major flooding events.

Part I will provide an introduction to green building, the historical importance of local authority for building and zoning, and the status of land use regulation and building codes in Louisiana. Part II will analyze the problems associated with statewide adoptions of LEED certification, such as preemption, delegation, takings, and pragmatisms, that arise when the state takes back its land use power. Finally, Part III will rebut the criticisms of statewide LEED certification and offer financial and non-financial solutions.

I. BACKGROUND

A. *The Built Environment*

The average person rarely considers the impact that building has on the environment and its connection to climate change. Research suggests that human-related climate change will increase the likelihood of the storms experienced in Louisiana in coming years.¹⁴ While recent data shows that carbon dioxide levels have reached irreversible quantities,¹⁵ climate change mitigation is still an option.¹⁶ Constructing a new building consumes more energy than it will use in its entire lifetime and that amount of energy is by no means insignificant.¹⁷ In the United States, forty percent of greenhouse gas emissions come from energy used for commercial, residential, and industrial buildings.¹⁸ Louisiana is susceptible to sea level

13. *State Market Brief: Louisiana*, U.S. GREEN BLDG. COUNCIL, <https://perma.cc/97A6-2BCH> (last visited Oct. 11, 2017).

14. *Climate Change Increased Changes of Record Rains in Louisiana by at Least 40 Percent*, NATL. OCEANIC & ATMOSPHERIC ADMIN. (Sept. 7, 2016), <https://perma.cc/3RLF-B3P7> [hereinafter *Climate Change*].

15. Brian Kahn, *The World Passes 400 PPM Threshold. Permanently*, CLIMATE CENTRAL (Sept. 27, 2016), <https://perma.cc/Q6VA-P4DZ>.

16. Elizabeth C. Black, *Climate Change Adaptation: Local Solutions for a Global Problem*, 22 GEO. INT'L ENVTL. L. REV. 359 (2010).

17. See Sara C. Bronin, *Building-Related Renewable Energy and the Case of 360 State Street*, 65 VAND. L. REV. 1875, 1884 (2012).

18. *Id.*

rise and more intense and frequent hurricanes caused by climate change,¹⁹ yet attempts to curb emissions from building practices in the state are unhurried.

In addition to the emissions from buildings, human development also has an impact on the severity of storms' effects. Impervious surfaces are hard, nonporous surfaces (such as concrete, asphalt, and metal) that prevent water from seeping into the ground and instead divert the water into a stormwater drainage system.²⁰ Urbanization increases the amount of land covered by impervious surfaces, such as rooftops, driveways, and parking lots; increases the volume of runoff experienced during a rain event;²¹ and decreases forests and wetlands that filter water.²² A rainstorm that causes one inch of rain to fall in an urban area produces 25,000 gallons of stormwater runoff, whereas a forest environment would have created 2,000 gallons of runoff during the same event.²³ The result of rampant impervious surfaces is an increase in the peak discharge, volume, and frequency of floods in nearby streams.²⁴ For example, the developed areas around the Amite River caused the stormwater to surge into the river and increased the intensity of the flooding.²⁵

It is not a coincidence that the areas that experienced the worst flooding in 2016 also had tremendous growth. Between 2000 and 2010, Livingston and Ascension Parishes experienced over twenty-five percent growth in population.²⁶ Municipalities are slowly realizing the connection between flooding and development—even the town of Walker filed a lawsuit against the State of Louisiana and all contractors involved in the widening of Interstate 12.²⁷

19. *Climate Impacts in the Southeast*, *supra* note 3.

20. Julie Moore, *Lake Champlain TMDL: Stormwater Runoff from Developed Lands*, 17 VT. J. ENVTL. L. 766, 767 (2016).

21. Trip Pollard, *Building Greener Communities: Smarter Growth and Green Building*, 27. VA. ENVTL. L.J. 125, 128 (2009).

22. *Id.*

23. Moore, *supra* note 20.

24. Konrad, *supra* note 3.

25. Bob Anderson & Bret McCormick, *Hell and High Water: The Devastating Flood of Livingston and East Baton Rouge Parishes in 1983*, THE ADVOCATE, Apr. 8, 2013, http://www.theadvocate.com/baton_rouge/news/communities/article_741f00d7-c2d2-5fe1-a268-4d9889b48378.html.

26. U.S. CENSUS BUREAU, LOUISIANA – 2010 CENSUS RESULTS (Feb. 4, 2011), <https://perma.cc/N64S-WXQQ>.

27. Scottie Hunter, *Walker, Denham Springs File Lawsuit Blaming DOTD Project for Flooding Area Communities*, WAFB (Jan. 6, 2017), <http://www.wafb.com/story/34191635/walker-denham-springs-file-lawsuit-blaming-dotd-project-for-flooding-area-communities>. See also Terry L. Jones, *Walker Mayor Says*

Not only does urbanization increase runoff, but this type of development also contributes to flooding and emissions. Historically, low-density development²⁸ (such as single-family housing with large, green yards, wide boulevards, and parking spots for all shoppers during the holiday season in front of their favorite department stores²⁹) has been the favored result of city planning. Contrast this with smart, growth-oriented,³⁰ compact developments, which include a mixture of uses—such as residential and commercial—that create pedestrian-friendly neighborhoods where people can work, live, and shop.³¹ While one would think low-density cities and sprawling landscapes would decrease stormwater runoff, imperviousness and density are not equivalent.³² For example, thirty single-family homes require much more impervious surfaces than an apartment building with thirty units.³³ Studies have shown that sprawling development results in more energy consumption due to the amount of fossil fuels required for transportation to any building, which can even surpass energy consumption for the building itself.³⁴ However, it is not necessary to stop development to decrease the environmental impacts of the built environment. Instead, green building practices facilitate a balance between growth and environmental stewardship.

DOTD, Barrier Wall Responsible for Town's Flooding, Threatens Lawsuit, THE ADVOCATE, Aug. 25, 2016, http://www.theadvocate.com/Louisiana_flood_2016/article_59c52500-6a28-11e6-af6e-877659a40ce5.html.

28. Low density development most frequently means building structures with low amounts of occupants. Its goal is to dilute the concentration of people in a given area, which in turn creates sprawl. To read a more comprehensive explanation of density, see generally Michael Lewyn, *New Urbanist Zoning for Dummies*, 58 ALA. L. REV. 257 (2006).

29. See generally Wayne Batchis, *Enabling Urban Sprawl: Revisiting the Supreme Court's Seminal Zoning Decision Euclid v. Ambler in the 21st Century*, 17 VA. J. SOC. POL'Y & L. 373 (2010).

30. "Smart growth encourages preservation, rehabilitation, and retrofitting of existing and historic buildings and the reuse of already developed land, including the redevelopment of blighted areas and brownfields. Increasing urban density by limiting lot sizes, encouraging vertical development and mixed-use buildings, and discouraging dedication of land to parking areas further curbs urban sprawl." Shurtz, *supra* note 11, at 247-48.

