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# Being Green Doesn't Need to be Taxing: How New York State Law is a Vanguard for Using Green Infrastructure

Keith J. Jones, Esq.\*

On June 23, 2008, New York State once again became a legislative and environmental leader. On that day, the New York State Legislature passed a bill that would create a substantial tax abatement for the installation of green roofs in New York City.<sup>1</sup> Subsequently, in August 2008, Governor David Paterson signed the bill into law.<sup>2</sup> By doing so, New York became the first state in the nation to enact a major tax incentive program to promote the use of a specific form of green infrastructure.<sup>3</sup> It is hoped that this is just the first serious step down a new greener path. Ideally, other state and local jurisdictions will once again follow New York's lead. New York City has long been known as a trend setter in everything from fashion to immigration,<sup>4</sup> but people sometimes overlook New York State's role in establishing legal and legislative precedents. With this new law, New York moves to the forefront of governments working to advance sustainability and prudent environmental stewardship by way of decisive economic policy and actual tax law.

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1. See Assemb. 11226, 231st Sess. (N.Y. 2008); S. 7553, 231st Sess., 2008 N.Y. Laws 461.

2. See Act of Aug. 5, 2008, ch. 461, § 2, 2008 N.Y. Laws 461 (codified as amended at N.Y. REAL PROP. TAX LAW §§ 499-aaa to -ggg (McKinney Supp. 2009)).

3. Lisa Anderson, *Green Roofs are Taking Root in American Cities: Other Cities Push to Take Chicago's Crown*, CHICAGO TRIBUNE, Sept. 19, 2008, at C1, available at [http://archives.chicagotribune.com/2008/sep/19/business/chi-green\\_roofssep19](http://archives.chicagotribune.com/2008/sep/19/business/chi-green_roofssep19) ("New York's tax credit program, believed to be the first such state-approved green roof initiative, is designed to defray about 35 percent of the cost of installing a green roof on a standard roof, according to the text of the bill.").

4. See Ellis Island, History, [http://www.ellisland.org/genealogy/ellis\\_island\\_history.asp](http://www.ellisland.org/genealogy/ellis_island_history.asp) (last visited Apr. 20, 2009); PBS, What is Fashion?, <http://www.pbs.org/newshour/infocus/fashion/whatisfashion.html> (last visited Apr. 20, 2009).



## I. New York Leadership

Over the years, New York State has frequently led the nation in the arena of environmental protection and preservation through statutes, regulations, and other endeavors. As early as 1895, the New York State Constitution was amended to include section 7 of article VII in order to ensure that certain New York forest land would be maintained as wild forest lands in perpetuity.<sup>5</sup> Over a century later, in 1999, New York became one of the first states to develop a permit to regulate environmentally harmful runoff from concentrated animal feeding operations (“CAFOs”).<sup>6</sup> Subsequently, federal regulations for CAFOs were established, based upon the efforts in New York.<sup>7</sup> More recently, in April 2003, then Governor of New York George Pataki led a group of nine Northeast and Mid-Atlantic states, including New York, in a collaboration to establish one of the first multi-state greenhouse gas cap-and-trade programs, known as the Regional Greenhouse Gas Initiative (“RGGI”).<sup>8</sup> Last summer, New York again moved to the forefront of environmental efforts by developing a green roof tax abatement program.<sup>9</sup>

### A. *New Statute*

New York State Assemblyman Ruben Diaz, Jr. and Senator Andrew J. Lanza sponsored the green roof tax abatement legislation,<sup>10</sup> which was passed by the state legislature on June 23,

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5. See *Ass’n for the Prot. of the Adirondacks v. MacDonald*, 170 N.E. 902, 903-04 (1930). This section has since been moved and is currently found in article XIV, section 1 of the New York State Constitution. See N.Y. CONST. art. XIV, § 1.

6. N.Y. State Dep’t of Env’tl. Conservation, *Anniversary of Dairy Farm Spill Marks Advancements in CAFOs*, ENV’T DEC, Sept. 2007, available at <http://www.dec.ny.gov/environmentdec/36936.html>.

