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Applying History's Lessons on the Clean Air Act to Rebuild Ground Zero

I. Introduction

In the movie *Groundhog Day*, the main character, Phil Connors, relives the same day until he learns the lessons from his past that he needs to progress.¹ Similar to Phil's dilemma, New York City is presently stuck reliving the same air pollution problems it faced in the past.² The past and present pollution problems find common ground, because they entail both insufficient knowledge concerning the effects of contaminants on the public's health and inadequate technology to monitor the pollutants.³ To progress, New York City must learn from the past smog crises and rebuild environmentally safe buildings in adherence

1. GROUNDHOG DAY (Columbia/Tristar Studios 1993). In *Groundhog Day*, Phil Connors, a TV weatherman played by Bill Murray, relives February 2, until he learns the lessons he needs to improve his life. When he finally has learned these lessons, his life drastically changes for the better.

2. Kirk Johnson, *You Should Have Seen the Air in '53; After Sept. 11, Considering History's Lessons on Pollution*, N.Y. TIMES, September 29, 2002. In the past, the air pollution in New York City caused a dry cough that people today have been contracting since Sept. 11.

3. *Id.* In 1953, air researchers could not determine the substance that polluted the air with "a stagnant stew of soot and lead and who knows what else. . . ." Initially, researchers called the substance "smaze," created from the words "smoke" and "haze." The term never caught on and was replaced with the word "smog."

to the Clean Air Act to prevent history from repeating itself.⁴

II. The Dirt From the Past

1953, New York City: a foul-smelling, heavy substance polluted the air for a seemingly endless week.⁵ People infected with a dry cough rushed to over-crowded emergency rooms.⁶ The theatres' closure darkened Broadway and civilian desertion silenced Times Square.⁷ This phenomenon is often a subplot of a horror film, but in New York City the storyline was a harsh reality, killing 25-30 people a day.⁸

This haunting experience reoccurred in 1962, and again in 1963.⁹ Air researchers, lacking in advanced technology, were helpless in determining the cause and even the composition of the air pollution.¹⁰ The search for an end to these twilight zone episodes, spurred on an environmental movement in the 1970's that gave breadth to the monumental Clean Air Act, (CAA), which instilled air quality standards and provided the government with enforcement methods.¹¹

III. The Past Revisits the Present

New York City's smoggy past was transported into the present within seconds of the collapse of the World Trade Center on the forever-remembered Sept. 11. No different from the air researchers in 1953, 1962, and 1963, the present-day air researchers are left as powerless by limited knowledge and inadequate technology.¹² According to the National Resources Defense Council, hundreds, if not thousands of toxic

4. *See id.*

5. *Id.*

6. *Id.* The theatres in Times Square suffered a severe economic loss in business and closed during the smog crises.

7. Kirk Johnson, *You Should Have Seen the Air in '53; After Sept. 11, Considering History's Lessons on Pollution*, N.Y. TIMES, September 29, 2002.

8. *Id.* The statistics of the air pollution victims are based on research conducted a few years after the smog crises.

9. *Id.*

10. *See id.* Interestingly, this same air pollution problem also occurred in Los Angeles, California.

11. *Id.* According to public health historians, "The pattern is unmistakable—watch for those moments when knowledge hits the wall, then stand back. Things will change." The Clean Air Act established air quality standards to ensure the air was safe to breathe. Also, the air quality standards provided the federal government with means to enforce the standards when states were not in compliance.

12. Megan D. Nordgren, Eric A. Goldstein, Mark A. Izeman, "The Environmental Impacts of the World Trade Center Attacks," National Resources Defense Council, February 2002 at 1. The National Resources Defense Council conducted this preliminary research assessment five months after the World Trade Center disaster. As a result, this analysis does not reflect the long term and cumulative effects of the environmental emergency.

particles entered the air when the World Trade Center collapsed.¹³ Only a small fraction of the total toxin mix was identified.¹⁴

Some of the identified toxic mix included 300-400 tons of asbestos from the north tower, 4 pounds of lead from 50,000 personal computers, mercury from the thousands of fluorescent lights, and 130,000 gallons of transformer mix from Con Edison substations.¹⁵ Tons of plastic and office furniture created hazardous waste in the form of dioxins, furans, and polybrominated diphenyl ethers.¹⁶