31. Pollard, *supra* note 21, at 136.

32. Michael Byrne, *The Unsolved Nonpoint Source Pollution Problem, and Green Buildings as a Solution*, 11 N.Y.U. J. LEGIS. & PUB. POL'Y 145, 168 (2008).

33. *Id.*

34. Pollard, *supra* note 21, at 136.

B. A Brief History of Green Building and LEED Certification

The Environmental Protection Agency (EPA) defines green building as the practice of creating structures and using processes that are “resource-efficient throughout a building’s life cycle from siting to design, construction, operation, maintenance, renovation, and deconstruction.”³⁵ The green building movement is a product of the 1970s, when the oil crisis, as well as several environmental catastrophes, launched legislation to address energy usage and environmental harm.³⁶ The passage of time and a growing understanding of climate change have affirmed society’s interest in green building.³⁷

While several green building certifications resulted from the environmental movement, the United States Green Building Council’s (USGBC) LEED certification has emerged as the most influential³⁸ and comprehensive approach to sustainable building.³⁹ The USGBC is a non-profit organization that represents over 12,000 construction-related organizations whose main mission is to curb energy consumption in the construction and lifespan of buildings.⁴⁰ Since its creation, the USGBC has certified more than 47,000 buildings covering nine billion square feet.⁴¹ The organization evaluates projects based on several categories, such as: sustainability, water efficiency, energy performance, materials, indoor environmental quality, and design, and assigns a point value for each benchmark achieved.⁴² Professionals evaluate projects on a 100-point scale, and the final score determines the level of LEED certification: a project needs forty to forty-nine points for certification, fifty to fifty-nine points for Silver, sixty to seventy-nine points for Gold, and a score above eighty achieves Platinum certification.⁴³

35. *Green Building: Basic Information*, U.S. ENVTL. PROT. AGENCY, <https://perma.cc/GCF5-GUFY> (last updated Feb. 20, 2016).

36. Pollard, *supra* note 21, at 130.

37. *Id.*

38. Patricia E. Salkin, *Sustainability and Land Use Planning: Greening State and Local Land Use Plans and Regulations*, 34 WM. & MARY ENVTL. L. & POL’Y REV. 121, 155 (2009).

39. Colburn, *supra* note 12.

40. *See* Bronin, *supra* note 17, at 1886.

41. *Id.* at 1887.

42. Higher grades of certification can also make a builder eligible for more incentives. *Credits*, U.S. GREEN BLDG. COUNCIL, <https://perma.cc/BM2B-3MB8> (last visited Oct. 12, 2017).

43. The level of certification achieved demonstrates a greater commitment to green building practices and also makes a builder more eligible for green building incentives and tax credits. Shurtz, *supra* note 11, at 270.

In order for Louisiana to address greenhouse gas emissions within the state, it must make buildings more energy efficient. A critical element of LEED buildings is reducing energy consumption, which in turn reduces emissions by using less fossil fuel for power. The Energy and Atmosphere category of LEED certification requires builders to meet energy efficiency standards through the use of natural lighting, insulation, and energy efficient appliances.⁴⁴ This category is the largest source of credits in the LEED certification system.⁴⁵

The two categories of LEED certification that would help mitigate Louisiana's urbanization-related flood problem are the Sustainable Sites and Neighborhood Development credits. The Sustainable Sites category focuses on reducing the environmental impacts based on site selection, and it restricts building on land that provides a high-functioning ecosystem service, such as wetlands.⁴⁶ This restriction would cover a large amount of building in Louisiana, which hosts forty percent of wetlands in the U.S., and also eighty percent of wetland losses.⁴⁷ Yet, building in floodplains has very real consequences. Seventy-five percent of the town of Central, Louisiana, a suburb of Baton Rouge, is in a 100-year floodplain,⁴⁸ and ninety-percent of the town flooded in the August 2016 flooding.⁴⁹

The most significant LEED points within the Sustainable Sites category would come from the adoption of credits 6.1 and 6.2, which address stormwater drainage.⁵⁰ Credit 6.1 reduces pollution from stormwater runoff and reduces impervious cover, which allows rainwater to filter into the ground. To receive this point, a project must install a stormwater management plan that controls the quantity of stormwater runoff.⁵¹ Credit 6.2 requires a stormwater management plan that reduces impervious

44. FRANK P. GRAD, TREATISE ON ENVIRONMENTAL LAW § 1A.15 (2015).

45. Hirokawa, *supra* note 10, at 516.

46. *Id.*

47. *Louisiana Coastal Wetlands: A Resource at Risk*, U.S. GEOLOGICAL SURV., <https://perma.cc/8ZLC-UEDW> (last visited Oct. 12, 2017).

48. There are several ways to categorize an area based on its chance of flooding. The Federal Emergency Management Agency (FEMA) defines a floodplain as "an area that will be inundated by the flood event having a one percent change of being equaled or exceeded in any given year." This means that the property will probably flood once every one hundred years. *Flood Zones*, FED. EMERGENCY MGMT. AGENCY, <https://perma.cc/DQW2-5M5D> (last updated Mar. 7, 2017).

49. Andrew C. Revkin, *How Growth-Focused Politics Helped Build Vulnerability in Louisiana's Flood Zones*, N.Y. TIMES, Sept. 2, 2016, <https://perma.cc/M6EL-SLAB>

50. Byrne, *supra* note 32, at 158-59.

51. *Id.*

cover, promotes infiltration, and captures and treats the stormwater runoff from ninety percent of the average rainfall using acceptable best management practices.⁵² Examples of management plans that would make a building eligible for this credit include installing green rooftops, capturing rainwater for plumbing, or creating retention ponds for rain to return to groundwater instead of adding to an over-burdened sewer system.⁵³

The second LEED category that would reduce stormwater runoff is the Neighborhood Development credit. This credit combines multiple green building principles to revitalize existing urban areas by reducing land consumption, increasing walkability, and decreasing urbanization-related pollution.⁵⁴ Growth-focused, sprawling development into suburbs, instead of increasing the density of existing infrastructure, has exacerbated the flooding problem by creating more impervious surfaces.⁵⁵ For example, Baton Rouge is the sixth most sprawling city in the United States and also has experienced some of the worst flooding.⁵⁶

Lastly, credits designed to keep runoff to pre-construction levels ensure that development does not add to the flooding problem. To earn the Maintain Stormwater Runoff Rates credit, the amount of runoff produced during the wettest twenty-four hours of a two-year period must not exceed the pre-project volume.⁵⁷ Second, the Reduce Stormwater Runoff Rates credit requires that the developer devise a stormwater management plan that results in a twenty-five percent decrease in the rate and quantity of post-project stormwater runoff.⁵⁸ Incorporating these two credits into standard building practices would offer significant reductions to the volume of water received in streams throughout Louisiana.

C. The Police Power and Land Use

Building codes and land use decisions are an extension of the state's police power, which allows the government to protect the health, safety, and welfare of its residents in exchange for a concession of private

52. *Id.*

53. Patrick E. Tolan Jr., *Going-Going-Green: Strategies for Fostering Sustainable New Federal Buildings*, 41 PUB. CONT. L.J. 233, 243 (2012).