7. *Id.*

8. Cinnamon Carlarne, *Notes from a Climate Change Pressure-Cooker: Sub-Federal Attempts at Transformation Meet National Resistance in the USA*, 40 CONN. L. REV. 1351, 1369-70 (2008). For more information about the RGGI, see Regional Greenhouse Gas Initiative, <http://www.rggi.org/home> (last visited Apr. 20, 2009).

9. See *infra* Part 1.A.

10. See Assemb. 11226, 231st Sess. (N.Y. 2008); S. 7553, 231st Sess., 2008 N.Y. Laws 461.



2008.<sup>11</sup> This legislation amends article four of the New York State Real Property Tax Law (“RPTL”) by adding a title 4-B and creates an economic incentive for the utilization of a proven environmental best management practice known colloquially as the green roof.<sup>12</sup> The new statute defines the term “green roof” as

an addition to a roof of an eligible building that covers at least fifty percent of such building’s eligible rooftop space and includes (a) a weatherproof and waterproof roofing membrane layer that complies with local construction and fire codes, (b) a root barrier layer, (c) an insulation layer that complies with the Energy Conservation Construction Code of New York state and local construction and fire codes, (d) a drainage layer that complies with local construction and fire codes and is designed so that the drains can be inspected and cleaned, (e) a growth medium, including natural or simulated soil, with a depth of at least two inches, (f) if the depth of the growth medium is less than three inches, an independent water holding layer that is designed to prevent the rapid drying of the growth medium, such as a non-woven fabric, pad or foam mat, unless the green roof is certified not to need regular irrigation to maintain live plants, and (g) a vegetation layer, at least eighty percent of which must be covered by live plants such as sedum or equally drought resistant and hardy plant species.<sup>13</sup>

In addition, this statute provides a one-year tax abatement for the construction of a green roof.<sup>14</sup> The tax abatement is \$4.50 per square foot of green roof up to the lesser of either \$100,000 or the total tax liability for the building for that tax year in which the abatement is claimed.<sup>15</sup> Notably, the tax

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11. See Act of Aug. 5, 2008, ch. 461, § 2, 2008 N.Y. Laws 461 (codified as amended at N.Y. REAL PROP. TAX LAW §§ 499-aaa to -ggg (McKinney Supp. 2009)). See also Jeff Goldis, *Green Rooftops in New York City Now Rewarded with Tax Credits*, STORM WATER INFRASTRUCTURE MATTERS (S.W.I.M.), June 26, 2008, <http://swimmablenyc.info/?p=54>.

12. See ch. 461, 2008 N.Y. Laws 461.

13. N.Y. REAL PROP. TAX LAW § 499-aaa(10) (McKinney Supp. 2009).

14. *Id.* § 499-bbb(2) (“Such tax abatement shall commence on July first following the approval of an application for tax abatement by a designated agency, and shall not exceed one year.”).

15. *Id.* § 499-bbb(1).



abatement is only applicable in cities of one million or more persons.<sup>16</sup> Consequently, the abatement only applies in New York City.<sup>17</sup> If the program is successful, the law could eventually be amended to include other cities throughout New York State.<sup>18</sup>

## B. *PLANYC*

The green roof tax abatement is just one small part of a much larger New York City environmental strategy. Towards the end of 2006, New York City Mayor Michael Bloomberg asked the citizens of that city to suggest sustainable ways to improve the environment.<sup>19</sup> New Yorkers responded, and the city developed a sustainability plan for its land, water, air, and transportation known as PLANYC.<sup>20</sup> PLANYC is a model for other cities that wish to improve the quality of life for their residents, while cleaning up the urban environment and reducing greenhouse gas emissions at the same time.<sup>21</sup> For example, PLANYC's Water Quality Initiatives were intended to build on the New York City Department of Environmental Protection's existing water reuse program.<sup>22</sup> At the time of the plan's development, New York City already provided discounts on water and sewer charges for customers who captured and recycled sewage effluents for non-potable purposes.<sup>23</sup> One of the first steps in enacting PLANYC was a pilot program to create incentives, such as the tax abatement to promote the installation of green roofs.<sup>24</sup> After five years, the city will assess, and it is

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16. *Id.* § 499-aaa(7).