Each identified toxin is a parasite to the public's health.¹⁷ For example, lead can damage the kidneys, central nervous system, and reproductive system.¹⁸ Some lead compounds are also carcinogenic.¹⁹ A brief exposure to mercury can result in lung damage, vomiting, diarrhea, skin rash, high blood pressure, and eye irritation.²⁰ Even dust alone can corrode the lungs.²¹

Because Sept. 11 is an unprecedented, Code Red, environmental emergency, the overall health risks are difficult to ascertain.²² The National Resources Defense Council has divided the affected population into three main categories: the first responders to the disaster site, the office workers in the towers and neighboring buildings, and the residents living in the area.²³ More than 2,500 firefighters experienced respiratory

13. *Id.* at 3-4. Other toxins include: mercury, polyvinyl chloride, copper, fiberglass, petroleum, and PCBS. These toxins are only a few of the composite toxic mix.

14. *Id.* at 3-4. Other toxins include: mercury, polyvinyl chloride, copper, fiberglass, petroleum, and PCBS. These toxins are only a few of the composite toxic mix.

15. *Id.* at 4. The toxic mix consists of the pollutants dispersed into the air from the materials in the twin towers.

16. *Id.* The levels of human exposure to the toxins are indeterminable.

17. Juan Gonzalez, *Fallout: The Environmental Consequences of the World Trade Center Collapse* 55 (2002).

18. *Id.* Infants and unborn children are most at risk from exposure to lead. Also, lead often mixes with bodies of water, creating a serious risk that the metal may be consumed in the public's drinking water.

19. *Id.*

20. *Id.* at 62. Mercury is especially dangerous to children, because it remains in the body for a long time. If mercury enters the nervous system, the person is likely to suffer from irritability, tremors, vision and hearing loss, and memory problems.

21. *Id.* at 80. The dust remained in the area even after people returned to work in the area. The dust was on rooftops, windowsills, and even inside commercial and residential buildings.

22. Megan D. Nordgren, Eric A. Goldstein, Mark A. Izeman, "The Environmental Impacts of the World Trade Center Attacks," National Resources Defense Council, February 2002 at 4. Even though the buildings had not been properly cleaned, the NRDC finds that the environmental health risk to New Yorkers working and residing outside Lower Manhattan may be low.

23. *Id.* The first responders include firefighters, policemen, construction workers, and emergency personnel. Interestingly, one lawyer reserved the right of these first responders to sue the city over long-term chronic health problems.

problems.²⁴ Nearly 600 people were treated for lung and eye ailments.²⁵

Approximately 50 percent of the residents surveyed in October 2001 reported various physical symptoms that can be attributed to contaminants in the air.²⁶

A year later, the most commonly reported ailment was a dry cough, known as the World Trade Center cough, that leaves the sufferer gasping for air.²⁷ According to Dr. Kerry Kelly, the chief medical officer for the New York Fire Department, the cough reduces lung capacity, creating a high sensitivity to inhaled particles, bacteria, and viruses.²⁸

The EPA's inconsistent reports and inaccurate test results raised concern amongst New Yorkers.²⁹ Only days after the collapse of the World Trade Center, Christie Whitman, Director of the Environmental Protection Agency, announced that the air was safe.³⁰ Her spokesman later elaborated that Administrator Whitman's statement meant that dangerous levels of asbestos and "commonly tested pollutants" did not contaminate the air.³¹

On its face, this finding presents several ugly distortions.³² First, the EPA tested only a small region of Manhattan below Canal Street,

24. *Id.* Approximately 750 firefighters working at Ground Zero have taken medical leave. Moreover, nearly 41 out of 62 rescue workers from Menlo, California reported severe respiratory ailments. Only two days after Sept. 11, five New York hospitals treated about 600 patients with lung and eye irritation.

25. *Id.* The National Resources Defense Council (NRDC) estimated that between 5,000 and 6,000 people reported short-term problems associated with the air quality near Ground Zero. The NRDC acquired this data by conducting a research sampling of the residents that live in lower Manhattan. Furthermore, students and teachers at Stuyvesant High School have reported health problems since the school reopened one month after the attacks.

26. Megan D. Nordgren, Eric A. Goldstein, Mark A. Izeman, "The Environmental Impacts of the World Trade Center Attacks," National Resources Defense Council, February 2002 at 6. Fifty percent of the residents constitutes nearly 6,500 people. Nearly 10,000 people have experienced short-term health problems from the air pollution. Air pollution has been the culprit in over 10,000 patients diagnosed with short-term health problems.

