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# Beyond the Building: Exploring the Link Between City Sustainability Policies and Historic Preservation Policies

## **Abstract**

Though the United States does not have a uniform climate or climate policy, cities are leading the way in sustainability policy creation. Historic preservation and sustainability are large concepts and neither, because of their values-based nature, have a single measurement of success. Linking the concept of historic preservation to sustainability can bring both into the next generation of practice. This thesis explores and analyzes the relationship between the sustainability policies and historic preservation policies of cities. It seeks to uncover whether some of the US cities that have been touted as the most sustainable use historic preservation as part of their approach to sustainability planning, and the extent to which they do so.

## **Keywords**

sustainability, policymaking, san francisco, boston, philadelphia

## **Disciplines**

Historic Preservation and Conservation

## **Comments**

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BEYOND THE BUILDING: EXPLORING THE LINK BETWEEN CITY  
SUSTAINABILITY POLICIES AND HISTORIC PRESERVATION POLICIES

JulieAnn Patricia Murphy

A THESIS

in

Historic Preservation

Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment  
of the Requirements of the Degree of

MASTER OF SCIENCE IN HISTORIC PRESERVATION

2013

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Professor of Architecture

For my Mom and Dad

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## **Chapter 1 - Introduction**

This thesis explores and analyzes the relationship between the sustainability policies and historic preservation policies of cities. It seeks to uncover whether some of the US cities that have been touted at the most sustainable use historic preservation as part of their approach to sustainability planning, and the extent to which they do so. It will add to recent work about the value that historic resources contribute to the creation and maintenance of sustainable communities in both the sustainability and historic preservation fields.

This study is not intended to unravel or evaluate the varying definitions of sustainability. It does recognize, rather, that sustainability has become one of the most salient issues in recent years in people's communities, homes, and personal lives. It also concedes that many different people use the term and idea of sustainability with varying interests and across realms of society. As such, this study accepts the natural tension between sustainability's role in dealing with the uncertainty of the future and the hope for enduring solutions. Finally, this thesis aims to inspire people in the sustainability and the historic preservation fields to acknowledge their mutual and overlapping interests and continue to engage in sustainability planning that advocates the use of historic preservation as an asset to long-term planning.

A completely sustainable or green city is an ideal, yet to be attained by any urban place in the world.<sup>1</sup> In the most perfect form, a green city is carbon neutral and fully sustainable. It is resilient in the face of natural disasters and its residents have strong, green behavioral habits, like taking public transportation, practicing recycling and water conservation, and using renewable energy. Sustainable cities take full advantage of their natural environments to sustain human life. They employ common sense and technology to meet their needs while preserving the ability of future generations to do the same.

Historic preservation and sustainability are large concepts on their own and neither, because of their values-based nature, have a single measurement of success. Historic preservation is often seen solely as the conservation of individual buildings and sites. Sustainability, on the other hand, is often seen as almost exclusively relating to the conservation of environmental resources. Linking the concept of historic preservation to sustainability can bring both into the next generation of practice.

Increased attention has been paid to the inherent relationship between the two fields in recent years. On the preservation side, the specific kinds of questions and themes addressed include: the embodied energy of existing buildings, the metrics used to assess the performance of historic buildings, and how to make historic sites more economically and environmentally sustainable.

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<sup>1</sup> Eugenie Birch and Susan L. Wachter, "Introduction: Urban Greening and the Green City Ideal," in *Growing Greener Cities: Urban Sustainability in the Twenty-First Century* (Philadelphia: University of Pennsylvania Press, 2008), 3.

Despite the growing number and range of topics studied, this study concludes that the relationship between historic preservation and sustainability planning have be examined at the city level.

The historic preservation field suffers from a perception that it is a practice that is only interested in “pickling” buildings. There is excellent work being presented that identifies the role of culture in sustainability planning, but it has been slow to be implemented into the policymaking and planning of sustainability in the United States. This paper urges the continued exploration of the role of culture, and historic preservation as a as tool that contributes to the manifestation of culture, in the planning of sustainable communities.

### **Literature Review**

In recent years, the relationship between historic preservation and sustainability has been explored with increasing frequency. Scientists, preservationists, and planners have studied the success of individual programs related to the built environment (like LEED), the embodied energy of individual buildings, and the way that sustainability could be integrated into historic site management. However, the investigation of the sustainable city and the policies that might lead to it has only recently emerged as an appropriate scope to measure the success of programs.

This literature review is divided between research trends between historic preservation and the sustainability movement. The understanding of recent

scholarship and its evolution is vital to understanding the undertaking of the goal of this thesis and future analysis.

The field of historic preservation has taken notice of, and has begun to analyze, the ethical and mutual bond between historic preservation and sustainability. For example, The National Trust for Historic Preservation's Summer 2012 *Forum Journal's* entire focus was "Green and Local Powers Preservation." The quarterly journal focuses on the most pertinent issues in preservation. This particular issue focuses on how to integrate historic preservation and sustainability in several facets. Numerous authors undertake ideas that could help the two movements integrate.

Patrice Frey, the editor of this *Forum Journal* edition, explains in "Integrating Historic Preservation and Sustainability at the Local Level" that "older buildings and historic preservation serve as the foundation for the creative, lively neighborhoods that give cities a strong sense of place and identity – and thus a competitive boost."<sup>2</sup> She explains that cities are going beyond the single building approach to historic resource management and engaging in sustainable placemaking. She argues that cities such a broader approach as contributing to competitive advantage in helping to attract and retain key demographics that are important to a city's economic success. She does observe, however, that not everyone sees the symbiotic relationship. Instead, some cities' sustainable

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<sup>2</sup> Patrice Frey, "Integrating Historic Preservation and Sustainability at the Local Level," *Forum Journal: Green and Local Powers Preservation*, Vol. 26 No. 4, National Trust for Historic Preservation (Summer 2012): 3.

planning efforts destroy historic buildings in the name of progress.<sup>3</sup> She explains that additional scholarship on the subject could change the state of the relationship.

Another author in the journal, Rachel Bowdon, looks at the relationship more closely to understand how to best frame the link between historic preservation and sustainability in, “Exploring the Link Between Historic Preservation and Sustainability.” In her article, Bowdon looks at the varying definitions of “sustainable communities.” She sees the chameleon quality of the definition as a strength that allows it to conform “to the knowledge, values, and philosophy of the political ideology of the community in which it’s employed.”<sup>4</sup>

Bowdon expands by explicating that the flexibility of the term “sustainable communities” has allowed for governments to mold the term to fit their particular needs and goals. There are “three E’s” that are often cited as the underpinning concerns of sustainability: environment, equity, and economics.<sup>5</sup> Bowdon explains that with the flexible definition, groups can focus on which of the three E’s they want to emphasize with their sustainable development policies. She clarifies that no matter what emphasis sustainable development may follow, all

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<sup>3</sup> Ibid.

<sup>4</sup> Rachel Bowden, “Exploring the Link Between Historic Preservation and Sustainability,” *Forum Journal: Green and Local Powers Preservation*, Vol. 26 No. 4, National Trust for Historic Preservation (Summer 2012): 35.

<sup>5</sup> Jeffery M. Chusid, “Teaching Sustainability to Preservation Students,” *Association for Preservation Technology International Bulletin*, Vol. 41, No. 1, (2010): 44.

goals fall under the following categories: Land Use, Transportation, Green Buildings, Economic Development, Equity/Social Justice, and Placemaking.

By pointing out these goal areas, Bowdon is strengthening the arguments that have been made about the development of sustainable cities within city planning literature. For example, the authors of the articles collected in *In Growing Greener Cities: Urban Sustainability in the Twenty-First Century*, first break down the history of the sustainability movement and then analyze how policies have affected each of the goal areas mentioned above. The editors, Eugenie L. Birch and Susan M. Wachter, explain in the book's introduction that a generation ago the government led initiatives to clean up air, water, and polluted lands. Subsequent federal legislation focusing on the goal areas supplements the original laws. The editors clarify that though the legislation was "driven by concerns for environmental quality, not by the broader greening issues, this legislation has achieved major milestones in cleaning up industrial pollution and thus has contributed to growing greener cities."<sup>6</sup>

The growth of the sustainability movement from a reaction to industrial pollution to large-scale green city movements can be understood by looking at the arch of environmental policies. Daniel A. Mazmanian and Michael E. Kraft do this through a framework explained in "The Three Epochs of the Environmental

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<sup>6</sup> Eugenie L. Birch and Susan M. Wachter eds., *Growing Greener Cities: Urban Sustainability in the Twenty-First Century* (Philadelphia: University of Pennsylvania Press, 2008), 4.

Movement.”<sup>7</sup> They explore the sustainability movement through public policy and government action. They explain that there has been extensive effort by the United States to clean up the environment since the 1970s. It has come at the cost of economic growth, in some cases, for business and industry and yet continues today.

The three epochs that Mazmanian and Kraft lay out are: (1) control and command, (2) environmental objective balancing, and (3) collaboration and cooperation. In their view, the first epoch (1970 – 1990) developed environmentalism as a social and political movement. It produced significant improvements in air and water quality. It included the creation of the National Environmental Protection Act, which spurred significant procedural changes across federal and state bureaucracies.<sup>8</sup> It also addressed ecosystem management, through legislation such as the Endangered Species Act of 1973, the Federal Land Policy and Management Act of 1976, and the National Forest Management Act of 1976.<sup>9</sup> The second epoch (1980 – 2000s) grew from the advances made in the first epoch and balanced the advancement of first epoch regulations with other social and economic priorities. This epoch produced legislation such as the Clean Air Act of 1990.<sup>10</sup>

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<sup>7</sup> Daniel A. Mazmanian and Michael E. Kraft eds., “The Three Epochs of the Environmental Movement,” *Toward Sustainable Communities: Transition and Transformations in Environmental Policy*, (Cambridge: The MIT Press, 2009), 3.

<sup>8</sup> *Ibid.*, 13.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*



Mazmanian and Kraft explain that the process and politics that emerged from these legislative processes helped to initiate a fundamental transformation in the way that Americans relate to the environment and conduct their lives. This is becoming the hallmark of the third epoch (1990 – present).<sup>11</sup> The third epoch will also continue to focus on collaboration and cooperation among affected stakeholders and incentive-based methods of policy implementation. This transformation into the third epoch is evidenced in the recent trends to discuss the role of sustainability in and from other fields.

In this spirit, the National Trust for Historic Preservation published an article on how to incorporate sustainability into master plans for Main Street programs. The article points out that “certainly, because existing buildings account for almost 40 percent of carbon emissions in the United States, greening historic buildings in our Main Street districts should be an essential activity in reducing emissions and promoting sustainability.”<sup>12</sup> But the essence of the argument is the larger picture: we have to understand how communities grow and develop, beyond individual buildings. Among the arguments that the Main Street programs rely on are those that have been emerging as the best way to manage change in cities. They stress the importance of a preservation plan in order to promote historic preservation and cultural history to its citizens while, at

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<sup>11</sup> Ibid., 15.