54. Byrne, *supra* note 32, at 172.

55. Richards, *supra* note 5.

56. Urban sprawl is the lateral expansion of central cities into suburbs. Characteristics of a sprawling city include low walkability, car dependency, and excessive land use. Rory Scott, *Urban Sprawl in the US: The 10 Worst Offenders*, ARCH DAILY (Apr. 25, 2014), <https://perma.cc/QV9A-GSQD>.

57. Byrne, *supra* note 32, at 173.

58. *Id.*

property rights.⁵⁹ While land use policies were traditionally handled under nuisance laws, the growing size of cities and inconsistencies of nuisance litigation led localities to create a uniform system of land use regulation.⁶⁰ The threat of fires in New York City was one of the first impetuses for uniform building codes because insurers were having difficulty offering fire insurance on a home that met fire safety regulations when its neighbor did not.⁶¹ There are similarities to the threat of flooding in Louisiana. In 1926, the Supreme Court ruled in *Village of Euclid v. Ambler Realty* that local ordinances were an acceptable use of the states' police power.⁶² The same year, the federal government published the Standard State Zoning Enabling Act (SZEa) for states to adopt, which allowed localities the exclusive power to zone.⁶³ Now, all fifty states have adopted some form of the SZEa and have delegated most land use and zoning authority to localities.⁶⁴ Localities are also responsible for issuing discretionary permits for the construction of new buildings.⁶⁵

Local control of land use relies on two primary concerns: history and local autonomy. Localities have exercised the power to zone for over a century and have considerable experience in city planning, infrastructure, and the needs of their local communities.⁶⁶ Some scholars argue that municipal land use decisions are actually the result of federal subsidies for roads and infrastructure rather than the organic result of local planning.⁶⁷ Regardless, there is a strong interest in keeping power at a local level due to the importance of holding local leaders accountable for infringing on private property rights.⁶⁸ Keeping land use at a local level allows citizens easy access to hearings. Individual voices are not lost within a larger jurisdiction, and citizens can "vote with their feet" if land use decisions are not furthered in their favor.⁶⁹

59. Hirokawa, *supra* note 10, at 519.

60. Bronin, *supra* note 17, at 1894.

61. Colburn, *supra* note 12, at 247-48.

62. 272 U.S. 365 (1926).

63. DEP'T OF COM., A STANDARD STATE ZONING ENABLING ACT (1926).

64. *See* Bronin, *supra* note 17, at 1897-98.

65. Sarah B. Schindler, *Following Industry's LEED: Municipal Adoption of Private Green Building Standards*, 62 FLA. L. REV. 285, 289 (2010).

66. Alice Kaswan, *Climate Change Adaptation and Land Use: Exploring the Federal Role*, 47 J. MARSHALL L. REV. 509, 527-28 (2013).

67. Colburn, *supra* note 12, at 245.

68. Kaswan, *supra* note 66, at 532.

69. Voters can move to a different municipality if land use regulation becomes too onerous. *See id.* at 527-28.

D. Types of Government Regulation of Green Building

Governments may exercise their police power to promote green building in varying intensities. The softest approach is through non-financial incentives, where a municipality might offer expedited permit processes, relaxed zoning regulations, or a public “pat on the back” for developers that build green.⁷⁰ Second, municipalities could use financial incentives, such as tax breaks, grants, or rebates, to drive green development.⁷¹ This strategy may be unpopular because it depletes public resources and does not set any mandatory building requirements. The third option is for a government to mandate all state buildings using public funds to meet green standards.⁷² The fourth and most stringent option is to mandate green building requirements on all construction, regardless if it is public or private.⁷³ The final option involves no government regulation at all and promotes green building through operation of the free market.⁷⁴

E. The Status of Land Use Regulation in Louisiana

Despite several floods and hurricanes, land use regulation in Louisiana has been slow to change in the last seventy years.⁷⁵ The 1921 Louisiana Constitution delegated authority to municipalities for zoning purposes, such as segregating areas based on residential or industrial use, but still allowed the State to reserve the right to zone other political subdivisions, such as parishes.⁷⁶ The 1974 revision expanded a locality’s power to zone and only restricts this power if zoning undermines a vital state interest.⁷⁷ The state legislature has enacted zoning enabling acts, which allow municipalities and parishes to zone when appropriate.⁷⁸

70. Shari Shapiro, *Who Should Regulate? Federalism and Conflict Regulation of Green Buildings*, 34 WM. & MARY ENVTL. L. & POL’Y REV. 257, 263-64 (2009).

71. *Id.* at 261-62.

72. *Id.* at 260.

73. *Id.* at 261.

74. Lauren E. Glesby, *Fitting the Bill: Proposed Regulatory and Non-Regulatory Approaches to Advancing Green Building Technologies*, 21 FORDHAM ENVTL. L. REV. 637, 640 (2010).

75. John J. Costonis, *Two Years and Counting: Land Use and Louisiana’s Post-Katrina Recovery*, 68 LA. L. REV. 349, 349-50 (2008).

76. Alex Ritchie, *Fracking in Louisiana: The Missing Process/Land Use Distinction in State Preemption and Opportunities for Local Participation*, 76 LA. L. REV. 809, 830 (2016).

77. *Id.*

78. *Id.*

Judicial review of zoning regulations is available if the municipality abused its discretion, unreasonably exercised its police powers, excessively used its zoning power, or denied due process.⁷⁹ While judicial review of zoning is available, it is hardly exercised contrary to local goals. The power of localities to regulate land use is an engrained idea that is rarely challenged by courts.⁸⁰ While the 1974 Constitution reserves the right of the state to deny zoning power to local governments, this power has never been exercised when the zoning opposes a vital state interest.⁸¹ Despite the existence of a mechanism for state intervention in local land use decisions, no decisions have risen to the level of implicating a vital state interest.

The Louisiana State Uniform Construction Code Council (The Council) prescribes statewide building codes.⁸² The Council consists of nineteen members appointed by the governor and confirmed by the senate, and the members serve a four-year term.⁸³ The members have professional backgrounds in construction-related industries, and their main responsibility is to amend the Uniform Construction Code to follow changing standards of safety, health, and habitability.⁸⁴ Louisiana has adopted the International Building Code for the majority of its construction, while reserving plumbing and electrical standards to other uniform construction codes.⁸⁵

II. IS GREEN BUILDING THE PATH OF LEAST RESISTANCE? LEGAL AND PRAGMATIC CHALLENGES

The geography around the Amite River is flat and surrounded by residential and commercial areas. The water from the river moves through an intricate network of streams and tributaries and crosses several city and parish lines.⁸⁶ The river crested during the 2016 flooding at an all-time high of 46.2 feet, surpassing the 1983 flood stage by almost five feet.⁸⁷ As

79. *Id.* at 831-32.

80. Costonis, *supra* note 75, at 354.

81. Ritchie, *supra* note 76, at 830-31.

82. For an in-depth view of what establishes the Louisiana State Uniform Construction Code Council, *see* LA. REV. STAT. § 40:1730.21 (2005).