27. Laurie Garrett, *City Struggles to Contend with Widespread WTC Cough* (September 30, 2002), available at <http://www.newsday.com/news/health/ny-hsair>. It is estimated that at least hundreds, if not thousands of people, have suffered from the cough.

28. *Id.* Physicians agree that the cough is caused by microscopic glass fibers trapped in the lungs. However, physicians dispute whether other contaminants also contribute to the cough.

29. *Id.*

30. *Id.*

31. *Id.* In addition, the EPA announced only hours after the environmental emergency that the particles did not violate the national ambient air quality standards.

32. Laurie Garrett, *City Struggles to Contend with Widespread WTC Cough* (September 30, 2002), available at <http://www.newsday.com/news/health/ny-hsair>. This analysis does not account for contaminants that the EPA did not test for, however these contaminants may pose a potential health risk to the public.

excluding southeastern Manhattan and Brooklyn, which are downwind from the site.³³ Second, the EPA did not have the technology to test for several potentially harmful substances that were dispersed into the air, such as large dust particles and fiberglass.³⁴ The curtain is pulled on the EPA's Wizard of Oz-like technological façade by the singular fact that EPA had only one particulate monitor located near the World Trade Center.³⁵ Third, it is hard to believe that the largest environmental disaster in New York City did not violate national ambient air quality standards for particulate matter, which raises eyebrows at the adequacy of the standards in protecting the public's health.³⁶

IV. New York State v. the Clean Air Act

The EPA's job description is to set the national ambient air quality standard for common pollutants at a level that protects the public's health, outlined in the Clean Air Act.³⁷ The CAA gives the states flexibility in implementing the standards and the EPA polices the states by requiring the submission of a state implementation plan (SIP).³⁸ Every SIP's mantra is sufficient "implementation, maintenance, and enforcement" of the standards.³⁹ The EPA then reviews the SIP and chooses whether to give it a stamp of approval, conditional approval, or disapproval.⁴⁰ States may immediately apply the plan upon EPA approval.⁴¹ States that receive conditional approval have one year to revise the parts of the plan that were rejected.⁴² The EPA may impose

33. *See id.* On Sept. 11, NASA's satellite images mapped the southeast movement of the World Trade Center debris toward Brooklyn. Brooklyn hospitals have been flooded with patients suffering from respiratory ailments.

34. Megan D. Nordgren, Eric A. Goldstein, Mark A. Izeman, "The Environmental Impacts of the World Trade Center Attacks," National Resources Defense Council, February 2002 at 17.

35. *Id.*

36. *Id.*

37. JEFFERY M. GABA, ENVIRONMENTAL LAW 113 (1994).

38. *Id.* The flexibility of the SIP prevents sovereignty issues that may arise between the state and federal government.

39. *Id.* The flexibility of the SIP prevents sovereignty issues that may arise between the state and federal government.

40. *Id.* An SIP must examine the following criteria before imposing emission limits: air quality control regions, inventory of old sources of air pollution, modeling and monitoring the air quality after imposing the emission limits.

41. *Id.* The emission limitations of a SIP are composed of the following elements: emission reductions, dispersion techniques, new source review, interstate pollution, and adequate state resources. Emission reductions examine restrictions that may reduce pollution. Dispersion techniques analyze the reduction of pollution by monitoring it according to the weather. The New Source Review requires new sources to satisfy construction standards. The SIP must prohibit the state from increasing interstate pollution. Adequate state resources guarantee proper implementation of the SIP.

42. JEFFERY M. GABA, ENVIRONMENTAL LAW 113 (1994).

sanctions on states that submit an inadequate plan and these states must go back to the drawing board and present a revised plan within one year.⁴³

The starting bell to the wrestling match between the federal government and New York is the EPA's implemented plan to reduce the pollution in the nonattainment areas throughout New York State by requiring New York to obtain a permit prior to pursuing any new building projects.⁴⁴ The permit will be issued on the condition that the state can prove that the new project will not directly or indirectly create new air pollution problems.⁴⁵