<sup>12</sup> Nick Kalogeresis, “Incorporating Sustainability into Downtown Master Plans & Codes,” National Trust for Historic Preservation, May/June 2011, <http://www.preservationnation.org/main-street/main-street-now/2011/may-june/incorporating-sustainability.html> (accessed October 24, 2012).

the same time, adopting policies that make healthier communities and create community sustainability.<sup>13</sup>

Both the sustainability movement and historic preservation are concerned with the livability of a place, that is, the quality of life. In *Historic Preservation and the Livable City*, Eric Allison discusses the benefits of historic preservation to aiding sustainable development. He points out that historic buildings have many of the attributes that are considered sustainable. Preservation is an effective growth management tool, saves embodied energy, and saves cities money, while encouraging economic development.<sup>14</sup>

The idea of livability is at the root of the early environmental movement. In 1987, the United Nations released the Report of Brundtland Commission, *Our Common Future*. It helped to frame the idea of sustainable development for constructive use in developed and developing nations. The report addressed the added stress that the planet endures in the name of development and progress. The report makes clear that Earth is a connected system and its users have to be aware of the impact of their actions. It advocates for the necessity of conserving resources while sustaining human development. Though economic in tone, the core message of this document is the idea of livability.<sup>15</sup>

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<sup>13</sup> Ibid.

<sup>14</sup> Eric Allison, *Historic Preservation and the Livable City* (Wiley and Sons Publishing, 2011), 164–175.

<sup>15</sup> “Report of the World Commission on Environment and Development: Our Common Future,” United Nations, 1987.

The idea of livability had been widely talked about even earlier with the publishing of Rachel Carson's seminal *Silent Spring*. The book, published in 1962, documented the detrimental effects of pesticides on the environment. The work was controversial at the time of its publishing, but has now become known for the advancement of a systems-based approach to ecology. The systems-based approach recognizes that everything on Earth is connected and part of a larger system of actions and reactions. Though her work focused on the pollution of the environment, its systems focus changed how people thought about the interaction between human beings and the environment.<sup>16</sup>

Carson's work motivated increased interest in the environment. The first pieces of US legislation of this era relating to the environment responded to the issues of pollution that Carson discussed. In *Governing the Environment: The Transformation of Environmental Regulation*, Marc Allen Eisner explains the legislative responses to environmental issues. In 1970, Congress allowed for the creation of the Environmental Protection Agency (EPA) and passed legislation that set the legal and institutional frameworks for the contemporary environmental era. Eisner explains that today, environmental protection is the most heavily funded regulatory responsibility in the United States. Though the EPA has had huge successes in the management of the environment, Eisner warns about the future of the current structure and the possible threat of it being disbanded with the support of several member of the Republican Party. He

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<sup>16</sup> Rachel Carson, *Silent Spring*,(New York: Houghton Mifflin, 1962).

explains that recent technological and policy innovations have to be integrated into current regulation.<sup>17</sup>

The beginning of the transformation that Eisner advocates has begun to occur at the local level. In his essay, “Sustainability in American Cities: A Comprehensive Look at What Cities Are Doing and Why,” Kent Portney explores why cities that seemingly should be solely dedicated to economic growth and development are taking great initiative in sustainability efforts. He explains that over the past 15 years “new ways of thinking about city policies have emerged, with special focus on healthy cities, livability, and sustainability.”<sup>18</sup> The traditional tradeoff between economic development on the one hand and environmental protection on the other one is shown to be a false one. Sustainable cities are not happening by accident. It is the result of concerted and coordinated efforts on the part of many people and parties in the city. He points out that about 45 major US cities have developed sustainability plans.

Portney argues that cities are helping to define the third epoch. Cities are taking the responsibility for the biophysical environment instead of deferring to the federal government. They are managing, protecting, and repairing it. He explains that the local level is motivated by several factors like the need to

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<sup>17</sup> Marc Allen Eisner, *Governing the Environment: The Transformation of Environmental Regulation*, (Boulder, Colorado: Lynne Rienner Publishing, 2007).

<sup>18</sup> Kent Portney, “Sustainability in American Cities: A Comprehensive Look and What Cities Are Doing and Why,” in *Toward Sustainable Communities: Transition and Transformations in Environmental Policy*, ed. Daniel Mazmanian and Michael E. Kraft (London, England: The MIT Press, 2009), 228.

combat climate change, the desire to protect the environment, and the need to attract residents.<sup>19</sup>

One such sustainability effort that many cities have adopted to attract residents is the idea of “smart growth.” Smart growth’s main argument is to control urban sprawl. The practice of land use planning and zoning help to initiate smart growth. Portney explains how land use planning helps to avoid the consequences of environmental degradation by regulating human activity.

Historic preservation can be classified as a component of smart growth. A widely held starting point for sustainable cities is that they are compact, high density, and mixed use. In *Conservation and Sustainability in the Historic Cities*, Dennis Rodwell explains that these characteristics are the main features of a historic city. He elaborates that they are places where “the need for daily travel is reduced; walking and cycling are prioritized; public transport is efficient and viable; energy consumption, the emission of pollutants, and the production of wastes are substantially lowered; and economy in the use of land is assisted by the need for less roads.”<sup>20</sup>

Rodwell argues that the sustainable city, to be successful, depends on a vision that progressively recovers key aspects of the historical models without retreating into it, while embracing the global dimension of the city. Central to the success of this idea is the realization that the physical fabric of a city constitutes

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<sup>19</sup> Ibid., 227–254.

<sup>20</sup> Dennis Rodwell, *Conservation and Sustainability in Historic Cities*, (Oxford: Blackwell Publishing, 2007), 113.

a diverse and rich non-renewable environmental resource. The physical fabric is inseparable from the diversity of the socio-economic frameworks that they support. Historic structures and infrastructure are environmental capital that have been inherited and can be cared for and creatively reused. In essence, existing buildings and the historic districts they collectively comprise are components of sustainability, and sustainability is a component of heritage.<sup>21</sup>

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<sup>21</sup> Ibid.

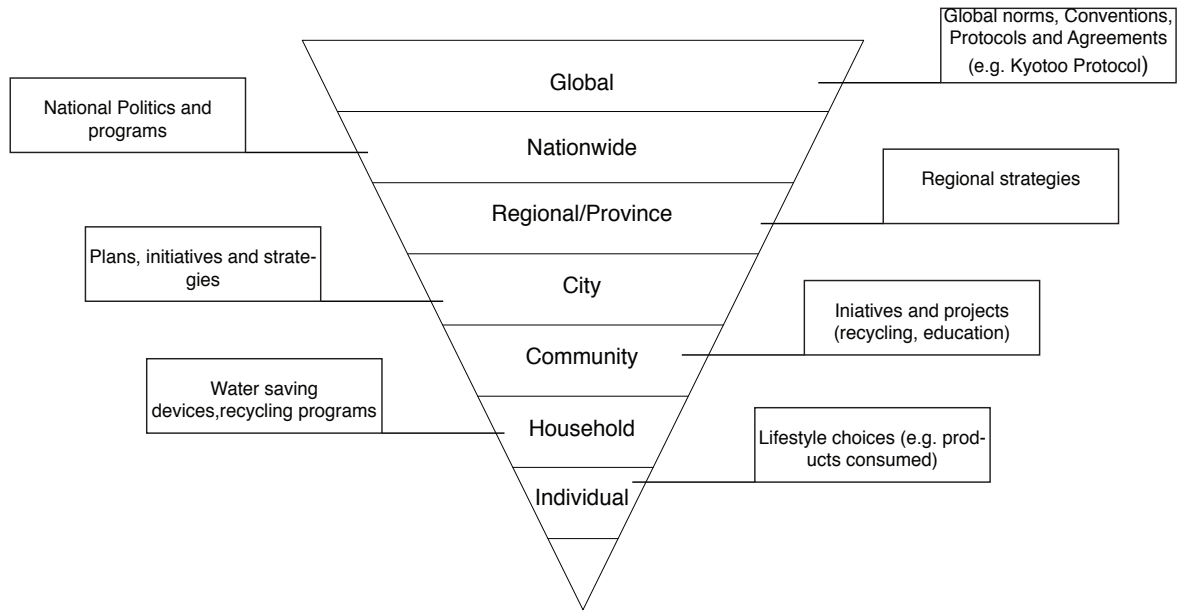
## Chapter 2 - Examination at the City Level

This thesis approaches the relationship between sustainability and historic preservation at the city level. While the United States does not have a federal carbon standard or climate policy, US cities are creating standards and comprehensive sustainability plans that are requiring technological advances and encouraging a more sustainable future. Although city budgets are facing major cuts, US mayors remain committed to sustainability and, in many cases and to varying degrees have recognized the contribution that historic preservation can make to that commitment.

It is critical to understand why sustainability is evaluated and confronted at the city level in order to understand the relationship between historic preservation and city sustainability policies. Decision-making and policymaking can happen at several levels. Figure 2.1 shows where decisions can be made. In terms of policy, it is the top four layers that have the broadest policy and the bottom three that have the most direct policy implementation impact. The city is the vital point between policy and implementation as it creates *and* implements policy.<sup>22</sup>

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<sup>22</sup> Chart take from - Peter S. Brandon and Patrizia Lombardi, *Evaluating Sustainable Development: In the Built Environment*, (Oxford: Blackwell Publishing, 2005), 166.



**Figure 2.1 – The Sustainability Complex<sup>23</sup>**

Creating sustainable communities is a very complex issue. When sustainable development is focused at the city level, the city plays a very significant role at the intersection between policy and enabling action. Planning for sustainable communities at the city level combines policy and action and is likely to have the greatest impact.<sup>24</sup> This is so because at the city level the government is more able to both implement and manage policy. It can also be noted that many policies grow from individual actions and activities, which fact can be more apparent at city rather than the state or national level. It is also true that citizens are more likely to be engaged with progress toward new policy if

<sup>23</sup> Brandon, *Evaluating Sustainable Development: In the Built Environment*, 166.

<sup>24</sup> *Ibid.*, 167.



they have an interest in their community, and people are more likely to identify with their smaller communities, rather than the larger US community.

Another reason for the growing popularity of green cities, the aimed development goal of being carbon neutral and environmentally conscious, is the absence of effective and competent environmental leadership at the federal level and in most states since the administration of George W. Bush. A shortage of federal and state direction can be traced back to the Reagan administration when the Environmental Protection Agency was seen as blatantly pro-business and anti-regulation.<sup>25</sup> The federal government helped urban environments through air and quality regulations, but it has not passed much inventive environmental legislation since the 1990 Clean Air Act.<sup>26</sup> Under the Clinton administration, the EPA began to turn over monitoring to states. As a result, the enforcement of federal environmental laws has been uneven, if not lenient.<sup>27</sup> Because states are often operating with limited budgets and less resources, some are unable to effectively administer policies. On the other hand, other states are unwilling due to the influences of strong business and the economic relationship between states and big business.

Managing the earth and its ecosystems is a complex and labyrinthine activity. The implementation of environmental-related goals requires a huge

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<sup>25</sup> Tom Daniels, "Taking the Initiative: Why Cities Are Greening Now," in *Growing Greener Cities: Urban Sustainability in the Twenty-First Century*, ed. Eugenie L. Birch and Susan M. Wachter (Philadelphia: University of Pennsylvania Press, 2008), 12.

<sup>26</sup> Tom Daniels, "Taking the Initiative," 12.

<sup>27</sup> Daniels, "Taking the Initiative," 12.