83. *About the Council*, LOUISIANA STATE UNIFORM CONSTRUCTION CODE COUNCIL, <https://perma.cc/45FR-7LCQ> (last visited Oct. 16, 2017).

84. *Id.*

85. LA. REV. STAT. § 40:1730.28 (2016).

86. Gayathri Vaidyanathan, *Why the Deadly Louisiana Flood Occurred*, SCIENTIFIC AMERICAN (Aug. 16, 2016), <https://perma.cc/JU4N-LNYG>.

87. *Id.*

the river crested in Denham Springs before the great flood of 2016, those downstream on the Amite River waited for their homes to soon flood.⁸⁸

Local decisions reach far beyond their respective jurisdictions. Decisions about development in floodplains, building codes, and drainage systems all have significant downstream externalities,⁸⁹ which are the unaccounted costs and benefits of development that pass to the public.⁹⁰ To illustrate externalities, imagine an expensive retail store built in the middle of town and a low-cost warehouse in a rural area.⁹¹ While municipalities equate these two buildings in zoning codes, the negative externalities associated with building the rural warehouse are actually higher due to the increase of emissions produced and infrastructure required to travel to the rural warehouse.⁹² Externalities can also include the unaccounted for flooding and emissions that result from development.

The logical solution would be to handle land use decisions on a larger scale, such as regional or state levels. But, state lawmakers have been hesitant to venture into land use regulation, particularly because of the fear that courts will strike down such actions on constitutional⁹³ or pragmatic grounds.⁹⁴ Some primary areas of concern with adopting statewide LEED certified building standards are the issues of delegation, preemption, and takings.

A. Delegation Issues

Delegation is the practice of lawmakers assigning their legislative power to other branches of government.⁹⁵ A primary criticism of government adoption of LEED standards is that it is an unconstitutional delegation of legislative power to a third party rating system.⁹⁶ The USGBC is not a

88. *Id.*

89. Kaswan, *supra* note 66, at 529-30.

90. Julie A. Tappendorf & Brent O. Denzin, Address at the Land Use Institute: Planning, Regulation, Litigation, Eminent Domain, and Compensation: Municipal Responses to a Global Crisis (Aug. 13-16, 2008) in ALI-ABA COURSE OF STUDY 781, 785 (2008).

91. *Id.*

92. *Id.*

93. Bronin, *supra* note 17, at 1908.

94. Schindler, *supra* note 65, at 296-97.

95. Frank David Ditta, *Leading the Way in Unconstitutional Delegations of Legislative Power: Statutory Incorporation of the LEED Rating System*, 39 HOFSTRA L. REV. 369, 384 (2010).

96. *Id.* at 370.

government entity so it lacks the safeguards and accountability of a government body.⁹⁷

However, these delegation criticisms of LEED do not have merit. Thousands of municipalities throughout the U.S. have adopted the International Code Council's (ICC) building codes, which are similar to LEED. A consensus of building organizations created a uniform system of building standards, known as the ICC, to ease the process of complying with hundreds of different local or regional codes.⁹⁸ The only fundamental difference between LEED and ICC is that the USGBC's model focuses on sustainable design.⁹⁹

While some people fear policy-making by non-state actors, private organizations such as USGBC offer an efficient market-driven guideline that can overcome judicial scrutiny by maintaining appropriate agency oversight.¹⁰⁰ Outsourcing the technical code-making to an established green building rating system is easier than requiring each municipality or state to define its own codes and standards.¹⁰¹ This practice guarantees that green building codes are sustainable and not "just the product of a 'greenwashed' exercise."¹⁰²

B. Preemption Issues

Preemption problems can arise when the regulatory authority of local governments constrain regulation taken at the state level.¹⁰³ On a federal level, there is express preemption when Congress explicitly prevents states from regulating in a particular area, and implied preemption when Congress dominates the field to the extent that the states have no room for regulation.¹⁰⁴ Preemption also occurs when state laws conflict with local laws, in which case, the state laws will prevail¹⁰⁵

The issue of preemption arose in *Air Conditioning, Heating & Refrigeration Institute v. City of Albuquerque*, in which the city met opposition

97. *Id.* at 392.

98. Stuart Kaplow, *Can Green Building Save the Planet?*, 3 U. BALT. J. LAND & DEV. 131, 141 (2014).

99. *Id.*

100. Sarah Fox, *A Climate of Change: Shifting Environmental Concerns and Property Law Norms Through the Lens of LEED Building Standards*, 28 VA. ENVTL. L.J. 299, 320 (2010).

101. Sussman, *supra* note 7, at 10.

102. *Id.*

103. Shapiro, *supra* note 70, at 269.

104. *Id.* at 266.

105. *Id.* at 269.

to enacting its high performance building code.¹⁰⁶ The Institute argued that the National Appliance Energy Conservation Act of 1987 (NAECA) and the Energy Policy Act of 1992 (EPCA) preempted the building code's provisions related to energy efficiency of HVAC products.¹⁰⁷ The court ruled that an express preemption provision in the NAECA denied states the ability to regulate HVAC systems and preempted the city's high performance building code.¹⁰⁸

Since the federal government has not expressly nor impliedly preempted states from creating high performance building codes, but rather only regulated the efficiency of certain appliances, there would be no preemption of state law. However, state laws would preempt local laws if statewide green building codes were to take effect. Louisiana, as well as most other states, have adopted the same ICC building codes that municipalities have adopted.¹⁰⁹

One challenge is whether statewide ICC and LEED codes conflict with each other and how to resolve the issue.¹¹⁰ The conflict resides in the difference between performance or prescriptive building codes. LEED is a performance-based building code and is evaluated based on accomplishing the desired result, such as reducing energy by a certain percentage to obtain a credit under the Energy and Atmosphere category.¹¹¹ Contrast LEED with prescriptive codes, such as the ICC, which dictate certain methods, designs, and materials for building.¹¹² Unfortunately, whether it is prescriptive or performance is a difficult question of fact, although USGBC claims that none of its standards compromise the safety or integrity of buildings.¹¹³

The issue of whether a state building code preempts a municipality's code is addressed in *Schuylkill Township v. Pennsylvania Builders Association*.¹¹⁴ Pennsylvania adopted the Uniform Construction Code (UCC) as the common building code for all municipalities in the state.¹¹⁵ The locality created an ordinance that required all new construction to

106. *Air Conditioning, Heating & Refrigeration Institute v. City of Albuquerque*, 835 F. Supp. 2d 1133 (D. N.M. 2010).

107. Shapiro, *supra* note 70, at 267.

108. *Id.* at 268-69.

109. *The International Building Codes in Louisiana*, LOUISIANA SEA GRANT, <https://perma.cc/6G2R-B684> (last visited Oct. 16, 2017).

110. Colburn, *supra* note 12, at 250.

111. Hirokawa, *supra* note 10, at 520.

112. *Id.*

113. Colburn, *supra* note 12, at 251.

114. 7 A.3d 249 (Pa. 2010).