V. Senator Clinton's and Governor Pataki's Polar Positions on Pollution

In response to New York's environmental crises, on October 26, 2001, Senator Clinton sent a letter to Administrator Whitman, requesting a national campaign to educate the public in ways to protect their health from the threatening poor air quality.⁴⁶ She soon proposed a Five-Point Plan to tackle the environmental issues associated with Ground Zero.⁴⁷ In summary, Senator Clinton's plan included: funding for long-term health monitoring systems at Ground Zero and other disaster sites, information on testing for and cleaning indoor air pollution made accessible to the public, initiatives to reduce harmful emissions from construction equipment, and lessons from air quality at Ground Zero applied to homeland security plan to alleviate any future disasters.⁴⁸

This plan safeguards the public's health, because it studies the long-term effect of a high-intensity air pollution episode. This study will effectively serve as precedent to resolving environmental emergencies and enlightening the public with knowledge to combat potential health

43. *Id.*

44. N.Y. Environmental Conservation Law § 19-0105 (1997). The purpose of the New York State air pollution control plan is both to control existing air pollution sources and prevent new air pollution sources.

45. *Id.* The regulations concerning indirect sources require permits for construction of highways, federally or state-owned parking lots, and garages.

46. Senator Hillary Rodham Clinton, *Senator Clinton Calls for Senate Hearing on Environmental, Health Concerns At Ground Zero* (December 4, 2001), available at <http://clinton.senate.gov/news/2001/12/2001C05A41.html>. Senator Clinton wrote: "I believe that local residents and parents with children who attend school in the area also deserve not only timely and accurate information about local air quality but also adequate protection from any potential health risks."

47. Senator Hillary Rodham Clinton, *Senator Clinton Outlines 5-Point Plan to Address Ground Zero Air Quality Concerns* (February 11, 2002), available at <http://clinton.senate.gov/news/2002/02/2002212A17.html>.

48. *Id.* Senator Clinton hopes that funding will increase last year's 12 million dollar budget for the Center of Disease Control.

risks.

Because Senator Clinton's Five-Point Plan is inherently reflective, it illustrates the importance of learning history's lessons on air pollution to ensure a strategy for conquering future environmental problems. If this proposal passes legislation, it would greatly improve America's response to environmental emergencies.

By March 2004, Clinton's steadfast pressure to address health risks resulting from Sept. 11 led to the Bush Administration's creation of the World Trade Center Expert Review Panel, comprised of government and outside experts.⁴⁹ The panel will investigate concerns raised by the EPA Inspector General's report.⁵⁰

On the other political side, in mid-December 2001, Governor Pataki requested that Congress amend the Clean Air Act to allow New York City to rebuild the PATH train and subway tunnels.⁵¹ Because transportation dramatically changed after the collapse of the World Trade Center, the waiver would allow replacement of the now obsolete transportation plan.⁵² Governor Pataki stated that the amendment was necessitated by the New York Transportation Council's loss of three members in Tower One and all records, significantly setting back the transportation and air quality research.⁵³ According to the State Department of Environmental Conservation, "Without the waiver, we're frozen into transportation projects that don't make sense anymore."⁵⁴

Environmentalists feared the waiver was over-reaching in length and application, because it would be in effect for 4 years and permit non-recovery related projects.⁵⁵ Because Governor Pataki's request added up to a complete bypass of all air quality standards, the plug was pulled on the life of the unconditional waiver by the U.S. House Committee on Energy and Commerce.⁵⁶ An amended version of the Clean Air Act exemption was approved with the following two hard-handed restrictions: the prohibition of new highway projects and a requirement

49. Senator Hillary Rodham Clinton, *Clinton Joins Announcement of EPA World Trade Center Expert Review Panel* (March 1, 2004), available at <http://www.friendsofhillary.com/news/20040301c.php>.

50. *Id.*

51. Richard Perez-Pena, *Pataki Seeks U.S. Waiver on Air Quality*, N.Y. TIMES, January 2, 2002.

52. *Id.*

53. *Id.*

54. *Id.* If New York is not permitted to immediately begin rebuilding, commuters will resort to using vehicles, which would exacerbate the already existing air pollution problems.