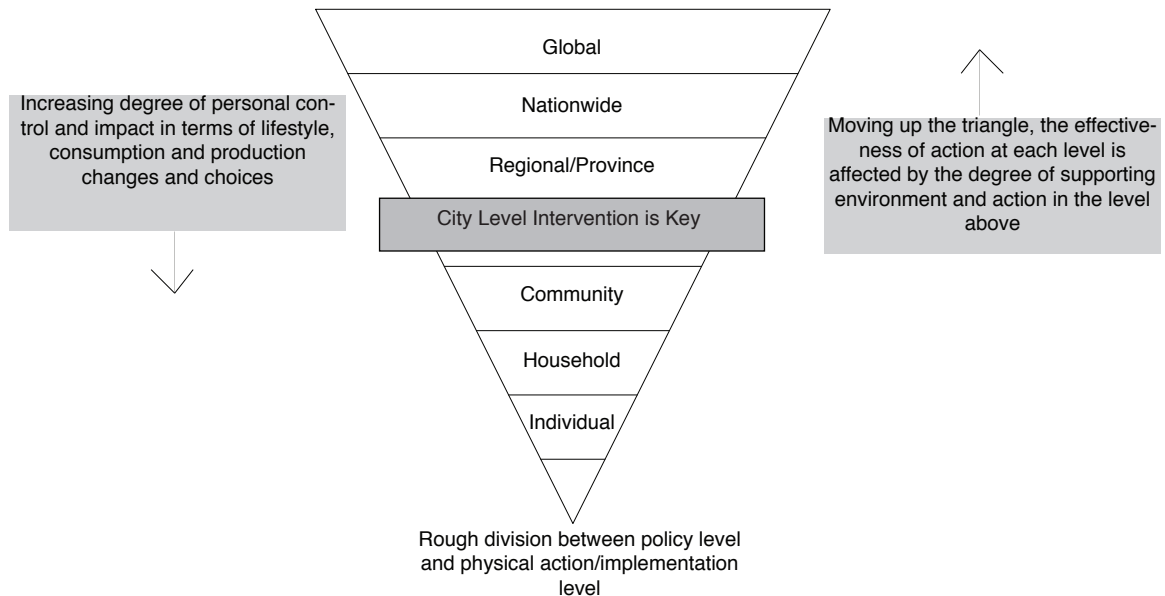
number of people to act in specific ways. The combined aspirations of environmental goals and influencing people's actions requires the translation of complex environmental relationships to direct roles of conduct. This is the difficult task of policy.<sup>28</sup>

Many city leaders have recognized that they cannot turn to the federal or state government for specific advice or funding for how to create green cities and implement effective sustainability policies. This is so because the influence of competing interests and political clout. National regulatory strategies that require direct government enforcement, while serving an important policy framework and having some success, need to be complemented with a myriad of public private and cooperative strategies that bring communities together in pursuit of their common interests in a better future.<sup>29</sup> This is achieved best at the city level. This is true for environmental policy as well as historic preservation policy. The National Historic Preservation Act of 1966 relies on an interconnected network of federal, state, local, and nonprofit support. In many respects, the local level has the most powerful and direct role. Cities provide a useful interface between policy and action, as demonstrated in Figure 2.2.

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<sup>28</sup> Inga Carlman, "The Rule of Sustainability and Planning Adaptivity," *Ambio* Vol. 34 No. 2005: 165.

<sup>29</sup> Daniel A. Mazmanian and Michael E. Kraft, "The Three Epochs of the Environmental Movement," in *Toward Sustainable Communities: Transition and Transformations in Environmental Policy*, ed. Daniel A. Mazmanian and Michael E. Kraft, (Cambridge: The MIT Press, 2009), 4.



**Figure 2.2 – What is the Significance of the City?**<sup>30</sup>

Of the 50 most populous US cities, more than 60% had sustainability or environmental departments or roles by 2006, signifying that cities are dedicating personnel and resources to sustainability and environmental issues more than ever before.<sup>31</sup> The city investment is not the only benefit at the city level. It is also possible at the city level for the nonprofit sector to play an important role in the greening of cities due to ease of access to local government and to the general population. There are also more abundant opportunities for public-private partnerships to be created and become effective at the city level. Public-private partnerships are created when a government and a private entity collaborate on a

<sup>30</sup> Brandon, *Evaluating Sustainable Development*, 167.

<sup>31</sup> Warren Karlenzig, "What Makes Today's City Green?" in *Growing Greener Cities: Urban Sustainability in the Twenty-First Century*, ed. Eugenie L. Birch and Susan M. Wachter (Philadelphia: University of Pennsylvania Press, 2008), 359.

project. Public-private partnerships are funded and operated through a partnership of government and a private sector business. They can be more effective at the city level because the level of investment from the private organization can be much more manageable for that entity to consider and the government bureaucracy at the city level, because of its small size and the greater flexibility private entities have in obtaining and spending funds compared to the federal government, is considerably more efficient.

Cities are a unique form of natural, built, and cultural environment. Because cities are tackling policy creation for sustainable development, there is an opportunity to examine the relationship between sustainability and historic preservation at a new scale. One of the most profound challenges at present is to create viable and sustainable political and institutional systems that can support strategies, programs, and policies for sustainable development.<sup>32</sup> This challenge can begin to be addressed through exploring relationships between sustainable development and existing planning activities like historic preservation. To examine the city as a system and to consider historic preservation and sustainable development as symbiotic activities is a way to better understand the relationship between the built, natural, and cultural environment. This thesis examines cities in which this symbiosis has been recognized in emerging sustainability policies.

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<sup>32</sup> Graham Haughton and Colin Hunter, *Sustainable Cities*, (London: Routledge, 2003), 285.

Sustainability, with its connotations of future availability of natural and cultural resources for coming generations, is a form of planning, which requires practitioners to be adept at intervening at the right scale and at the right time and at operating across scales.<sup>33</sup> Instead of deferring responsibility, cities have taken on the task of managing, protecting, and repairing the environment. And, instead of embracing politics that simply shift environmental impacts elsewhere in place or time, cities have begun to look to their larger metropolitan and regional areas in an effort to achieve greater coordination.<sup>34</sup>

The interest that cities have in creating sustainable communities is not limited to interest of conserving natural resources. They are seeking to improve and protect the quality of the environment for the long-term, but their interest in sustainability is motivated by many goals.<sup>35</sup> It is also evident in many strategies. Along with resource conservation, cities are undertaking making their cities walkable, improving access to fresh food, and creating more green spaces. Cities are convinced that sustainability is highly consistent with their needs and values. Sustainable development is a way to create a competitive advantage for their

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<sup>33</sup> Jeffery Chusid, "Teaching Sustainability to Preservation Students," *APT Bulletin* Vol. 41 No. 1 (2010): 48.

<sup>34</sup> Kent E. Portney, "Sustainability in American Cities: A Comprehensive Look at What Cities Are Doing and Why," in *Toward Sustainable Communities: Transition and Transformations in Environmental Policy*, ed. Daniel A. Mazmanian and Michael E. Kraft, (Cambridge: MIT Press, 2009), 249.

<sup>35</sup> Portney, "Sustainability in American Cities," 250.

economic development activities, a way to save money, especially on energy, and also a way to address quality of life issues.<sup>36</sup>

The US manufacturing-based economy of the 20th century has been transformed into a service-based knowledge economy. For the information age economy, environmental quality is a major economic asset. Skilled workers are increasingly unattached, able to settle nearly anywhere where there is Internet access, and they are drawn to healthy, aesthetically pleasing environments. A quality environment produces jobs.<sup>37</sup> A green city enables a choice of transportation options, areas in which to enjoy recreational activities, and opportunities for social interaction on the street and in public spaces.<sup>38</sup> This is also why historic preservation is important to cities. Many of the same things that people crave from green cities overlap with why people are interested in historic preservation. One can see much of the physical fabric of cities as a non-renewable resource itself, meriting some degree of protection.

For these reasons, the city is the best place to address the issues of sustainable development. The adage to “think globally, act locally” is true. The emphasis of placing people at the center of thinking and policy creates comprehensive approaches to sustainable development that include addressing not only the natural environment of the city, but the built and cultural environment

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<sup>36</sup> Ibid.

<sup>37</sup> Ibid., 249.

<sup>38</sup> Daniels, “Taking the Initiative,” 11.

as well.<sup>39</sup> These three elements of sustainable city planning are encompassed all in the act of historic preservation. The relationship between historic preservation and sustainability, and the city is the best scale to examine how each movement, and their connection with one another, is important for people. Former Seattle Mayor Greg Nickels explained the importance of the city in 2005 by saying,

“I’m a great believer in cities. I’ve worked in local government my entire adult life. Because it’s a place where you can make a difference: you can roll up your sleeves everyday and at the end of the day see the difference you have made...I think it’s appropriate that the cities of America are also the place where sustainability is talked about and really worked on everyday.”<sup>40</sup>

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<sup>39</sup> Alexander Garvin, “Greening Cities: A Public Realm Approach,” in *Growing Greener Cities: Urban Sustainability in the Twenty-First Century*, ed. Eugenie L. Birch and Susan M. Wachter (Philadelphia, University of Pennsylvania Press, 2008), 60.

<sup>40</sup> Garvin, “Greening Cities,” 60.

## Chapter 3 - Methodology

This thesis critically analyzes the sustainability and historic preservation policies of three US cities. The use of multiple case studies to explore the question of historic preservation's place in the plans and policies of sustainable cities is useful because it allows the analysis of the relationship between historic preservation and sustainability policies in action. The convergence of the data collected across the three case studies allows for the appearance of patterns to be evaluated and add to explanation building.

The cities have been chosen from among those included in the Green City Index. The Green City Index was developed and carried out by the Siemens Corporation in 2011. The Siemens Corporation is an international energy and electronics company, specializing in industry, energy, transportation, and healthcare.<sup>41</sup> Its Green City Index measures and compares the environmental performance of 27 major cities in the United States and Canada and their commitment to reducing future environmental impacts.<sup>42</sup> Siemens states that the goal of undertaking this index is to allow a comparison of cities against their peers and provide insights for city stakeholder groups into their city's strengths and weaknesses.<sup>43</sup>

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<sup>41</sup> Siemens, "About Siemens," accessed November 15, 2012,

<http://www.siemens.com/about/en/index.htm>.

<sup>42</sup> Siemens AG, *US and Canada Green City Index: Assessing the Environmental Performance of 27 Major US and Canadian Cities* (Berlin: Siemens AG, 2011), 10.

A complete list of scores is available on page 9.

<sup>43</sup> Ibid.



The use of the Green City Index was chosen because of its clear and enumerated methodology. Although there are other organizations that appraise and rank sustainable cities in the United States, the methodology used in those studies are not often as clear and available as those in the Siemens study. Though it is a corporation and could be interpreted to be a non-neutral researcher for this topic, the methodology used and the people associated with the report add to its merit as a sound source of accurate information. Several of the lists of sustainable cities published in recent years are rather insubstantial and the result of journalistic rather than substantive analysis. Another sound list is compiled by SmarterCities, an initiative of the Natural Resources Defense Council. Though comprehensive and well researched, this study's methodology was based largely on survey. Survey as a research tool is incredibly useful, but can be skewed by interpretation. Furthermore, the survey form and results were not made publicly available. The Siemens Green City Index, on the other hand, was based more on publically available resources. It also has a clear, well-defined and, most importantly for this thesis, transparent methodology.