17. *See* OFFICE OF THE N.Y. STATE COMPTROLLER, POPULATION TRENDS IN NEW YORK STATE'S CITIES 3 (2004) (reporting that the second largest city in New York State, Buffalo, has a population of 292,648 people).

18. Telephone interview with Hilary Meltzer, Senior Counsel, Env'tl. Law Div., NYC Dep't of Law (April 6, 2009).

19. *See* CITY OF N.Y., PLANYC: A GREENER, GREATER NEW YORK 10-11 (2007), available at [http://www.nyc.gov/html/planyc2030/downloads/pdf/full\\_report.pdf](http://www.nyc.gov/html/planyc2030/downloads/pdf/full_report.pdf).

20. *See id.* at 10-11.

21. *See id.* at 12.

22. *See id.* at 60-61.

23. *See id.* at 61. The New York City Department of Environmental Protection's Comprehensive Water Reuse Program applies to buildings that install systems to recycle "blackwater," which is sanitary wastewater, and "greywater," which is water from household appliances and faucets for non-potable purposes. *Id.*

24. *See id.* at 60-61.



hoped, expand, the pilot program to include additional green infrastructure practices.<sup>25</sup>

## II. Green Infrastructure

What is green infrastructure, and why is it beneficial? In its broadest sense, green infrastructure is

an interconnected network of natural areas and other open spaces that conserves natural ecosystem values and functions, sustains clean air and water, and provides a wide array of benefits to people and wildlife. . . . [G]reen infrastructure is the ecological framework for environmental, social, and economic health—in short, our natural life-support system.<sup>26</sup>

In more practical terms, green infrastructure is using vegetation and soil in place of traditional pipes and pumps to protect water quality, prevent flooding, and even reduce energy costs.<sup>27</sup> Green infrastructure includes not only green roofs, but also vegetated swales, constructed wetlands, tree boxes, and rain gardens.<sup>28</sup> Green infrastructure is particularly helpful in managing stormwater runoff, which results from all forms of precipitation, including rain, hail, and snowmelt.<sup>29</sup> The first few inches of stormwater runoff collects and carries the major-

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25. *Id.* at 61.

26. MARK A. BENEDICT & EDWARD T. MCMAHON, *GREEN INFRASTRUCTURE* 1 (2006).

27. See U.S. ENVTL. PROT. AGENCY, *MANAGING WET WEATHER WITH GREEN INFRASTRUCTURE: ACTION STRATEGY* 4-5 (2008), available at [http://www.epa.gov/npdes/pubs/gi\\_action\\_strategy.pdf](http://www.epa.gov/npdes/pubs/gi_action_strategy.pdf) [hereinafter U.S. ENVTL. PROT. AGENCY, *MANAGING WET WEATHER*] (“[W]e intend the term “green infrastructure” to generally refer to systems and practices that use or mimic natural processes to infiltrate, evapotranspire (the return of water to the atmosphere either through evaporation or by plants), or reuse stormwater or runoff on the site where it is generated.”). See also CITY OF N.Y., *PLAN NYC: SUSTAINABLE STORMWATER MANAGEMENT PLAN* 41 (2008), available at [http://www.nyc.gov/html/planyc2030/downloads/pdf/sustainable\\_stormwater\\_plan.pdf](http://www.nyc.gov/html/planyc2030/downloads/pdf/sustainable_stormwater_plan.pdf) [hereinafter CITY OF N.Y., *SUSTAINABLE STORMWATER*] (“Green roofs treat storm water through retention or bioretention. Green roofs are comprised of a structurally sound roof, a waterproofing and root barrier, a drainage layer, a permeable fabric, a growing medium, and vegetation.”).