55. *Id.*

56. Mobilizing the Region, *Proposed Clean Air Act Waiver for NY Would Prohibit New Highways Before 2005* (September 9, 2002), available at <http://www.tstc.org/bulletin/20020909/mtr38202.htm>.

that air quality impacts of construction in downtown Manhattan be offset by corresponding emission reductions.⁵⁷ This amended bill waives until 2005 the New York transportation plan's conformation with the Clean Air Act's emissions targets.⁵⁸ However, in 2003 the state filed an interim report detailing progress toward clean air compliance.⁵⁹

VI. Clean Air Act Suffocated

The Clean Air Act is already facing a huge blow as a result of changes in regulation.⁶⁰ On November 22, 2002, the Bush Administration and the EPA weakened the Clean Air Act by eliminating the regulations that forced utilities, refineries, and manufacturers to modernize their plants with expensive anti-pollution equipment, exacerbating New York's air pollution problem.⁶¹

It is very likely that the waiver that Governor Pataki requests would affect more than one state.⁶² New York City's smog often travels upwind to the northeastern states.⁶³ As a result, Connecticut is listed as one of the top ten states that suffer from severe smog.⁶⁴

In 2001, Connecticut has suffered a number of times from the smog reaching an unhealthy standard.⁶⁵ These smog crises in Connecticut are déjà vu to the historic smog crises in New York City.⁶⁶ Like the smog crises in New York City, the Environmental Protection Agency lacks technology to determine the effect of the pollution on children, who appear to be the population most at risk.⁶⁷

General information is known about smog.⁶⁸ Smog is composed of

57. *Id.*

58. *Id.*

59. *Id.*

60. John Heilprin, *EPA Loosens Clean Air Rules*, THE ASSOCIATED PRESS, November 22, 2002.

61. *Id.* The EPA claims that loosening the regulation does not increase air pollution. Industry now has an easier means to modify its operations.

62. *Id.* The EPA provides industry with higher pollution limits. Also, industry conserves resources by not having to update pollution controls.

63. Jane Gordon, *Our Air, Their Air: Most of It Is Bad*, N.Y. TIMES, November 10, 2002.

64. *Id.* Because New York's smog travels to Connecticut, Connecticut suffers from poorer air quality than New York.

65. *Id.* The pollution list that ranked Connecticut's smog problem high was released in August 2001 by the United States Public Interest Research Group. The study was titled "Danger in the Air, the 2001 Ozone Season Summary."

66. *Id.*

67. *Id.*

68. Jane Gordon, *Our Air, Their Air: Most of It Is Bad*, N.Y. TIMES, November 10, 2002. According to Dr. Jonathon Fine, who works at a camp for asthmatic children, when the smog levels were high he noticed children had short irregular breaths, rather than long clean ones.

nitrogen oxide and volatile organic compounds.⁶⁹ Smog can damage the respiratory tract and further damage lung function in people with weak lungs.⁷⁰ Studies have shown that during these smog episodes, asthmatic children have difficulty breathing.⁷¹ With increasing smog levels, more asthmatic children will be left struggling to breathe.⁷²

During the mid-1990s, Connecticut, in an attempt to improve its air quality, sued New York for air contamination.⁷³ The court found for Connecticut and ordered New York to renovate sewage plants.⁷⁴

VII. Green Light for Green Building

The use of green building in the rebuilding process would promote water, energy, and waste management as well as maintain environmental justice on a local, federal, and international level.⁷⁵ Green building symbolizes a new frontier and embraces the underlying theme present throughout the rebuilding process, which is to forge ahead. The term "green building" ensures an environmentally beneficial approach to planning, designing, and constructing the entire building process.⁷⁶ Green building saves resources by reducing energy consumption and recycling, renewing, and reusing construction material. These environmentally friendly buildings are also wallet friendly, promoting low operating costs.⁷⁷

Central to green building is the use of solar energy to reduce waste.⁷⁸ By eliminating the quantity of pipes and wires for maintaining

69. *Id.* According to Mr. Blumenthal, who sued New York State to renovate sewage plants and to prevent the contamination of Connecticut's air, said, "We are a bad-air dumping ground. . . . The real problem is these air contaminants don't respect our state boundaries. They don't stop at the borders."

70. *Id.* Smog is the worst during the spring and summer. "Connecticut ranked third in the nation for the number of times the smog reading hit an unhealthy standard for a single one-hour period in 2001. It ranked 10th in the number of days the ozone reading hit unhealthy, meaning it was above the national standard, for an 84 period, according to the United States Public Interest Research Group Study, with data provided from the Environmental Protection Agency and state environmental departments."