The Economist Intelligence Unit, an independent business intelligence group, developed the Green City Index's methodology. The cities on the Index were chosen because they represent a number of the most populous metropolitan areas in the United States and Canada. The scores assigned to each city were derived from nine categories: CO<sub>2</sub>, energy, land use, buildings, transportation, water, waste, air quality, and environmental governance. To

develop the city scores, 31 indicators were developed. Of the 31 indicators, 16 were quantitative and 15 were qualitative. Whenever possible, the Index used publically available data. For the US cities, the sources of data included: US Census Bureau, US Environmental Protection Agency, US Geological Survey, National Oceanic and Atmospheric Administration, the Trust for Public Land, and the National Transport Database. For all categories, the most current information was used, with one exception. CO<sub>2</sub> emission measurements were taken from the 2002 Vulcan Project data over data available from city agencies because it ensured that CO<sub>2</sub> emissions were measured consistently over all cities. The 16 quantitative indicators were assessed using normalized data points representing each quantitative indicator and assigned a score from 0-10, 10 being the best. Analysts having expertise in the city in question scored qualitative indicators. Qualitative indicators were comprised of two or more sub-indicators, excluding one category. The clarity and comprehensiveness of the Green City Index methodology were the major factors in using the Green City Index as a source for the case study selection in this thesis. Therefore, alternative resources were explored and abandoned in favor of the Siemens Green City Index.

The cities chosen for this thesis are San Francisco, Boston, and Philadelphia. They represent the first, sixth, and thirteenth spots on the Green City Index, respectively.<sup>44</sup> They have been chosen because of the range of positions they represent on the Green City Index and the wealth of information

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<sup>44</sup> Ibid., 10.

available on their sustainability efforts. Another factor for case selection was the government structure in each city. Each city has a mayor-council form of government, where the mayor is vested with executive power. This is an important factor because much of this study evaluates policy creation and implementation. The value in examining cities with the mayor-council form of government is that it is one of the most common forms of local government and is most often the form adopted by larger cities. As this thesis hopes to find common policy practices that can be adopted by many places, it is central to have an analytical foundation based in the same governing model. Therefore, the fact that policy is created in effectively the same way in each city was an important consideration in case selection.

An additional similarity in government structure is the relationship between city and county government in each case city. San Francisco is a consolidated city-county government.<sup>45</sup> The mayor is also the county executive and the County Board of Supervisors acts as the city council. Similarly, the city of Philadelphia made the Philadelphia County government a legal nullity by adopting the Philadelphia Home Rule Charter in 1952.<sup>46</sup> And although the City of Boston and Suffolk County operated as a consolidated government for much of the 20<sup>th</sup> century, that relationship ended in 1999 with the movement toward abolition of

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<sup>45</sup> City and County of San Francisco, "Board of Supervisors - Does San Francisco have a City Council?" accessed on February 17, 2013, <http://sf311.org/index.aspx?page=262>.

<sup>46</sup> Philadelphia Home Rule Charter Art.1§1-102 (1952), [http://www.seventy.org/files/philadelphia\\_home\\_rule\\_charter.pdf](http://www.seventy.org/files/philadelphia_home_rule_charter.pdf).

county governments in Massachusetts. Suffolk County, today, has no county government.<sup>47</sup>

These cities have also been chosen as the case studies for the undertaking of this thesis because of their historic preservation records. Each city has an image as being sensitive to their historic fabric and individual city culture. San Francisco, Boston, and Philadelphia have historic preservation ordinances that created a historic preservation office with the authority to declare landmarks and districts and to regulate physical change to those landmarks and within those districts. This differs from some cities not seen as favorable to historic preservation that have preservation commissions in only an advisory capacity to the planning office or another city government office. Given the shared attributes and similar government structures, it is reasonable to suspect that the policies of these cities reveals if and how sustainability and historic preservation policies intersect.

To be able to evaluate the sustainability and historic preservation policies of these cities, this thesis first presents a broad overview of the intersection of historic preservation and environmental policy at the national level. It then explores, through research on the literature, how environmental policy at the federal level deviated from a shared history of environmentalism and historic preservation as conservation efforts.

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<sup>47</sup> Ma. Gen Law, Chapter 34B §1 (1997).

From there, analysis shows how each city has responded to the trends in federal policymaking. Information gathering is used to determine the state of policies in each city. To understand the nuances of policy construction and administration, each city's sustainability policies are evaluated by applying the same framework. The framework is adopted from Daniel Mazmanian's work on environmental policy. His work identifies factors that place a policy in one of three lifecycles: first epoch, second epoch, and third epoch, (which will be further explained below). He evaluates a policy's lifecycle based on the following categories, as shown in Figure 3.1: Problem Identification and Policy Objectives, Implementation Philosophy, Points of Intervention, Policy Approach and "Tools", Information and Data Management Needs, Predominant Political/Institutional Context, and Key Events and Public Actions.<sup>48</sup>

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<sup>48</sup> Daniel Mazmanian and Michael Kraft, "The Three Epochs of the Environmental Movement, in *Toward Sustainable Communities: Transition and Transformations in Environmental Policy*, edited by Daniel Mazmanian and Michael Kraft, 8. Cambridge: The MIT Press, 2009.

	First Epoch	Second Epoch	Third Epoch
	<p><b>Regulating for Environmental Protection</b> 1970 - 1990</p> <ul style="list-style-type: none"> <li>•pollution caused primarily by callus and unthinking business and industry</li> <li>•establish as national priority the curtailment of air, water, and land pollution caused by industry and other human activity</li> </ul>	<p><b>Efficiency Based Regulatory Reform and Flexibility</b> 1980s- 2000s</p> <ul style="list-style-type: none"> <li>•managing pollution through market-based and collaborative mechanisms</li> <li>•subject environmental regulations to cost-effectiveness</li> <li>•internalize pollution costs</li> <li>•pursue economically optimal use of resources and energy</li> <li>•introduce pollution prevention</li> <li>•add policies on toxic waste and chemicals as national priorities</li> </ul>	<p><b>Toward Sustainable Communities</b> 1990 - present</p> <ul style="list-style-type: none"> <li>•bringing into harmony human and natural systems on a sustainable basis</li> <li>•balance long term societal and natural systems through system design and management</li> <li>•rediscovery of/ emphasis on resource conservation</li> <li>•halt diminution of biodiversity</li> <li>•embrace an eco-centric ethic</li> </ul>
Problem Identification and Policy Objectives			
Implementation Philosophy	<ul style="list-style-type: none"> <li>•develop the administrative and regulatory legal infrastructure to ensure compliance with federal and state regulations</li> </ul>	<ul style="list-style-type: none"> <li>•shift to state and local level for initiative in compliance and enforcement</li> <li>•create market mechanisms for protection of the environment</li> </ul>	<ul style="list-style-type: none"> <li>•develop new mechanisms and institutions that balance the needs of human and natural systems both within the US and around the globe</li> <li>•focus on outcomes and performances</li> </ul>

	First Epoch	Second Epoch	Third Epoch
	<b>Regulating for Environmental Protection</b> 1970 - 1990	<b>Efficiency Based Regulatory Reform and Flexibility</b> 1980s- 2000s	<b>Toward Sustainable Communities</b> 1990 - present
<b>Points of Intervention</b>	<ul style="list-style-type: none"> <li>•end of the production pipeline</li> <li>•end of the waste stream</li> <li>•at the point of local, state, and federal governmental activity</li> </ul>	<ul style="list-style-type: none"> <li>•the market-place, which serves as the arbiter of product viability</li> <li>•provide education and training at several points along the cradle to grave path of materials and resource use</li> </ul>	<ul style="list-style-type: none"> <li>•societal level needs assessment and goal prioritization</li> <li>•industry-level attention to product design, materials selection, and environmental strategic planning</li> <li>•individual behavior and life-style choices</li> </ul>
<b>Policy Approaches and "Tools"</b>	<ul style="list-style-type: none"> <li>•policy managed by Washington DC</li> <li>•command-and-control regulation</li> <li>•substantial federal technology R&amp;D</li> <li>•generous federal funding of health and pollution prevention projects</li> </ul>	<ul style="list-style-type: none"> <li>•policy managed more by states and affected communities</li> <li>•federal role shifts to facilitation and oversight</li> <li>•introduction of incentive based approaches (taxes, fees, emissions trading) for business and industry</li> <li>•creation of emissions-trading markets</li> </ul>	<ul style="list-style-type: none"> <li>•comprehensive future visioning</li> <li>•regional planning based on sustainability guidelines</li> <li>•Total Quality Environmental Management and life -cycle design practice in industry</li> <li>•various experiments with new approaches</li> </ul>

**Figure 3.1 – From Environmental Protection to Sustainable Communities**

Policies in this thesis are evaluated based on the following of Mazmanian's categories: Problem Identification and Policy Objectives, Implementation Philosophy, Points of Intervention, and Policy Approaches and Tools. The omission of the categories Information and Data Management Needs, Predominant Political/Institutional Context, and Key Events and Public Actions is in order to control the scope of this thesis and the question it seeks to answer. Furthermore, the information necessary to gather data to analyze these classifications would be difficult to acquire for each city.

In order to develop a thorough understanding of each city's policy, interviews with city employees have been conducted. Interviewees included those from the sector of the government that deals with sustainability policy and programs and those who work in historic preservation offices. The objective of these interviews was to testify how policy is administered in both the historic preservation and sustainability sectors of the city governments. The questions focused on how policy is implemented and practiced. The questions also sought subjective options on how sustainability in each city is being pursued, the effects of policy on daily operations, and experiences with community opinions and reactions to such policies.

After city policies are analyzed under the Mazmanian criteria for evaluation, they were classified as being part of one of the following lifecycles: first epoch, second epoch, or third epoch. Mazmanian's explanation of each epoch's characteristic is based on environmental policy at the national level. This



study adapts the use of the signifying qualities of each epoch to be applied at the citywide level.

The first epoch is epitomized by command and control regulation. The emphasis of regulation at this stage is remedial rather than preventative actions.<sup>49</sup> Laws and policies in this era are often the product of a complex, cumbersome and adversarial rule-making process. This epoch's policies are also distinguishable by their lack of flexibility, lack of incentives, and absence of innovation.<sup>50</sup> The first epoch, because of its focus on remedial action, neglects the broader goal of sustainable development and is deficient in creating policies that can be addressed across policy domains. As a matter of implementation, first epoch policies require direct enforcement.

The second epoch is typified by policies that seek to shift from strict regulation to balancing environmental objectives with other social and economic priorities.<sup>51</sup> These policies emphasize human health. They also look to use market-based mechanisms, rather than direct enforcement. Policies at this epoch also support education training, stakeholder participation, and public input. Second epoch laws and programs institute incentives for business and industry.

The third epoch is hallmarked by work to create sustainable communities through sustainable development. Its focus is a comprehensive approach to achieve more enduring solutions for the problems of environmental pollution,

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<sup>49</sup> Mazmanian, "The Three Epochs," 4.

<sup>50</sup> *Ibid.*, 4.

<sup>51</sup> *Ibid.*, 13.

resource degradation, and the effects of climate change.<sup>52</sup> Policies of the third epoch link sustainability concepts to the concepts of community. As such, the third epoch is the stage in which most meaningful change occurs and is where cities should aim to be. That is not to say, however, that there not aspects of the first and second epochs that are not worth practicing. Regulation is necessary for certain reforms to be successful.

The application of this framework to the cities' sustainability and historic preservation polices illuminates how each epoch is still active at many scales. However, as cities seek to improve their green efforts, it is apparent that the sustainability plans implemented use components of first epoch and second epoch policy, but are based in the collaborative ideals of the third epoch. As historic preservation movements in each city strive to remain strong and relevant, the inclusion of their sometimes first epoch ordinances that are based in regulation can be folded into sustainability plans and brought into the third epoch.