115. *Id.* at 250.

install fire sprinklers.¹¹⁶ The general rule is that a locality may pass its own regulations if: (1) the requirements are equal or more stringent than the UCC, (2) the locality gets approval from the Pennsylvania Department of Labor and Industry, and (3) the locality provides sufficient public notice.¹¹⁷ In this case, the Court ruled that the local regulations exceeded the state UCC because the locality did not provide a sufficient local condition that would justify an exception to the UCC.¹¹⁸

According to the Louisiana Constitution, municipalities can regulate land use within their jurisdiction if it is consistent with the health, safety, and welfare goals of the community.¹¹⁹ The State cannot interfere with this grant of local authority unless the exercise of this power conflicts with a vital state interest.¹²⁰ The issue of conflict of laws revolves around whether the state's interest in energy efficiency and stormwater management is a "vital state interest" that can preempt local laws to the contrary. The repetitive nature of the flooding and the associated extensive damages and costs suggest that it might be one of the most vital state interests.

C. Takings Issues

As conceptions of private property rights change to include environmentally responsible behavior, reasonable expectations of the way property is used change as well. These changes can involve challenges under the Takings Clause in the Fifth Amendment of the Constitution, which prohibits the government from taking private property for public use without just compensation.¹²¹ The scope of the definition "public use" broadened overtime to include takings that benefit the public in a general way.¹²² If states promulgate mandatory green building codes, there is a possibility of takings challenges in courts if landowners were planning a non-green use for the land.

116. *Id.*

117. Shapiro, *supra* note 70, at 269-70.

118. 7 A.3d at 250.

119. LA. CONST. art. VI, § 7.

120. LA. CONST. art. VI, § 9.

121. Ann K. Wooster, *What Constitutes Taking of Property Requiring Compensation Under Takings Clause of Fifth Amendment to United States Constitution: Supreme Court Cases*, 10 A.L.R. FED. 2D 231 (2006).

122. The definition of "public use" in the 5th Amendment of the U.S. Constitution can be read to include private economic development in a municipality. See generally *Kelo v. City of New London*, 545 U.S. 469 (2005).

In *Lucas v. South Carolina Coastal Council*, a developer purchased two beachfront lots intended for homes.¹²³ South Carolina's Beachfront Management Act prevented landowners from building habitable structures in critical coastal protection areas.¹²⁴ The developer filed a lawsuit alleging that the Act constituted a taking because it deprived economic use of the land.¹²⁵ Land-use regulation violates the Fifth Amendment when it "does not substantially advance legitimate state interests or denies an owner economically viable use of his lands."¹²⁶ The Supreme Court ruled that there was a taking because the Council could not show that building houses on the coast would result in a nuisance.¹²⁷

Mandatory LEED standards are justified based on the ability of the state to exercise its police power as a prevention of harm to others.¹²⁸ Rights of use enjoyed by property owners may, if employed in an environmentally unsound manner, lose their protections in light of new scientific research on climate change.¹²⁹ Imagine if a builder bought a piece of land with the intent to build a store with a large parking lot that contributed stormwater runoff into a nearby stream. Further, suppose that after his purchase, Louisiana mandated green building codes. Under the Supreme Court's interpretation of *Lucas v. South Carolina Coastal Council*, the construction makes the developer ineligible for compensation under the Takings Clause because increased flooding would likely be considered a nuisance.¹³⁰

D. Pragmatic Challenges to Statewide Adoption of LEED

The Matching Principle supports the idea that the regulating jurisdiction should not be larger than the regulated activity.¹³¹ While the aims of green building are to mitigate the effects of climate change, an issue of global concern, the externalities associated with the built environment are felt

123. *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992).

124. *Id.* at 1007.

125. *Id.* at 1009.

126. *Id.* at 1016.

127. *Id.* at 1029.

128. Fox, *supra* note 100, at 337.

129. *Id.*

130. "Anything that works hurt, inconvenience, or damage to another, or anything done by one which annoys or disturbs another in the free use, possession, or enjoyment of his property." *BALLENTINE'S LAW DICTIONARY* (3d ed. 1969).

131. For an in-depth discussion of the Matching Principle, *see* Schindler, *supra* note 65, at 297.

locally.¹³² Further, local authority coincides with free market principles because public duties, goods, and services make a market with lower transaction costs than larger jurisdictions.¹³³

While a statewide revision of building codes to incorporate sustainable practices limits public choice to find a locality conducive to their needs, it also prevents a “race-to-the-bottom.” A “race-to-the-bottom” occurs when a jurisdiction relaxes its regulations to be more competitive within a more restrictive jurisdiction.¹³⁴ By making building codes applicable to the entire state of Louisiana, a municipality is prevented from lowering its standards and making its citizens susceptible to the harms associated with conventional construction. Also, if statewide action is not used to address the deficiencies in building practices, considerations about the Matching Principle and local autonomy could be meaningless if the federal government decides to regulate building standards.

III. A NEW WATERMARK IN SUSTAINABILITY

Over the next twenty years, seventy-five percent of all buildings will be new or replaced.¹³⁵ Thirty percent of greenhouse gas emissions can be avoided if policymakers enact regulations to reduce emissions from buildings that require replacement.¹³⁶ After the multiple 2016 flooding events, over 140,000 homes in the Baton Rouge area¹³⁷ and almost 5,000 in the Shreveport area¹³⁸ needed repair. Floods of this magnitude will happen again in the future.¹³⁹ Now is the appropriate time to leverage these tragedies into an opportunity.

The Louisiana legislature should enact legislation that directs localities to prioritize green building by applying financial resources and development in a way that is beneficial throughout the state. Statewide reforms do not need to constrain local autonomy, but instead can work

132. *Id.*

133. Colburn, *supra* note 12, at 253.

134. Kirsten H. Engel, *State Environmental Standard-Setting: Is There a “Race” and is it “To the Bottom?”*, 48 HASTINGS L.J. 271, 274 (1997).

135. Bronin, *supra* note 17, at 1891.

136. Bronin, *supra* note 17.

137. Ford Fessenden & Rudy Omri, *Mapping the Extent of Louisiana’s Floods*, N.Y. TIMES, Aug. 22, 2016, <http://www.nytimes.com/interactive/2016/08/22/us/louisiana-flooding-maps.html>.

138. Doyle Rice, *Record Flooding Swamps Texas, Louisiana, Miss., USA TODAY*, Mar. 14, 2016, <https://perma.cc/A5AW-JLMP>.

139. *Climate Change*, *supra* note 14.

within existing relationships between state and local governments.¹⁴⁰ Approaching sustainable design at the state level, as opposed to local level, will lead to greater uniformity and make a larger impact on the environmental problems related to conventional construction.¹⁴¹

Since LEED is a framework for all aspects of sustainability and its credits are not restricted to energy concerns, some communities have specified that a certain number of LEED credits can be earned from the energy credit category to assure that adequate energy improvements are included.¹⁴² In order for Louisiana to make progress, however, new legislation should mandate that new construction, at a minimum, fulfill the Energy and Atmosphere, Sustainable Sites, and Neighborhood Development credits to mitigate the effects of flooding.