71. *Id.*

72. Jane Gordon, *Our Air, Their Air: Most of It Is Bad*, N.Y. TIMES, November 10, 2002.

73. *Id.*

74. *Id.*

75. Bion Howard, *Green Building: A Primer for Builders, Consumers and Realtors*, (1997), available at <http://www.coopamerica.org/individual/marketplace/imgreenbld.htm>. Many professional builders have undertaken green building, because consumers are more aware of the environmental value of a home.

76. *Id.* Green building also governs commissioning projects and technologies.

77. *Id.* Green building provides a means to reverse the negative impacts of past development.

78. *Id.* In general, a green built home takes as much as 60% pressure off of the environment. It is reasonable to assume that this number would significantly increase

the water, electrical, and sewer systems, costs are cut for both the short and long-term.⁷⁹

In fact, only a block away from Ground Zero, on 20 River Terrace stands, “the world’s most environmentally correct residential high-rise,” serving as the poster child for green building near the World Trade Center.⁸⁰ This building uses a third less water than usual for an apartment building and generates 5 percent of its own electricity.⁸¹

Since Sept. 11, architects have heralded green building as the Holy Grail in improving the safety of buildings in the event of another terrorist attack.⁸² Architects have incorporated into their building designs natural power and air cleaning systems, because those systems prevent intense fires, which weakened the Twin Towers and contributed to their collapse.⁸³

The Green Buildings Working Group of the Civic Alliance to Rebuild Downtown New York encompasses 85 diverse organizations, incorporating the visions and ideals of the investors and public synthesized into a design for the future development of lower Manhattan, known as the Planning Framework.⁸⁴ The Planning Framework recommends monitoring sustainability metrics not only during the rebuilding process, but also prior to rebuilding and throughout the existence of the new developments.⁸⁵ According to the Green Building Rating System, minimizing carbon dioxide emissions prevents global warming and improves indoor air quality.⁸⁶ Reducing water usage conserves the municipal water supply.⁸⁷ Replacing platinum with recyclable material would limit the exposure to the contaminant. Lower

when applied to buildings.

79. *Id.*

80. Kirk Johnson, *A Green Foothold in Lower Manhattan’s Concrete*, N.Y. TIMES, October 15, 2002.

81. *Id.* “The skeleton of the 20 River Terrace has twice as many water pipes and air ducts in its apartments as conventional high-rise residential building. Each apartment will have its own dedicated air supply—filtered and humidified—and a separate water line just for flushing the toilets with treated waste water piped up from the treatment plant in the basement.”

82. Shira Boss, *Security Goes Green*, (May 20, 2002), available at <http://www.crainsny.com/page.cms?pageId=576>.

83. *Id.*

84. Civic Alliance to Rebuild Downtown New York, *A Planning Framework to Rebuild Downtown New York* (September 30, 2002), available at <http://www.civic-alliance.org>. The Civic Alliance also consists of a partnership between the Regional Plan Association and New York University, New School University, and the Pratt Institute.

85. *Id.* The Planning Framework was completed on April 26, 2002.

86. *Id.* Sustainability means that the recommendations will be maintained throughout the entire rebuilding process and throughout the life of the new developments.

87. *Id.* The Civic Alliance believes that a zero net carbon dioxide standard for energy and a zero net water usage can be achieved by passive solar designs and water strategies that take into account predicted climate changes expected in New York City.

Manhattan should maintain a zero net carbon dioxide emission standard for energy, a zero net water usage, and consume less platinum under the standard set by the U.S. Green Building Code.⁸⁸

The Civic Alliance's proposal combats socio-economic environmental racism by encouraging the Lower Manhattan Development Corporation and the Port Authority to work together to reduce solid waste by recycling, which avoids depositing the waste in low-income communities.⁸⁹ Green building would impede the production of power and sewage facilities in low-income communities, thereby promoting environmental equality.⁹⁰ Furthermore, these communities would not have to absorb a loss in land value.⁹¹

In general, the Civic Alliance is a proactive plan that examines all possible environmental factors, including climate change.⁹² The new developments should be located at higher elevations to withstand storm flooding, which is the most likely climate change for New York City.⁹³

The Civic Alliance supports the Governor and Legislature removing the 25 million dollar cap on the New York State Green Building Tax Credit and increasing the funding to promote a competitive market for environmentally friendly technology.⁹⁴ Governor Pataki signed into law the Green Building Tax Credit, which is the first tax incentive program in the United States that gives a financial incentive to environmentally conscience designers and builders.⁹⁵