The ultimate goal of this research and use of these frameworks is to uncover any thematic patterns that emerge from sustainable city practices and their relationship to historic preservation. This thesis uncovers the best policies and practices in cities and construct a guide of what works particularly well and is replicable in other US cities. This research will hopefully guide historic preservationists in how and where to focus advocacy efforts and policy

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<sup>52</sup> Ibid., 21.

reformation. It will also hopefully encourage more cross-disciplinary and cross-departmental cooperation in city government.

## Chapter 4 - Policymaking

Policymaking at the federal level in the United States is a complex, laborious, and often slow process. Each level of government as well as individual citizens rely on the network of policies laid out by the national government to solve problems. In the process of policymaking “problems are conceptualized and brought to government for solution; governmental institutions formulate alternatives and select policy solutions; and those solutions get implemented, evaluated, and revised.”<sup>53</sup> To make sense of the present while anticipating the future it is vital to understand the progression of the way people think about and frame the issues of historic preservation and the environment and the policies and strategies to address them.

Historic preservation and sustainability share a past. Both movements are grounded in a philosophy of conserving resources for the benefit of future generations. The early environmentalist movements and historic preservation were addressed at the federal level, in some cases in the same legislation, for example, through the creation of Yellowstone National Park, or the later formation of the National Park Service. However, as the effects of industrialization became evident through environmental degradation, the federal policies for the environment shifted from conservation to environmental protection. It is out of this shift that the two movements began to diverge.

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<sup>53</sup> Leslie R. Alm, Ross E. Buckhart, and Marc V. Simon, *Turmoil in American Public Policy: Science, Democracy, and the Environment*, (Santa Barbara: Praeger, 2010),16.

However, today, as cities confront the issues of creating sustainable communities, they are revisiting the ideas of conservation as the motivation for policymaking. By unraveling the parallel and intertwined histories of historic preservation and the environmental movement and the structure of policy making in the United States, it will become clear why city governments have taken it upon themselves to advance their own sustainability policies.

Protection of the environment is one of the oldest societal issues in the United States and environmental movements have helped it become part of the current paradigm of social values. As the United States was barreling ahead during the Industrial Revolution, the deleterious effects of progress began to reveal themselves and environmental conservation became a national concern. At the beginning of the 20<sup>th</sup> century, the United States witnessed a growing interest in the creation of public lands and the scientific management of natural resources. John Muir, founder of the Sierra Club, worked to conserve wilderness areas from commercial development. Progressive intellectuals, like Gifford Pinchot, sought to reconcile development and conservation through management. Under the influence of Pinchot, the Department of the Interior's Division of Forestry, which he headed, began to promote sustainable yield forestry.<sup>54</sup> The conservation and appropriate well-regulated use of resources was the hallmark of the environmental movement at this time.

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<sup>54</sup> Marc Allen Eisner, *Governing the Environment: The Transformation of Environmental Regulation*, (London: Lynne Rienner Publishers, 2007), 57.

Conservation focuses on the prevention of damage, injury, decay and loss. Early environmentalism was focused on the conservation of the environment. It contributed to the creation of national forests, protection of waterways, and the careful utilization of resources, like sustainable yield forestry.

Congress created the world's first national park, Yellowstone, in 1872. However, the concept of a system to conserve and protect a wide variety of our natural and cultural resources nationwide evolved slowly.<sup>55</sup> Growing interest in preserving scenic landscapes of the American west and early Native American cultures led to the passage of Antiquities Act of 1906, which authorized the President to "declare by public proclamation [as national monuments] historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest."<sup>56</sup> With the creation of the National Park Service in 1916, Congress established a national conservation agency with the primary responsibility of promoting and regulating its federally owned lands in a manner that would "leave them unimpaired for the enjoyment of future generations."<sup>57</sup> The non-impairment stipulated in this act would apply to both cultural and natural resources.

For generations, this was the predominant approach to environmentalism in the United States. A long national commitment to conservation was

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<sup>55</sup> US Dept of Interior. Federal Historic Preservation Laws. 1989-1990

<sup>56</sup> "Antiquities Act of 1906," 16 U.S.C 431 §2, Available from: [http://www.cr.nps.gov/history/online\\_books/fhpl/antiquities\\_act.pdf](http://www.cr.nps.gov/history/online_books/fhpl/antiquities_act.pdf); Accessed 2/20/2013.

<sup>57</sup> "National Parks, Military Parks, and Seashores," 16 U.S.C §1, Available from: <http://www.law.cornell.edu/uscode/text/16/chapter-1>; Accessed 2/10/2013.

established. The national monument and park creation approach created conservation preserves as a policy approach. Its aim was to sequester places and time, but was not as broad and inclusive as where it is now perceived that environmental and historic preservation policy can be. Subsequent federal historic preservation law is grounded in these early concepts of conserving cultural resources for the benefit of future generations. However, at the same moment in federal legislative history, environmentalism ceased being focused solely on conservation of resources and instead focused on the protection of the environment. The commitment to conservation delivered the contemporary environmental protection movement.

The environmental protection movement is different from conservation, in that it emphasizes limiting the negative impact of pollution and human activities rather than conservation of resources. Instead of prioritizing the stewardship of the natural environment, environmental protection reacted to the deleterious effects from human use of the natural environment and focused on the reparation of damage done. Environmental protection is thus rather more reactive than proactive.

Nonetheless, each movement's transformative legislation emerged in the same era. The seminal National Historic Preservation Act was passed in 1966. The NHPA is the basic federal law for identification, designation, and protection of historic resources of regional, state, and local significance. It relies on the interconnected network of federal, state, local, and nonprofit agencies for its

implementation and in many ways, has the most powerful and direct role at the local level. The beginning of the regulatory environmental policy began with the passage of the National Environmental Policy Act of 1969. It is during this time that the two movements began to diverge away from their shared history. Unlike the NHPA, the EPA's early administration was concentrated in the federal government.

Historic preservation policy continued to be guided by the principle of protection of resources, while environmental policy began to focus on environmental protection. For example, Section 8 of the General Authorities Act of 1970 directed the Secretary of the Interior to submit an annual report to Congress identifying National Historic Landmarks that exhibit known or potential damage or threats to their integrity while Section 9 of the Mining in the National Parks Act of 1976 required consultation with the Advisory Council on Historic Preservation to protect Landmarks threatened with destruction by surface mining activities.

At the same time, the environment emerged as a salient issue in the 1960s. In a February 1968 poll by the Gallup Organization, only 1 percent of respondents cited water and air pollution as "the most important problem" facing the community. In a national poll by Louis Harris and Associates in July 1967, only 38 percent of respondents believed that air pollution had become worse compared with a few years previous, whereas 57 percent believed that pollution



had remained about the same. Things would change significantly in the next several years.

With works like Carson's *Silent Spring* (1962), people increasingly began to demand environmental policy that reversed the detrimental effects of pollutants. Environmentalism became an integral part of the social protest movements of the 1960s. In a following national poll by Louis Harris and Associates in February 1970 it was clear that public opinion on air pollution had flipped. In response to the same question asked in 1967, 53 percent of the population believed that air pollution had become worse, whereas 39 percent believed it had stayed the same.<sup>58</sup>

The first Earth Day on April 22, 1970 marked the broadening and deepening of environmental concern. On Earth Day, demonstrations and rallies around the United States called for a political response to environmental degradation. Heavy media coverage contributed to heightened demand for policy response.<sup>59</sup> The inclusion of the environment as a protest subject along with issues of social justice and civil rights carved a place out for environmentalism as fundamental human rights issue.

Environmental protection as a social value has helped institutionalize it into the American policymaking process. The Federal government responded with the passage of The Environmental Policy Act in the 1970s. This Federal

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<sup>58</sup> Eisner, *Governing the Environment*, 57.

<sup>59</sup> *Ibid.*, 58.

legislation, in part, created the Environmental Protection Agency (EPA) and the Council on Environmental Quality. The EPA was not built from the ground up, but was the result of the reorganization and consolidation of multiple bureaus and agencies that had different but overlapping missions with cultures. The authority of the EPA was not organic, but came from the new regulatory statutes – The Clean Air Act of 1970, the Clean Water Act of 1972, and the Endangered Species Act of 1973. These early regulations sought to undo the damage of previous decades and to protect the environment.

The National Environmental Protection Act of 1969 and its component parts are filed under U.S.C Title 42, which deals with public health. United States Code Title 16 is the federal permanent law that regulates conservation in the United States. U.S.C Title 16 regulates everything from national parks to whale protection and forest regeneration. The breadth of this Title reveals the bond between environmental conservation and historic preservation. The fact that the federal government has identified the relationship between the management of both cultural resources and natural resources demonstrates that the fields of historic preservation and environmental conservation are considered as complementary fields. The filing of the NEPA under Title 42 rather than Title 16 demonstrates the divergence of historic preservation and the environmental movement through the focus on environmental protection rather than conservation. This divergence is further amplified in how environmental protection policy has continued to be made.

Early on the EPA accepted the agenda of the environmental movement. The environmental protection policy of the 1970s came from the close work of environmental groups and their congressional allies to secure their victories through regulatory design and was understood as keeping corporations accountable.<sup>60</sup> The 1960s witnessed the rise of the environmental movement in the United States as a public issue and the 1970s codified it as a political issue.

In President Nixon's 1970 State of the Union Address he asked, "shall we make our peace with nature and begin to make reparations for the damage we have done to our air, to our land, and to our water?" He continued, "Restoring nature to its natural state is a cause beyond party and beyond factions. It has become a cause of all people of this country."<sup>61</sup>

However, in years to follow in the political arena, environmentalism broke along partisan lines, with Democrats being viewed as more friendly toward the environment than Republicans.<sup>62</sup> This was revealed in the 1980s and 1990s when there was backlash to environmental legislation, driven by a portrayal of such legislation as disadvantageous to economic interests. There were few major domestic environmental initiatives during these two decades. This is due to the fact that policy outcomes are the product of a complex set of political and institutional forces.

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<sup>60</sup> Ibid., 61.

<sup>61</sup> Richard M. Nixon, "Annual Message to Congress on the State of the Union," The American Presidency Project: Document Archives (January 22, 1970): 1, <http://www.presidency.ucsb.edu/ws/?pid=2921> (February 20, 2013).

<sup>62</sup> Alm, Bukhart, and Simon, *Turmoil in American Public Policy*, 37.

The understanding of the complex political process behind environmental policy may help explain why federal legislation has stalled and why cities are now leading the way in environmental and sustainable policies. For many US citizens, environmentalism is a part of mainstream life and it could be argued that environmentalism has become one of the core values of American society, along with social justice, economic prosperity, national security, and democracy.<sup>63</sup> Even if it is not universally accepted as a core American value, it is nonetheless among the major issues requiring a range of policy response. Public support for environmental protection is becoming more vigorous and widespread, but there is no universal agreement on how to create solutions to environmental issues through policy. Policymakers also have to confront antagonists who advocate the abolition of the EPA, many of whom occupy the United States Congress and deny global climate change. Although opposition to “big government” agencies continues to gain ground in this country and further fragments political debate, environmental groups at the local, state, and national level have nevertheless achieved significant results through activism, mobilization and the exploitation of legal resources to restrain corporate and government behavior in regard to the environment. However, progress is frustrated by the role of opposition lobbies and interest groups in the United States’ policymaking process.