A. Pooling Resources for Green Building

Building performance assessment and labeling systems, such as LEED, developed in the United States as a result of industrial self-regulation.¹⁴³ Governments that take a more active role through the use of incentives encourage the expansion of free market usage of green building.¹⁴⁴ Louisiana is falling behind much of the country in its adoption of green building codes and incentives, likely due to its notion that restriction on construction will have a negative effect on business and development. In reality, overlooking the green building trend is a missed economic opportunity because projections show green building contributing \$303.5 billion to the national gross domestic product by 2018.¹⁴⁵ Indeed, industry has become privy to the value of green jobs in Louisiana as well; the fastest growing industry in southeast Louisiana is water management, and it provides more than 32,000 well-paying jobs.¹⁴⁶

140. Bronin, *supra* note 17, at 1897-98.

141. Anthony DeLaPaz, *LEED Locally: How Local Governments Can Effectively Mandate Green Building Standards*, 2013 U. ILL. L. REV. 1211, 1241-42 (2013).

142. Sussman, *supra* note 7, at 11.

143. 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, 457 (2005).

144. *Id.*

145. *Benefits of Green Building*, U.S. GREEN BUILDING COUNCIL (Apr. 1, 2016), <https://perma.cc/F8R3-YM2C>.

146. *Louisiana Business Organizations Tout Significant Economic Potential of Coastal Restoration to Governor John Bel Edwards*, ENVIRONMENTAL DEFENSE FUND (Mar. 14, 2016), <https://perma.cc/DUQ9-43S6>.

1. Mandatory Green Building Codes

Louisiana needs the most stringent government regulation of green building: a statewide appropriation of LEED standards into a model building code that municipalities can adopt. This type of regulation is called “command and control regulation” and is one of the most common approaches to environmental policy.¹⁴⁷ Command and control regulation imposes detailed legal requirements, enforcement procedures, and penalties for non-compliance.¹⁴⁸ A successful example of this regulation is the Clean Air Act, which has dramatically improved the air quality in the United States since its enactment in 1970.¹⁴⁹

Green building achieved similar success. For example, the city of Palo Alto, California has committed to making all new buildings Zero Net Energy by 2030, meaning that all new construction must produce as much energy as it consumes.¹⁵⁰ While the introduction of this program is likely due to the fact that city of Palo Alto has willing and affluent participants—Palo Alto is home to companies such as Facebook, Tesla, and Google—there is no reason why Louisiana could not impose such aspirational legislation. Louisiana cannot continue development in flood-prone areas without considering a smarter approach. Mandatory green building will not discourage growth, but instead will ensure that future construction considers the downstream effects of development.

The mechanisms for sustainable development are already in place in Louisiana. Green building is attainable through a governor’s appointment of LEED-accredited professionals to the Louisiana State Uniform Construction Code Council. The Council can then amend the Louisiana Uniform Construction Code to incorporate vital LEED standards, such as stormwater management, to the building code. Hiring LEED accredited professionals or retraining current building inspectors would be a straightforward way of enforcing these new standards; also, hiring these professional would create more jobs.¹⁵¹

147. Glesby, *supra* note 74.

148. *Id.*

149. See *Overview of the Clean Air Act and Air Pollution*, ENVIRONMENTAL PROTECTION AGENCY, <https://perma.cc/W4NK-KMFM> (last visited Oct. 16, 2017).

150. Press Release, City of Palo Alto, City of Palo Alto Approves New Energy Reach Code Ordinance in Support of Zero Net Energy (May 5, 2016), <https://perma.cc/2JWP-2Z6P>.

151. Environmental Defense Fund, *supra* note 146.

2. Financial Incentives

Financial incentives, such as tax credits, can be an effective tool to encourage developers to “build green.” In Oregon, the Oregon Sustainable Buildings Tax Credit (OSBTC) incentivizes developers to achieve the highest and most rigorous level of LEED certification: LEED Platinum.¹⁵² The higher the level of certification, the larger proportion of taxes the developer is eligible to offset.¹⁵³

Unlike most regulation, green building has not led to much litigation.¹⁵⁴ One of the first lawsuits related to green building was *Southern Builders v. Shaw Development*.¹⁵⁵ In this case, a contractor agreed to build a LEED Silver condominium project.¹⁵⁶ The primary motivation for obtaining this certification was to be eligible for \$600,000 in tax credits, but the contractor failed to complete the project in time to receive the credits.¹⁵⁷ The contractor was not paid and filed a mechanics’ lien, but the owner counterclaimed alleging breach of contract.¹⁵⁸ The case settled out of court but represented the first answer to speculation surrounding the future of green building.¹⁵⁹ While this case presents a novel issue that involves green building, the core claim is breach of contract and should not present a significant barrier to providing financial incentives for green building.

Financial incentives to promote green building will face objections in the Legislature due to the ongoing budget crisis in Louisiana.¹⁶⁰ The solar panel tax credit is one of the only green financial incentives in Louisiana, but due to its popularity and strain on state resources, it will sunset in December 2017 with a maximum allowance on how many people can take advantage of the tax credit.¹⁶¹ Yet Louisiana could start implementing

152. King & King, *supra* note 143, at 454.

153. *Id.* at 455.

154. Fox, *supra* note 100, at 310.

155. Tracy L. Steedman et al., *The Greening of Public Private Partnerships: What Design Professionals and Contractors Need to Know for Green Building’s Next Legal Frontier*, 3 U. BALT. J. LAND & DEV. 89, 96 (2014).

156. *Id.*

157. *Id.*

158. *Id.*

159. *Id.*

160. Chico Harlan, *Battered by Drop in Oil Prices and Jindal’s Fiscal Policies, Louisiana Falls into Budget Crisis*, THE WASHINGTON POST, Mar. 4, 2016, <https://perma.cc/LSG9-VRXH>.

161. Jennifer Larino, *Louisiana has No More Tax Credits for Solar Owners*, NOLA (July 20, 2016), <https://perma.cc/P7AM-JK4M>.

negative incentives that would act as a source of income, such as taxing or raising permit fees for inefficient projects.¹⁶²

While Louisiana is not currently in the position to be offering generous tax credits, public resources are not used through the formation of public private partnerships. Louisiana public private partnership is made of both a public and a private sector entity that join forces to create a project for use by the general public and share the risks and rewards.¹⁶³ Usually, the public-sector entity will provide funding for the upfront costs of the project in exchange for revenues generated by the project or a payment by the state over time.¹⁶⁴ This method saves the State from using tax dollars and gives a business a return on its investment. While public private partnerships are popular in Europe and Asia and were used when building the first American infrastructure,¹⁶⁵ they have fallen out of favor due to restrictive laws, financing issues, and bureaucracy. Louisiana currently has a public private partnership enabling statute in place, and this would be a viable route to build green despite budget shortfalls.¹⁶⁶

3. *Green Building for Public Buildings*

States have experimented with regulations that require publicly funded buildings to meet sustainability standards in order to be approved.¹⁶⁷ This strategy has proven to be successful in several states, such as California, Arizona, and Connecticut.¹⁶⁸ In 2012, Governor Brown of California issued an executive order directing California agencies to “green” their buildings to reduce emissions, improve energy efficiency,

162. Carl J. Circo, *Should Owners and Developers of Low-Performance Buildings Pay Impact or Mitigation Fees to Finance Green Building Incentive Programs and Other Sustainable Development Initiatives?*, 34 WM. & MARY ENVTL. L. & POL’Y REV. 55, 59 (2009).