The Green Building Tax Credit policy establishes the following set of criteria to determine whether the "construction, rehabilitation, and maintenance" of the building satisfies the state's goals of improving the environment and the public's health.⁹⁶ Alternative energy sources such as fuel cells or photovoltaic modules are required components to qualify for the tax credit.⁹⁷ Also, a green refrigerant that is made from a non-ozone depleting refrigerant must be installed.⁹⁸

In the operation of the building, the energy use must not exceed 65

88. *Id.*

89. Civic Alliance to Rebuild Downtown New York, *A Planning Framework to Rebuild Downtown New York* (September 30, 2002), available at <http://www.civic-alliance.org>.

90. *Id.*

91. *Id.*

92. *Id.*

93. *Id.*

94. Civic Alliance to Rebuild Downtown New York, *A Planning Framework to Rebuild Downtown New York* (September 30, 2002), available at <http://www.civic-alliance.org>.

95. *Id.*

96. State of New York Assembly, Doc. No. 11006, at 144-159 (2000).

97. *Id.*

98. *Id.*

percent if the base of the building is newly constructed.⁹⁹ If the base of the building is rehabilitated, the energy use must not exceed 75 percent.¹⁰⁰ The building's appliances and ventilation system must pass each year the inspection of a licensed professional approved by the Commissioner of Environmental Conservation.¹⁰¹

If the building passes inspection, the credit awarded is equal to the applicable percentage of allowable costs paid by the taxpayer.¹⁰² The taxpayer may be either the owner or the tenant.¹⁰³ If the building is located in an economic development area, the percentage is 1.6 percent, otherwise the percentage is 1.4 percent.¹⁰⁴

Using green building to rebuild Lower Manhattan may serve as an international example of the United State's new direction in minimizing climate change.¹⁰⁵ The United States is responsible for approximately half of all the carbon dioxide produced by the industrialized countries, which amounts to one fourth of the world's total carbon dioxide production.¹⁰⁶ In response to international pressure, President Bush requested American voluntary measures to slow the progression of the pollution.¹⁰⁷ Through the use of green building, Lower Manhattan may globally revitalize the principles of health, equality, and environmental concern for the 21st Century.

The impact of the final design on the environment will be examined by the city and state, and possibly extend to the federal level.¹⁰⁸ The Lower Manhattan Development Corporation is the agency that has been formally assigned to plan the rebuilding of Lower Manhattan.¹⁰⁹ Once a plan had been adopted, the State Environmental Quality Review Act consists of an administrative stage and judicial stage.¹¹⁰ The administrative stage allows for the public to voice its concern and for the agencies to gather information to make a fair decision.¹¹¹ The judicial stage decides on the unresolved issues presented in the administrative

99. *Id.*

100. *Id.*

101. State of New York Assembly, Doc. No. 11006, at 144-159 (2000).

102. *Id.*

103. *Id.*

104. *Id.*

105. New York Climate Rescue, *Green Ground Zero Campaign* (January 17, 2003), available at <http://www.climate-rescue.org/Greengroundzero.html>.

106. *Id.*

107. *Id.*

108. Civic Alliance to Rebuild Downtown New York, *A Planning Framework to Rebuild Downtown New York* (September 30, 2002), available at <http://www.civic-alliance.org>.

109. *Id.*

110. *Id.*

111. *Id.*

stage.¹¹²

To avoid a long judicial review process, the Civic Alliance proposes in its Planning Framework, that the State Quality Review Board create a checklist that would efficiently take into account the public's concern.¹¹³ The checklist would also present all aspects of the building process, including green building and energy efficiency to ensure the public is aware of the adoption of environmentally sound standards.¹¹⁴

The emergence of green building has set the stage for an environmental renaissance and a brighter dawn for New York City's skyline. Keeping with the spirit of Phil Connor's plight in Groundhog Day, New York's past has elucidated many lessons on the significance of pollution control and forge ahead as long as it fully learns and applies the lessons from its past.

Penelope Campoli

112. *Id.*

113. Civic Alliance to Rebuild Downtown New York, *A Planning Framework to Rebuild Downtown New York* (September 30, 2002), available at <http://www.civic-alliance.org>.

114. *Id.*