Though the environmental lobby in the United States is established, sophisticated, and respected, the success it has enjoyed in recent years is

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<sup>63</sup> Alm, Bukhart, and Simon, *Turmoil in American Public Policy*, 38.

increasingly seen as disproportionate to growing national and global environmental challenges. There are several reasons to explain this. First, many cities and policy makers see a fundamental conflict between economic growth and environmental protection. The American values of capitalism and the market system revolve around the belief that humans are responsible for the management of the world around them. Environmentalists, on the other hand, believe that the earth has finite resources and carrying capacity.<sup>64</sup> The early environmental policies focused on a regulatory system that was justified as a means to compensate for market failure, forcing corporations to internalize costs of pollution that would have otherwise been pushed on to society. Secondly, there is a clash between a democratic system that moves at a glacial pace and the decisiveness and speed with which environmental policy needs to be developed and implemented to be effective. These two factors may help explain the lack of recent Federal policy innovation, but do not change the role of the environment as an American value.

Rules, roles, and formal structures are of critical importance when understanding policy and politics of policymaking. They shape the organization of interests and structure elite and interest group access to sites of policymaking. Also, the way agencies and organizations are staffed will affect whether policymakers have access to certain bodies of expertise and the extent to which this expertise is integrated into decisions regarding resource flows, policy design,

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<sup>64</sup> Alm, Bukhart, and Simon, *Turmoil in American Public Policy*, 43.

instrument choice and evaluation. Access will determine the ways in which other governmental and nongovernmental actors are integrated into policymaking and implementation. These factors will affect the emphasis, consistency, and performance of policy.<sup>65</sup>

It is important to understand how policies are formed and to remember that environmental politics is no longer grass roots. The largest environmental groups are the older organizations that were founded to focus on early conservation issues. Such groups include the Sierra Club, the National Audubon Society, the Izaak Walton League, the Wilderness Society, the National Wildlife Federation, the Defenders of Wildlife, the Nature Conservancy, and the World Wildlife Fund.<sup>66</sup> These groups wield considerable political influence and their combined budgets approach \$500 million.<sup>67</sup>

But the environmental movement no longer relies solely on such nonprofit actors to achieve political success. Business associations and corporations have joined together to form larger umbrella organizations. For example, the U.S. Business Council for Sustainable Development was created in 2002 and represents major trade associations (the American Forest and Paper Association) and corporations (Dow Chemical, DuPont, Shell Oil) in working to frame policy debates over the issues of sustainable development related to business, though they are among the largest carbon intensive companies.

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<sup>65</sup> Eisner, *Governing the Environment*, 54.

<sup>66</sup> *Ibid.*, 46.

<sup>67</sup> *Ibid.*

Organizations like these play a huge role in the adequacy of regulatory science and the shaping of policy. Different umbrella organizations address different constituencies and the policies of one agency may contribute to the very problems that the other organizations are trying to manage. These complex relationships help to explain the disorganization and uncertainty in policymaking in the United States.

The relationship between lobbyists, umbrella organizations, and the government has created so-called “Bootlegger-Baptist” coalitions -- model of politics where opposite positions on an issue are held, but vote the same way. For example, Congress may design legislation that meets the demands of environmentalism by promoting more stringent air pollution regulations, while simultaneously catering to select economic actors by forming requirements that impose higher standards on new participants in order to restrict competition. It may benefit passage, while sacrificing effectiveness.<sup>68</sup>

This relationship has created a US policy instrument that is command and control and has done little to support policy innovation. Government commands business to adopt specific standards and controls its behavior through the imposition of sanctions.<sup>69</sup> Results and accountability are the hallmarks of regulatory design. This approach has been largely successful for “cleaning up” the environment and generating significant improvements in environmental

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<sup>68</sup> Ibid., 11.

<sup>69</sup> Ibid., 13

quality. However, the regulatory framework has been frustrated by the inclusion of many actors from inside and outside the government, and has revealed that it may not be the best or only approach for long-lasting solutions to environmental sustainability.

As sustainability policy innovations continue to be envisioned, created, implemented and continuously evaluated at the citywide level, there is an opportunity for the environmental movement and historic preservation to converge again. With the identification and creation of policy and initiative networks that support the ideals of conservation, health, and safeguarding for the future, it is possible that the two movements can once again be not only folded into the same policies, but implemented in a broad, complete and intelligent way.



## **Chapter 5 - Case Study One: San Francisco**

The city of San Francisco sits on the Pacific coast of California. The coastal city of just 49 square miles is surrounded by water on three sides. It has a population of just over 800,000 people.<sup>70</sup> Its small area and high population makes it nearly twice as dense as the average of the 27 cities studied in the Siemens Green City Index.<sup>71</sup> The city's response to future environmental changes has garnered global attention and has earned the city the top spot on Siemens Green Cities Index.

San Francisco's unique geographic position makes it exceptionally susceptible to environmental changes. Recent initiatives and programs have addressed the city's position and how to best respond to change and development. However, San Francisco does not operate in a vacuum and must be considered as a component of a larger system, the state, in order to appreciate how its policy creation and initiation is effective.

### **California's Response**

Like all American cities, San Francisco is bound to adhere to the laws of not only the Federal government, but those laid out by the State of California as well. California state environmental laws are some of the most stringent in the country. For example, the state has legislation that requires electricity providers

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<sup>70</sup> US Census Bureau, "State and County QuickFacts 2010", accessed February 13, 2013, <http://quickfacts.census.gov/qfd/states/06/0667000.html>.

<sup>71</sup> Siemens AG, *US and Canada Green City Index: Assessing the Environmental Performance of 27 Major US and Canadian Cities* (Berlin: Siemens AG, 2011), 119.

to attain a portfolio of 20% renewable resources.<sup>72</sup> It also has developed legislation that requires CO<sub>2</sub> emissions reduction plans for tailpipes<sup>73</sup>. Though these environmental laws are quite strict, when evaluating them using the Mazmanian timeframe, it is clear that these initiatives are first epoch and may help to explain why cities, like San Francisco, have felt compelled to augment state standards.

### **Problem Identification and Policy Objectives**

The state actions, like requiring the electricity providers to attain a portfolio of 20% renewable resources and CO<sub>2</sub> emissions reductions for tailpipes are activities that regulate for environmental protection. The emphasis of these actions on the effects of pollution caused by consumption and the priority to curtail pollution from human activity clearly places these activities in the first epoch timeframe.

### **Implementation Philosophy**

Another indicator that the California state laws for increased renewable energy sources is a first epoch policy is that it relies on an administrative and regulatory infrastructure to ensure compliance. In this case, the California Public Utilities Commission is responsible for ensuring that public utility companies are adhering to the law. Similarly, the CO<sub>2</sub> tailpipe emissions standards are regulated

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<sup>72</sup> *Renewable energy: California Renewables Portfolio Standard Program*, S1078, 107<sup>th</sup> Cong., (2002).

<sup>73</sup> *Vehicular emissions: greenhouse gases*, AB 1493, 107<sup>th</sup> Cong., (2002).

by the administrative office of California Air Resources Board, a department within the state's Environmental Protection Agency

### **Points of Intervention**

First epoch policies are branded by the intervention being at the end of the production pipeline. The focus of the increase in renewable resources by the state stresses a desired outcome instead of innovation and changed life-style choices. The CO<sub>2</sub> reduction in tailpipe emissions also is very clearly a end of the pipeline intervention. The fact that these interventions are at the end of production instead of the beginning is a tell tale sign of first epoch policy.

### **Policy Approaches and Tools**

Both of the state policies discussed are examples of "command and control" regulation. Command and control regulation is the regulation of an activity by legislation that states what is permitted and legal. Though these two policies are guided by the overall goal of lowering contributing factors to climate change, the route taken through legislation is a firm approach that relies on punishment rather than incentives for compliance.

Though the examples shown above indicate that some of California's state environmental policies are in the first epoch, that is not the case with all of them. In many respects, California is well ahead of the national curve on environmental legislation. For example, California has established the California Climate Action Registry, which created a non-profit, voluntary organization that certifies

companies and local governments to quantify and register their greenhouse gas emissions for possible future trading systems.<sup>74</sup>

### **Problem Identification and Policy Objectives**

The California Climate Action Registry is a third epoch endeavor because it seeks to balance long term societal and natural system needs through management.

### **Implementation Philosophy**

The California Climate Action Registry created a new non-profit institution, which is a signal that it is a third epoch exercise. It focuses on recording performance as a way to improve CO<sub>2</sub> emissions.

### **Points of Intervention**

The point of intervention, however, was an end of the production assessment. In that respect, this program was in the first epoch. Instead of goal prioritization, the emphasis of the program was collecting information on pollution that had occurred, instead of its reduction.

### **Policy Approaches and Tools**

The policy approach of the California Climate Action Registry is third epoch as well. The emphasis of the program was to create a way to measure, monitor, and verify carbon emissions of participating companies and organizations. The goal of the reporting was to establish accurate and consistent

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<sup>74</sup> *Greenhouse gas emission reductions: climate change*, S1771, 106<sup>th</sup> Cong., (2000).

reporting standards for future Greenhouse Gas reduction requirements, which demonstrated future visioning.

Though the California Climate Action Registry was a noble program with lofty ambitions, it closed in December 2010 due to the desire to have consistent data reporting and an integrated system that was not achievable at the state level. This closure demonstrates that perhaps the idea was right, but the scale was wrong. The fact that nearly every aspect of the program is classified as a third epoch policy, but that it was unable to survive is exemplary of why some of the larger, societal and cultural aspects of environmental laws and programs have to be confronted on a smaller scale.

### **San Francisco's Response**

Perhaps the most important legislation is that which relates to the reduction of carbon emissions. The Kyoto Protocol is the United Nations Framework Convention on Climate Change (UNFCCC). It was passed at an international meeting to discuss the global response to climate change in Kyoto, Japan in 1997. The UNFCCC is the resulting environmental response treaty, with the goal of achieving "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." There are 191 states that have ratified the treaty, but the United States is not one of them.

Therefore, policy relating to the reduction of greenhouse gas emissions is left up to individual states. California, despite its strong environmental

regulations, is the second largest greenhouse-gas polluting state in the nation, and emits 2% of global human-generated emissions. The state has recognized that they have a duty to address their contribution to global warming. While California's Climate Action Registry was an important step in identifying and rectifying practices that contribute to global warming, citywide plans are what are effecting real action.

San Francisco is a consolidated city-county government and is simultaneously a charter city and a charter county. The mayor is the county executive and the board of supervisors serves as the city council. The city charter explains, "The City and County may make and enforce within its limits all local police, sanitary and other ordinances and regulations."<sup>75</sup> In combination with the state constitution, the city charter is the enabling legislation for the city to create citywide laws.

In 2002, San Francisco passed Resolution 0158-02, which supported "efforts to curb global warming, adopting greenhouse gas emissions reduction goals for the City and County of San Francisco in excess of the targeted goals of the Kyoto Protocol, and calling for continued actions toward achieving these goals."<sup>76</sup> The Resolution further explains that "local actions can help to pave the way for national leadership, by providing working models of greenhouse gas reduction initiatives that reinforce other high priority policy objectives."

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<sup>75</sup> San Francisco Charter. art I, §1.101.

<sup>76</sup> Reducing Greenhouse Gas Emissions, 0158-02, Board of Sup. (2002).