28. U.S. ENVTL. PROT. AGENCY, *MANAGING WET WEATHER*, *supra* note 27, at 5. See also CITY OF N.Y., *SUSTAINABLE STORMWATER*, *supra* note 27, at 43 (describing vegetative controls as another form of green infrastructure to implement source control of storm water).

29. CITY OF N.Y., *SUSTAINABLE STORMWATER*, *supra* note 27, at 41.



ity of pollutants found on the ground, including trash, oils, and grease, directly to the nearest surface waters.<sup>30</sup>

Thanks to the ever-growing volume of impervious surfaces, such as roads, parking lots, and traditional roofs, stormwater velocity has increased to the point where it actually erodes riverbanks more quickly than they would naturally erode and greatly increases sedimentation that reduces water quality.<sup>31</sup> Green infrastructure can be used to capture and slow stormwater runoff until it can gradually and naturally be cleansed and slowly released through layers of earth into ground water.<sup>32</sup> This effect also helps to reduce stormwater flooding of wastewater collection systems, which are designed to overflow to the closest creek or river when their capacity limit is in danger of being exceeded.<sup>33</sup>

While traditional “gray” or “hard” infrastructure, such as pipes, underground storage tanks, and even enormous subsurface tunnels, can also be used for the same purposes as green infrastructure,<sup>34</sup> they lack the aesthetic and sustainability benefits that are inherent in green infrastructure. Also, according to the Center for Neighborhood Technology, a nearly three-decade-old organization that develops tools for sustainable economic development, green infrastructure often costs less to install and can be more reliable than gray infrastructure.<sup>35</sup> However, the use of green infrastructure often requires an external motivation, such as New York’s green roof tax abatement, to shift the paradigm and motivate people to actually try a new approach like installing a green roof.<sup>36</sup>

#### A. *Green Roofs*

The concept of green roofs is far from new. Considered one of the Seven Wonders of the Ancient World, King Nebuchadnezz-

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30. See U.S. ENVTL. PROT. AGENCY, *MANAGING WET WEATHER*, *supra* note 27, at 4.

31. See *id.*

32. *Id.* at 5.

33. See CITY OF N.Y., *SUSTAINABLE STORMWATER*, *supra* note 27, at 26-27.

34. Green Values Stormwater Toolbox, About This Site, <http://greenvalues.cnt.org/about> (last visited Apr. 20, 2009).

35. *Id.*

36. See E-mail Interview with Erik Meyers, Vice President for Sustainable Programs, The Conservation Fund (Oct. 22, 2008) (on file with author).



zar's Hanging Gardens of Babylon were essentially rooftop gardens or very elaborate green roofs.<sup>37</sup> Similarly, New York City itself is no stranger to green roofs. For years, a beautiful private rooftop garden has been maintained high above Fifth Avenue atop Rockefeller Center's British Empire Building.<sup>38</sup>

In addition to their aesthetic value, green roofs can serve a variety of practical purposes. Depending on the intensity of a wet weather event and the depth of the "growing medium"—the capacity of an independent water-holding layer—a green roof can greatly reduce the amount of runoff and thereby greatly diminish pollutant transportation, unlike typical impervious rooftops.<sup>39</sup> Moreover, green roofs have natural insulating properties and thus help cool buildings in warm weather and heat buildings in cold weather.<sup>40</sup> Consequently, buildings with green roofs have lower energy costs than buildings with traditional roofs.<sup>41</sup> Despite the long list of benefits associated with green roofs, they have yet to become commonplace in the United States.<sup>42</sup>

According to Erik Meyers, Vice President for Sustainable Programs for The Conservation Fund, green roofs

help catch and retain much of the first "flush" of wet weather that falls over a developed landscape. This keeps more pollutants out of surface waters and decreases runoff that can scour shorelines and flood developed areas. Green roofs help insulate the building spaces below and lower energy demand and costs. Green roofs are often experienced as an aesthetic amenity when people can observe them or be on them, and they can provide a bio-diverse habitat for birds and other animal life. More poetically, green roofs can reconnect people to nature, especially in highly developed environments. This connection restores balance

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37. See Irving Finkel, *The Hanging Gardens of Babylon*, in *THE SEVEN WONDERS OF THE ANCIENT WORLD* 38, 45-46 (1988).