163. Steedman et al., *supra* note 155, at 115.

164. *Id.*

165. “Ben Franklin and Dr. Thomas Bond raised private funds that were then matched by the Pennsylvania Assembly to establish the Pennsylvania Hospital, which opened its doors to Philadelphians as a charity hospital.” Steedman et al., *supra* note 155, at 96-97.

166. LA. REV. STAT. § 48:2084 (2006).

167. Shapiro, *supra* note 70, at 260.

168. Alexandra Klass, *State Standards for Nationwide Products Revisited: Federalism, Green Building Codes, and Appliance Efficiency Standards*, 34 HARV. ENVTL. L. REV. 335, 345 (2010).

and save valuable taxpayer dollars.¹⁶⁹ In only three years, California experienced a 49.99% decrease in greenhouse gas emission, 40.9% decrease in water usage, and 16.42% reduction in energy usage.¹⁷⁰

The Louisiana Office of State Buildings (OSB) maintains and operates all facilities under the jurisdiction of the Division of Administration.¹⁷¹ The facilities include over six million gross square feet and present a great opportunity for Louisiana to reduce its environmental impact.¹⁷² In Louisiana, 81 out of 106 LEED certified buildings are educational spaces.¹⁷³ This success is attributed to the Louisiana Recovery Authority approving \$2.5 million in incentives to support public schools pursuing LEED certification.¹⁷⁴

4. Non-Financial Incentives

Time is a valuable resource for a developer; one way to incentivize green building is through an expedited permit program. In Chicago, a project can receive a building permit in as little as fifteen days if the project is LEED certified, and the value of not waiting months for permits can quickly outweigh the cost of building green.¹⁷⁵ Another option is giving developers density bonuses for green projects, which increases their profit by allowing the developer to put more tenants into one building.¹⁷⁶ Making sure green building is enforced once developers receive bonuses can be an issue, but cities such as Arlington, Virginia effectively do so by only issuing an occupancy permit after LEED certification is obtained.¹⁷⁷ While not a low cost solution, municipalities can hire a LEED certified specialist to enforce green building codes and nudge developers to build green. The specialist would work with developers throughout the process by estimating the cost of the proposed project with LEED certification and

169. *Governor Brown Sets Ambitious New Goals to Green State's Buildings, Save Taxpayer Dollars*, OFFICE OF GOVERNOR EDMUND G. BROWN (Apr. 25, 2012), <https://perma.cc/P2BA-US39>.

170. *Greening State Buildings for a Brighter Future*, STATE OF CALIFORNIA GREEN BUILDINGS, <https://perma.cc/WW83-SYTL> (last visited Oct. 16, 2017).

171. *Office of State Buildings*, STATE OF LOUISIANA DIVISION OF ADMINISTRATION, <https://perma.cc/GEP9-ZZWQ> (last visited Oct. 16, 2017).

172. *Id.*

173. *State Market Brief: Louisiana*, *supra* note 13.

174. *US-LA-2008-State and Local Facilities Construction Authority*, U.S. GREEN BUILDING COUNCIL (Feb. 12, 2008), <https://perma.cc/7YE2-LJPM>.

175. Sussman, *supra* note 7, at 18.

176. *Id.* at 17.

177. *Id.*

suggesting greener alternatives, such as better insulation or energy efficient windows.¹⁷⁸

5. Free Market Approach

The free market approach requires no action by the government; instead it allows builders to voluntarily build green based on demand and free will.¹⁷⁹ Some free market advocates argue that the market efficiently solves environmental issues and is a more accurate reflection of consumer choice.¹⁸⁰ Indeed, LEED can attribute much of its success to its market-driven, voluntary rating system even before municipalities incentivized its green building practices.¹⁸¹

The free market approach is in effect in Louisiana and has had a slow influence on sustainable building. In fact, current development patterns cause property to be flooded repeatedly, which increases the cost of insurance and discourages growth.¹⁸² The free market approach will cost Louisiana more than it would cost to impose stricter building codes because the cost of rebuilding a flooded area is high and businesses often fail to reopen due to fear of repeated flooding.¹⁸³

B. Disadvantages

Most municipal land use decisions do not address problems rising to the level of statewide importance.¹⁸⁴ The most frequent harms associated with conventional building are sedimentation and erosion caused by stormwater runoff into streams, landfills filled with construction waste, and public health issues, which are all handled at the local level.¹⁸⁵ The need for localized understanding is important when considering a broader scope of building regulations, such as adopting LEED certification standards. The obvious hurdle for nationwide green building codes is the huge variability between states due to water availability, earthquake

178. Colburn, *supra* note 12, at 245.

179. Glesby, *supra* note 74, at 662.

180. *Id.* at 663.

181. Hirokawa, *supra* note 10, at 527.

182. Wold, *supra* note 4.

183. Cameron McWhirter & Ruth Simon, *In Flood Ravaged Louisiana, Small Businesses Struggle to Recover*, WALL ST. J., Sept. 16, 2016, <https://perma.cc/2M UH-PANK>.

184. Costonis, *supra* note 75, at 355.

185. Schindler, *supra* note 65, at 296.

considerations, and climate.¹⁸⁶ This criticism, however, does not apply to green building on a statewide scale in a state as small as Louisiana with similar environmental conditions throughout the state.

Developing supplemental code provisions requires municipal leaders to work with trained professionals to analyze what is workable and appropriate, and requires training of municipal staff so that lack of enforcement does not defeat the goal.¹⁸⁷ Creating a more stringent code at the local level also presents concerns that some developers will choose not to build in a community with more stringent and expensive requirements when nearby communities have not enacted similar provisions. While these are all factors to consider, the net benefits of enacting code changes will make the effort supremely worthwhile.¹⁸⁸

The last qualm about LEED standards involves its performance relative to its claims. The USGBC claims to increase energy performance, yet industry professionals—albeit some with an invested interest in conventional construction—¹⁸⁹ remain skeptical. This skepticism led to a federal class action lawsuit where the plaintiffs claimed that the USGBC falsely advertised energy savings compared to non-LEED certified buildings.¹⁹⁰ The court dismissed the case due to a failure to obtain class certification, but the question it raised is still valid today.