In an effort to achieve these stated goals, San Francisco implemented the *Climate Action Plan* in 2004.<sup>77</sup> The development and implementation of a comprehensive and overarching plan is exemplary of a third epoch approach. It is a platform within which environmentalism, urban planning, and historic preservation can be addressed as part of the same system.

### **Problem Identification and Policy Objectives**

The *Climate Action Plan* is centered on the main goal to dramatically reducing overall city greenhouse gas emissions to 20% below 1990 levels by 2012. The *Climate Action Plan* is laid out in 4 chapters. It covers the causes and impacts of climate change, a plan for inventory of greenhouse gas emissions, actions to reduce greenhouse gas emissions, and an implementation strategy for the near future. The emphasis on balancing long-term social and natural systems needs through management and design make this strategy a third epoch plan.

### **Implementation Philosophy**

The implementation strategy set out in this plan is one of its strongest virtues. It first identifies areas where differences can be attained and then enumerates achievable goals in several areas. For example, the plan recognizes that much of the region's pollution is due to transportation. The implementation strategy then offers several ways that damage from transportation can be mitigated. The implementation strategies lay out an initiative, the next steps for it

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<sup>77</sup> *Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions*, (San Francisco, CA: San Francisco Department of the Environment and San Francisco Public Utilities Commission, 2004).

to be realized, names the implementing agencies, identifies possible funding, and finally lists progress indicators. This is done for transportation, energy efficiency, renewable energy, and solid waste. The emphasis on outcomes and performance is indicative of a third epoch approach. This systems approach, along with the recognition that several government agencies must work together epitomizes third epoch implementation philosophy.

### **Points of Intervention**

The *Climate Action Plan* is representative of the third epoch for its points of intervention. The intervention recommendations stress the incorporation of laws that were previously in place and new strategies to curb climate change. The plan explains, “while the original objectives of most of the existing actions listed here (e.g. reducing air pollution, increasing energy efficiency, increasing recycling) were not explicitly developed to reduce greenhouse gas emissions, they do just that. *The Climate Action Plan* seeks to reinforce and expand these existing efforts and to link them under the common goal of climate protection.”<sup>78</sup> This emphasis of linking previous efforts to new ones shows that the city understands the need to balance societal needs with goal prioritization. By the incorporation of old and new and the recognition of the benefits of policies in place, the city is able to suggest implementation that is achievable.

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<sup>78</sup> *Climate Action Plan for San Francisco*, 3-1.



## **Policy Approaches and Tools**

The policy approaches outlined in the *Climate Action Plan* break the implementation into four areas of focus: Transportation, Energy Efficiency, Renewable Energy, and Solid Waste. The division of areas for improvement allows for the plans that exist to be evaluated and for new strategies to be introduced. The comprehensive outlook for the future and the emphasis on education and training are indicative of the third epoch. The plan's exploration of sustainability as more than just reactionary is at the heart of the third epoch and the importance for long-term solutions.

Clearly, San Francisco has entered the third epoch in its environmental sustainability efforts. The examples above illustrate a commitment to a comprehensive approach to creating a sustainable city. The areas of focus of Transportation, Energy Efficiency, Renewable Energy and Solid Waste may seem to have little relation to historic preservation. However, as examined below, if a closer look is given to some of the policies set forth in the *Climate Action Plan*, it is evident that historic preservation's goals, principles, and practices contribute greatly to the creation and maintenance of a sustainable city. However, in its current form, the *Climate Action Plan* does not explicitly state the role of historic preservation, instead, it identifies areas where the concepts of historic preservation could easily be added to create favorable environmental results, like Transportation and Energy Efficiency.

## San Francisco's Historic Preservation Ordinance

As demonstrated above, state environmental policies are beginning to be more focused on comprehensive and innovative approaches to sustainability issues. Though the scale may not be right, the instinct to approach the issues related to sustainability in ways that do not rely solely on regulation is indicative of the next generation of sustainable planning. State actions like this help to inspire and initiate movement at the city level and have been a boon to California's endeavor to draw attention to the issues of sustainability.

Historic preservation, on the other hand, adheres to a mostly regulatory framework. Historic preservation has had a successful past in San Francisco. The legal framework for historic preservation in the city was established in 1967 with the adoption of Article 10 of the Planning Code.<sup>79</sup> The ordinance provides for designation of local landmarks, the designation of historic districts, evaluation of proposed alterations and the ability to delay demolition of historic buildings for a period of up to one year. Article 10 also created the Landmarks Preservation Commission, known today as the Historic Preservation Commission. In addition to approving or denying historic designations, the Commission reviews the

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<sup>79</sup> *San Francisco Preservation Bulletin 9*, (San Francisco, CA: San Francisco Planning Department, 2003), 1.

effects of development on historic resources as required by California Environmental Quality Act (CEQA).<sup>80</sup>

### **Policy Identification and Objectives**

San Francisco's historic preservation ordinance regulates certain establishes human activity and can thus be characterized as a first epoch approach to policy. San Francisco's historic preservation ordinance places buildings at center stage "despite the feasibility of preserving them."<sup>81</sup> The attitude of policy adherence as a priority is a first epoch approach to policy.

### **Implementation Philosophy**

The City's historic preservation ordinance established the Historic Preservation Commission, which is the administrative and regulatory arm that ensures policy compliance. If it were a second or third epoch approach to implementation philosophy, the implementation would use market mechanisms to

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<sup>80</sup>The California Environmental Quality Act (CEQA) of 1970 requires consideration of a project's (any that requires discretionary approval by a government agency) effects on historical, architectural, and archaeological resources as part of the state's environmental review process. It is the foundation of the environmental policy and law in California and encourages the protection of natural, environmental, and historic resources.

"FAQs," Department of Environmental Review and Assessment, accessed April 13, 2013, [http://www.dera.saccounty.net/FAQs/tabid/88/Default.aspx#when\\_does\\_ceqa\\_apply](http://www.dera.saccounty.net/FAQs/tabid/88/Default.aspx#when_does_ceqa_apply).

<sup>81</sup> San Francisco Planning Code Article 10, §1001.

encourage historic preservation or create organizations that focus on outcomes instead of adhering to the bureaucratic process.<sup>82</sup>

### **Points of Intervention**

The historic preservation ordinance also suffers from a condition that affects all regulatory frameworks in that it focuses on the result of action and is a first epoch activity. Though first epoch approach is effective in some ways, as it was in the “cleaning up” phase of federal environmental policy, it now, too has to go beyond the first step of saving sites and districts. The duties of resource designation, permit approvals, and appropriateness reviews are acts that focus on managing change, balancing individual projects with legislative community expectations. In this way, it is an intervention that happens too late. It is one that often creates an adversarial relationship between community members, property owners, and the local government.

### **Policy Approaches and Tools**

Finally, the City’s historic preservation ordinance is a first epoch approach because it relies on command and control as a policy tool. Command and control

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<sup>82</sup> The Mills Act is an economic incentive program available in California for private property owners of qualified historic buildings. Enacted by the State of California in 1976 and amended in the San Francisco Administrative Code in 1996, the Mills Act provides for a potential 50 percent reduction in property taxes on qualified historical properties in exchange for the owner's agreement to maintain and preserve the resource in accordance with standards established by the Secretary of Interior’s Standards for the Treatment of Historic Properties. San Francisco Planning Department, “Mills Act,” accessed April 15, 2013. <http://www.sf-planning.org/index.aspx?page=1825#mills>.

does not consider all factors of a problem, but instead stringently adheres to what the written law deems legal or illegal.

Although San Francisco is motivated to continue its goal of becoming a sustainable city, there are issues like historic preservation that could be dealt with in a better way. There is a philosophical acceptance in the city's governing documents that suggest that it understands the special role of historic preservation in planning. However, its official historic preservation policy remains rooted in the regulatory, first epoch framework. Though this is a useful and necessary administrative approach for the continued organized governance over the city's historic resources, it does not have to be the only official city policy for historic preservation. Individual buildings and districts will always matter in the field of historic preservation and will require regulation to be uniformly treated. But, the comprehensive nature of sustainability planning offers a fertile opportunity for the more complete integration of historic preservation as a sustainable planning idea, rather than characteristically as a real property management tool.

For example, the layout and use of space in San Francisco today is the result of public and private planning of the past. As such, the urban landscape has been shaped by history and is an important component of how the city is

experienced today and is vital to both historic preservation and sustainability.<sup>83</sup>

The maintenance of historic buildings and districts offers sources to analyze the material conditions of earlier times.<sup>84</sup> Space is permeated with social relations and urban landscape history can help to understand a context for greater social responsibility to people in the design, planning, and environmental fields.

People's experiences of the urban landscape intertwine the sense of place and the politics of space and this is where historic preservation and sustainability can cooperate more successfully.<sup>85</sup>

### **Eco Districts**

San Francisco's recent adoption of Eco Districts as a planning tool is the beginning of historic preservation ideas being integrated into sustainability planning projects. San Francisco's General Plan, adopted in 1996, addresses the relationship between historic preservation with urban planning. The General Plan is the City's comprehensive planning guide. It is broken down into several elements, discussing housing, commerce and industry, recreation and open space, transportation, urban design, environmental protection, community facilities, community safety, arts, and air quality. The General Plan sets the official approach to managing city space. Though historic preservation is not its own element, it is listed as one of the Priority Policies that should guide how to

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<sup>83</sup> Delores Hayden, "Urban Landscape History: The Sense of Place and the Politics of Space," in *Understanding of Ordinary Landscapes*, eds. Paul Groth and Todd Bressi (New Haven: Yale University Press, 1997), 123.

<sup>84</sup> Hayden, "Urban Landscape History," 123.

<sup>85</sup> *Ibid.*, 133.

resolve plan inconsistencies. A perfect example of how the General Plan utilizes historic preservation to help implement a Priority Policy is in the Planning Department's Eco-District Development Plan.

### **Problem Identification and Policy Objectives**

An eco-district is a neighborhood or district where neighbors, community institutions, and businesses join to meet sustainability goals and create innovative projects.<sup>86</sup> It is a neighborhood scale private-public partnership that uses the economy of scale approach to furthering urban sustainability. The goals of the eco-districts are to strengthen the community, create a sense of place, and emphasize sustainable practices. The City cites that "creating eco-districts can help achieve the goals of the city's Climate Action Plan, Electricity Resource Plan, and Green Building Ordinance."<sup>87</sup>

The eco-district creation is from the Planning Department's Sustainable Development program. It is not an official policy, but a program that is rooted in the ideas of several official policies as well as the General Plan. The Planning Department has identified four different types of eco-districts: The Blank Slate, The Patchwork Quilt, The Strengthened Neighborhood, and The Industrial Network. The identification of several types of development strategies and plans for implementation indicate an understanding of balancing different types of long

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<sup>86</sup> *Central Corridor Eco-District: Program Framework*, (San Francisco, CA: San Francisco Planning Department, 2012), 1.

<sup>87</sup> "Sustainable Development," San Francisco Planning Department, accessed on January 10, 2013, <http://www.sf-planning.org/index.aspx?page=3051>.

term development and an understanding of the need to prioritize. Today, the eco-district program is in the pilot stage of innovation. The first program to be implemented will be the Central Corridor District, which is a Patchwork Quilt. It will be comprised of a mix of undeveloped, underdeveloped, and developed lands owned by different landowners. It will focus on aligning development timeframes to maximize growth while meeting environmental goals.