38. See The Greenroof Projects Database: Rockefeller Rooftop Gardens, <http://www.greenroofs.com/projects/pview.php?id=666> (last visited Apr. 20, 2009).

39. CHRISTIAN WERTHMANN, *GREEN ROOF—A CASE STUDY* 73 (2007).

40. *Id.* at 25.

41. *Id.* at 29-30.

42. See STEVEN PECK & MONICA KUHN, *DESIGN GUIDELINES FOR GREEN ROOFS* 17 (2003), available at <http://www.probeinternational.org/files/Green%20roofs%20-%20design%20guidelines.pdf>.



between the natural and manmade aspects of our lives.<sup>43</sup>

However, Meyers also saw challenges associated with green roofs and stated that

[o]ne of the biggest obstacles to installing green roofs is the perception that this is a new approach and likely to cost more. While, in fact, green roofs are associated with cost reductions over time because they do not deteriorate when exposed to UV as do many standard roofing materials. . . . [a] state or local tax preference, whether an abatement or credit, could help remove the concern over added cost of installation and stimulate greater interest in green roofs.<sup>44</sup>

Like Myers, many environmental professionals recognize that the key to making the use of green infrastructure, including green roofs, will require incentives.<sup>45</sup>

#### B. *Incentive Needed*

In recent years, there has been a great deal of talk about the many virtues of green infrastructure, but to date, building practices have not caught up with the hype.<sup>46</sup> Back in 2006, the United States Conference of Mayors passed a resolution recognizing “that green infrastructure naturally manages stormwater, reduces flooding risk and improves air and water quality, thus performing many of the same functions as traditionally built infrastructure, often at a fraction of the cost . . . .”<sup>47</sup> In April of 2007, the U.S. Environmental Protection Agency (“EPA”), in conjunction with the National Association of Clean Water Agencies, the Natural Resources Defense Council, the Low Impact Development Center, and the Association of State and Interstate Water Pollution Control Administrators,

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43. E-mail Interview with Erik Meyers, *supra* note 36.

44. *Id.*

45. See PECK & KUHN, *supra* note 42, at 17.

46. See Alan Jaffe, *Green Infrastructure's Expense*, PLANPHILLY, Nov. 1, 2007, <http://www.planphilly.com/node/2176>.

47. U.S. CONFERENCE OF MAYORS, RESOLUTIONS ADOPTED BY THE MEMBERS OF THE U.S. CONFERENCE OF MAYORS: 74TH ANNUAL CONFERENCE 105 (2006), *available at* [http://www.usmayors.org/resolutions/74th\\_conference/resolutions\\_adopted\\_2006.pdf](http://www.usmayors.org/resolutions/74th_conference/resolutions_adopted_2006.pdf).



signed the Green Infrastructure Statement of Intent.<sup>48</sup> The purpose of the statement was to

formalize a collaborative effort among the signatory organizations in order to promote the benefits of using green infrastructure in protecting drinking water supplies and public health, mitigating overflows from combined and separate sewers and reducing stormwater pollution, and to encourage the use of green infrastructure by cities and wastewater treatment plants as a prominent component of their Combined and Separate Sewer Overflow (CSO & SSO) and municipal stormwater (MS4) programs.<sup>49</sup>