C. Advantages

Building codes are often enacted to “cur[e] the ills of yesterday’s technology, rather than tomorrow’s.”¹⁹¹ Handling the built environment on a state level, as opposed to local level, can help prevent the downstream impacts of conventional construction practices. States, rather than localities, are more equipped to deal with siting questions due to neutrality from local

186. Shapiro, *supra* note 70, at 273.

187. Sussman, *supra* note 7, at 14.

188. *Id.*

189. “The lawsuit was initiated by Henry Gifford who owned Gifford Fuel Savings, Inc. In the USGBC’s motion to dismiss, the organization noted that ‘Gifford had been a longtime gadfly, preoccupied with critiquing USGBC and LEED through the media, internet forums, and the like.’ For example, and as the court noted, on the first page of Henry Gifford’s website, is the site’s Mission statement, a description of Gifford’s background, and the title to the article he wrote: ‘Why LEED Buildings Use More Energy Than Comparable Buildings and How to Avoid the Same Results.’” Steedman et al., *supra* note 155, at 96-97.

190. *Id.*

191. Hirokawa, *supra* note 10, at 519.

politics and can deliver more consistent results.¹⁹² While keeping local land use in the hands of municipalities is beneficial due to the advantage of local knowledge, Louisiana faces similar land use problems throughout the state. For example, while Shreveport does not typically need to prepare for hurricanes, the year of 2016 showed that urban flooding is as much of a problem in north Louisiana as it is in south Louisiana.¹⁹³

Action at the state level can prevent the federal government from stepping in to regulate building codes.¹⁹⁴ According to a study conducted by the Natural Resources Defense Council, the National Flood Insurance Program insures 7,200 Louisiana multi-flood homes out of 30,000 nationwide and has issued a total of \$1.22 billion dollars in flood insurance payments to Louisiana homeowners.¹⁹⁵ If the federal government continues to use money to pay for homes repeatedly flooded without any change in land use or building policies at the state or local level, it is likely that the federal government will step in to regulate what the State has failed to address. In 2009, Congress attempted to pass the Waxman-Markey Act, which would direct state and local governments to adopt a national energy efficient building code, but the bill failed to reach the Senate.¹⁹⁶ The General Services Administration (GSA) is the government's largest civilian property provider and requires that all new construction and renovations achieve LEED Gold certification.¹⁹⁷ Even the Department of Defense (DOD) budgets its building projects to allow for LEED Silver certification.¹⁹⁸

The incorporation of LEED requirements into model building codes has several advantages. First, the point-based LEED system offers an easy solution for policy makers who do not have to create their own sustainable building standards from scratch.¹⁹⁹ If each municipality designed its own green building standards, a patchwork of different codes could result, causing much confusion for designers.²⁰⁰ Second, the LEED rating system is one of the most common²⁰¹ and impartial²⁰² green building standards

192. Bronin, *supra* note 17, at 1898.

193. Rice, *supra* note 138.

194. Shapiro, *supra* note 70, at 275.

195. Revkin, *supra* note 49.

196. Shapiro, *supra* note 70, at 275.

197. Steedman et al., *supra* note 155, at 104.

198. *Id.* at 105.

199. DeLaPaz, *supra* note 141, at 1231-32.

200. Steedman et al., *supra* note 155, at 108.

201. DeLaPaz, *supra* note 141, at 1231-32.

202. Some points in the LEED certification process require materials to be sourced locally to reduce fossil fuels used in transportation. They also require the

available. Finally, the LEED standards and the point weights in each category are revised²⁰³ once new technology and information become accessible.²⁰⁴ Because green performance measurement of the built environment is an evolving science and entails the need to include various locational factors, the use of performance standards, rather than prescriptive codes, offers developers more flexibility to build in a way that satisfies the project's needs.²⁰⁵

The widespread criticism of green building is that it is expensive. Early predictions estimated that green building would increase the upfront cost of building by twenty to twenty-five percent.²⁰⁶ Studies have shown, however, that the increased upfront cost of green building is recuperated over time due to energy savings.²⁰⁷ In fact, a more efficient home retains its value longer if built to handle the possibility of energy and resource scarcity in the future.²⁰⁸ In addition, projections show consumer costs decreasing by \$38 billion within fifteen years by increasing energy efficiency in the United States by thirty percent.²⁰⁹ By imposing stricter building requirements²¹⁰ on individuals, the state will save money by reducing stormwater at the source instead of creating more diversion canals and drainage ditches to handle the increased runoff from development.

The final and most elusive advantage is fostering an environmentally aware Louisiana through the use of positive legislation. Just as catastrophic events have raised public awareness about climate change, LEED has brought awareness of the benefits of green building to the construction industry, the public, and policy makers.²¹⁰ Increased regulation of an activity creates a compliance culture, which, over time, begins to instill

timber to be harvested sustainably. This has caused backlash from the timber industry, who created their own timber certification process that allows clear-cutting, a harvesting practice that is widely criticized by environmentalists, to be certified as sustainable. See Andrew Goodwin, *More States to Ban LEED Certification System Due to Timber Industry Opposition*, INHABITAT (Sept. 11, 2013), <https://perma.cc/PP5H-8ENU>.

203. The USGBC revises the LEED certification standards every couple of years to reflect changes in available technology and increases the stringency of the standards. See generally Stuart Kaplow, *USGBC Making Significant Change to LEED 2009*, GREEN BUILDING LAW UPDATE (Mar. 13, 2016), <https://perma.cc/WFT7-B9ZL>.

204. Shurtz, *supra* note 11, at 273.

205. Hirokawa, *supra* note 10, at 528.

206. *Id.* at 526.

207. Sussman, *supra* note 7, at 9.

208. Colburn, *supra* note 12, at 245.

209. Sussman, *supra* note 7, at 19.

210. Shurtz, *supra* note 11, at 273.

values reflected in the regulation.²¹¹ When legislation reflects responsible behavior, a societal acceptance of these values soon follows.²¹² Private property rights in Louisiana are highly valued, and this sentiment is not subject to change.²¹³ This attitude has the potential to change in light of scientific findings that show the detrimental impacts that individualistic conceptions of private property have on the environment.²¹⁴

CONCLUSION

Sustainable development is a process rather than an outcome.²¹⁵ While statewide green building codes are not a cure-all for flooding in Louisiana, they represent an achievable first step. Green building has a surprising lack of related litigation and would not mire Louisiana policymakers in courts due to the ability to overcome delegation, preemption, and takings challenges. Instead of continuing the tradition of allowing municipalities to cope with problems that they are neither equipped nor large enough to handle, the state should step in and provide mandatory green building standards for public buildings and incentives for private buildings through the use of public private partnerships. With financial and non-financial incentives, as well as the imposition of stricter building regulations, Louisiana can reclaim control over the built environment.

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211. Fox, *supra* note 100, at 338.

212. *Id.*

213. Costonis, *supra* note 75, at 354.

214. Fox, *supra* note 100, at 337.

215. King & King, *supra* note 143, at 400-401.

* J.D./D.C.L., 2018 Paul M. Hebert Law Center, Louisiana State University. The author would like to extend her thanks to all who made this article possible — Professor Tyson for his supervision throughout this article's composition, the Volume VI Editorial Board for their thoughtful contributions and attention to detail, the author's family for their continued support throughout law school, and Andrew Harlow for his endless supply of pep talks.