In January 2008, the EPA issued *Managing Wet Weather with Green Infrastructure: Action Strategy*.<sup>50</sup> The strategy stated that the benefits of green infrastructure include cleaner water, enhanced water supplies, cleaner air, reduced urban temperatures, reduced climate change impacts, increased energy efficiency, source water protection, community benefits, and cost savings.<sup>51</sup> The EPA is currently working on a permitting and enforcement guide intended to demonstrate how to manage wet weather with green infrastructure to regulatory authorities across the nation.<sup>52</sup>

Despite all these efforts, the country is not being reconstructed with green infrastructure.<sup>53</sup> For this to actually happen, incentives still need to be developed. According to Christopher Kloss, Senior Environmental Scientist at the Low Impact Development Center, “Financial incentives, including tax abatements, can be a successful approach for increasing the rate of green roof adoption. This type of incentive seems to resonate with developers because it is something that they can quickly include in their economic assessments and evaluate its

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48. U.S. ENVTL. PROT. AGENCY ET AL., GREEN INFRASTRUCTURE STATEMENT OF INTENT (2007), *available at* [http://www.epa.gov/npdes/pubs/gi\\_intentstatement.pdf](http://www.epa.gov/npdes/pubs/gi_intentstatement.pdf).

49. *Id.* at 1.

50. U.S. ENVTL. PROT. AGENCY, *MANAGING WET WEATHER*, *supra* note 27.

51. *Id.* at 5-6.

52. *Id.* at 7.

53. *See* Jaffe, *supra*, note 46.



immediate and long-term benefits.”<sup>54</sup> While a few other cities, such as Chicago, Philadelphia, and Portland, Oregon, are working to incorporate green infrastructure into their urban landscapes,<sup>55</sup> New York’s green roof tax abatement is a big leap forward.<sup>56</sup>

### III. Conclusion

In recent years, the term “green” as a synonym for all things environmental has become ubiquitous across the United States. Some individuals and organizations have even been accused of “greenwashing”—claiming that their activities or products promote sustainability or protect the environment when their efforts are really just public relations and marketing campaigns.<sup>57</sup> New York has often been a leader in the law generally and in environmental legal issues in particular.<sup>58</sup> Consequently, it makes perfect sense that New York would lead a true “green revolution” involving actions that actually do benefit the environment.

New York City’s PLANYC was just the right catalyst to inspire a new statute that would provide the incentive needed to get people to not just talk about “green,” but actually take some tangible action by incorporating green infrastructure into arguably the most urban environment in the nation.<sup>59</sup> It should not be difficult to make the argument that if a green roof can be made to work in New York City, it can be made to work anywhere. Hopefully, New York’s new green roof tax abatement law will be successful and help reconstruct the skyline of New York City with hundreds, if not thousands, of green roofs of va-

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54. E-mail interview with Christopher Kloss, Senior Scientist, Low Impact Dev. Ctr. (Oct. 27, 2008) (on file with author).

55. See CNT, Green Infrastructure Community Profile: Portland, OR, <http://www.cnt.org/repository/Portland.pdf> (last visited Apr. 20, 2009); Jaffe, *supra* note 46; Sierra Club, Green Infrastructure Prevents Sewer Overflows and Protects Water Quality, [http://ohio.sierraclub.org/central/SewerDoc\\_factsheet\\_Greeninfrastructure.pdf](http://ohio.sierraclub.org/central/SewerDoc_factsheet_Greeninfrastructure.pdf) (last visited Apr. 20, 2009).

56. See CITY OF N.Y., SUSTAINABLE STORMWATER, *supra* note 27, at 27 (describing how these cities have initiated programs to reduce impervious surfaces and control storm water sources).

57. Shireen Deen, *Don't Be Fooled: America's Ten Worst Greenwashers*, GREENWASHING.NET, Aug. 29, 2002, <http://www.greenwashing.net>.

58. See *supra* notes 3-9 and accompanying text.

59. See *supra* notes 19-25 and accompanying text.



rious shapes and sizes. Ideally, other jurisdictions will follow New York's lead and enact similar statutes that provide tax abatements, tax credits, or other incentives to promote the use of green roofs and the panoply of other green infrastructure practices.