Embracing an eco-centric ethic is a third epoch policy. The eco-district focus for planning and sustainable development demonstrates a sophisticated understanding of the connection of human needs and natural conservation. The eco-district approach also clearly identifies historic preservation as an important component of eco-district success. Though the Central Corridor district is in its early stages, it seems like it will support historic preservation efforts. A memo on the pilot eco-district plan explains, “integrating the historic fabric of the area as it grows is essential to its evolving identity. Using existing sites to either host green manufacturing or to contribute to the character of the area creates a sense of place, which is a core value of Eco District work. A piecemeal and fragmented approach to incorporating historic preservation into an Eco-District would diminish the potential impact.”<sup>88</sup> Historic preservation’s inclusion as a stated contribution to sustainable planning shows that San Francisco appreciates the role of historic resources in sustainability planning.

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<sup>88</sup> *Central Corridor Eco-District: Program Framework*, 16.



### **Implementation Philosophy**

The implementation philosophy is also a third epoch characteristic. The eco-district plan supports the use of private-public partnerships. The utilization of this implementation tool, rather than relying solely on government action, allows for a new mechanism to accomplish goals. Furthermore, it is more than a community improvement plan. It is a sustainable community plan that focuses on positive outcomes. The emphasis of performance is an important factor in classifying eco-districts as third epoch policies. The performance of eco-districts will be assessed and determinations will be made about what project priorities will be most effective. Therefore, though there is an implementation plan that incorporates many parties and many ideas, the reliance on metrics to evaluate performance helps to ensure that it does not become an act of futility.

### **Points of Intervention**

Goal prioritization is an important indicator of third epoch policy. The eco-district plan, through scheduled assessments, prioritizes which activities are the most cost-efficient and are the most sustainable. Another indication of this being a third epoch policy is the role of citizens. To become an eco-district a neighborhood, partnering with the city, must create a shared vision and a governance structure to ensure that it has the resources for implementation.<sup>89</sup> The fact that the stakeholders decide on the form of governance for the eco-district is an extremely progressive action. Though eco-districts will not likely

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<sup>89</sup> Ibid., 5.

overlap with historic districts, it is a tool to encourage the preservation of historic neighborhoods without relying on the existent regulatory framework. The sense of community ownership that it could create lends itself to influencing individual behavior and life-style choices to being at a much greater scale and number.

### **Policy Approaches and Tools**

The comprehensive future planning in the eco-district framework is a strong third epoch indicator. It is regional planning based on the sustainability guidelines of the city, but expands significantly on those ideas to foster program innovation. The eco-district approach to sustainable development is a clever way to get utility companies, property developers, property owners, renters, and the city to cooperate on sustainability. It is a way for several different types of people to work together and approach several goals of sustainability including: energy, water, community identity, habitat function, and materials management. Also, the identification that historic preservation can aid in the development of eco-districts is a noteworthy indicator of the cooperation at many levels. The memo on eco-districts explains, “the city will examine the role of preservation in sustainability efforts and determine how to integrate preservation best practices into the eco-district to maintain the historic character.”

The strength of this framework for eco-districts is that there are several approaches and tools that are outlined. The inclusion of historic preservation as a policy approach is simply one indicator of the health of this policy. The fact that San Francisco not only recognizes the relationship between sustainable

development, but that it explicitly states the relationship is not a new idea, but it is a new approach. Many other places do not do this. The understanding that San Francisco has about the relationship between natural, built, and heritage conservation is one of the reasons it is celebrated as a leader in the sustainable city movement.

### **Sustainable Culture**

Perhaps San Francisco has transitioned into a mostly third epoch city, in regards to their sustainability efforts, due in part to the tradition of environmentalism and conservation that has existed there for some time. The Sierra Club, one of America's oldest institutions dedicated to the conservation of the environment was founded in San Francisco in 1892.<sup>90</sup> Today, the Sierra Club exercises a phenomenal amount of power in Washington DC and influences national environmental policy.

The continued tradition of proactive policy is proven in San Francisco's Environment Code<sup>91</sup>. The code begins with a section titled the Precautionary Principle. The code explains, "The Precautionary Principle requires a thorough exploration and a careful analysis of a wide range of alternatives." This approach is indicative of a third epoch predominant political context in that it stresses the use of community capacity to reach decisions. The precautionary approach allows for future visioning that takes several factors into account and tempers the

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<sup>90</sup> "Chapter History," Sierra Club, San Francisco Bay Chapter, accessed on February 1, 2013, <http://sanfranciscobay.sierraclub.org/chapter/aboutus/chapterhistory.htm>.

<sup>91</sup> San Francisco Environment Code, Ch.1 §100.

possible negative outcomes. The code emphasizes this, explaining, “the precautionary approach to decision-making is meant to help reduce harm by triggering a process to select the least potential threat.”

The sentiment of long-term sustainable solutions and the balance of the needs of the natural environment and the urban environment are engrained in city policy making. The city’s General Plan explains, “environment’ is not accurately compartmentalized as animals and trees versus people and cars.”<sup>92</sup> The General Plan then goes on to explain, “for San Francisco, almost wholly developed, conservation of those man made features of high quality and cultural value may be more important than the natural features of the environment that are of such importance to rural areas of the state.”<sup>93</sup> The recognition that conservation in an urban context includes not only environmental conservation, but conservation in urban design through tools like historic preservation and its principles exemplifies how cities can be sustainable communities. A sustainable community is one that does not place the burden of conservation on one aspect of living. Instead, it is one that seeks to control not only individual actions or nature, but also one that improves the coordination between human consumption and resource conservation. Though San Francisco’s Eco District plan is only its inception stage, it shows great potential for future planning.

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<sup>92</sup> “San Francisco General Plan: Environmental Protection Element,” San Francisco Planning Department, accessed on January 30, 2013, [http://www.sf-planning.org/ftp/general\\_plan/I6\\_Environmental\\_Protection.htm](http://www.sf-planning.org/ftp/general_plan/I6_Environmental_Protection.htm).

<sup>93</sup> Ibid.

## **Chapter 6 - Case Study Two: Boston**

Boston, Massachusetts is the largest city in New England. It is the state capital and home to about 650,000 people. At only 48 square miles, Boston is one of the densest cities evaluated on the Siemens Green City Index.

Boston sits along the Charles River to the west, separating it from neighboring Cambridge and Boston Bay on the east. Its geographical situation helps it contain development and combat sprawl. Though the city's position is a benefit for creating and supporting a sustainable city, it is still subject to pollution and environmental degradation.

### **Massachusetts's Response**

As a city in the Commonwealth of Massachusetts, Boston is of course required to adhere to state laws. Massachusetts has environmental laws in place that, for example, control air quality, protect drinking water, regulate hazardous waste disposal, and limit pesticide use. The Massachusetts Department of Environmental Protection is the state agency that is responsible for the administration and implementation of Massachusetts's laws relating to clean air and water, management of toxic materials, recycling hazardous waste, and the preservation of wetlands and coastal resources. These actions rely largely on first epoch approaches to environmental laws.

However, Massachusetts has been working toward more far-reaching and preventive environmental laws. For instance, it passed the Clean Energy Biofuels Act in 2008. The Act exempts cellulosic biofuels from the state gasoline excise

tax, requires a minimum percentage of advanced biofuel as a component of all diesel fuel and home-heating fuel sold in the Commonwealth, and requires the state to pursue a low carbon fuel standard.

### **Problem Identification and Policy Objectives**

The policy objective of this law is based in ideas of third epoch policies.

The emphasis of this act on new sources of fuel is indicative of recognition that the sole reliance on the current source of fuel is unsustainable. The observation of the need for new sources of energy at the state level is policy directed at creating more sustainable communities.

### **Implementation Philosophy**

Though this Act is ambitious in its objectives, it relies on market mechanisms for protecting the environment. The exemption of biofuels from state gasoline tax is an incentive for compliance. For example, the use of a market mechanism for compliance is symbolic of a second epoch policy.

### **Points of Intervention**

The fact that the Clean Energy Biofuels Act relies on the marketplace for product viability is also indicative of a second epoch policy. The benefit of using the marketplace, however, is that it prevents reliance on a regulatory framework that is mostly effective at the end of a resource utilization process, when damage is already done.

### **Policy Approaches and Tools**

The use of incentive-based approaches for business and industry is the mark of a second epoch policy and is a positive step to get people to act, but it

does not guarantee innovation. For long-term changes, laws have to support comprehensive enduring solutions.

In many ways, the state is the appropriate level to address issues of sustainability and environmental protection. As in the case of the Clean Energy Biofuels Act, the scale to deal with certain problems has to be from the top down because of the mechanisms needed to cope with large scale and interstate issues, like alternative fuel sources. However, for the creation of sustainable communities, it is at the city level where much of the most effective work can be done. It is at this level that cooperative policies, agencies, and organizations can converge and be managed. It is also where the effects of progress can be realized more easily. The recognition that there are appropriate scales for governmental action is why some powers of governance are put in the city.

### **Boston's Response**

Boston's law-making power is the function of "several state statutes and not a single code."<sup>94</sup> The authority to make laws to govern the administration and performance of local government is derived from a patchwork of special acts. As it now stands, Boston's City Charter is a collection of laws made up of the surviving portions of the charter approved by the Massachusetts Great and General Court (the legislature) in 1909. The charter was significantly edited and amended in both 1948<sup>95</sup> and 1951.<sup>96</sup>

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<sup>94</sup> *City Council of Boston v. Mayor of Boston*, 383 Mass. 716, 719 (1981).

<sup>95</sup> Acts of 1948, ch. 452, (1948).

Boston is distinguished from all other Commonwealth cities in that it has a strong-mayor form of government that predates the mayor-council government that other Massachusetts cities were granted in the state constitution.<sup>97</sup> Numerous Commonwealth cities are classified as “Plan A” cities in the State Constitution. “Plan A” cities are defined by their city government and legislative body being composed of the mayor and a city council, the councilors being elected at large. Boston, however, has a strong-mayor form, in which the elected mayor is given almost total administrative authority, though a city council does still exist and has law-making capabilities. Boston’s strong-mayor government has grown from successive amendments to the 1822 Boston City Charter that sought to strengthen the executive power of the mayor.<sup>98</sup> Today, most large cities have a strong-mayor form of government.

Boston operates with three branches of city government.<sup>99</sup> City laws are created in one of two ways: the mayor may approve of an ordinance of resolution originating from the city council<sup>100</sup>, or the mayor may make recommendations to city council in the form of an executive ordinance for laws to be created for “the welfare of the city.”<sup>101</sup>

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<sup>96</sup> Acts of 1951, ch. 376, (1951).

<sup>97</sup> Massachusetts Const. part I, ch. 34.

<sup>98</sup> “Boston Bound”, Boston Foundation, accessed March 3, 2013, [http://www.bostonfoundation.org/uploadedFiles/tbforg/Utility\\_Navigation/Multimedia\\_Library/Reports/Boston%20Bound%20report.pdf](http://www.bostonfoundation.org/uploadedFiles/tbforg/Utility_Navigation/Multimedia_Library/Reports/Boston%20Bound%20report.pdf).

<sup>99</sup> Acts of 1951, ch.376, §1.11 (1951).

<sup>100</sup> Boston City Charter, § 17D.

<sup>101</sup> Boston City Charter, § 17E.



The city's mayor, Thomas Menino, has used his power as the city's executive to create its sustainability policies through the use of the executive ordinance. Though the city council is able to create city environmental laws, Mayor Menino has been the driving force behind the city's sustainability efforts, with the city council passing related measures, like the requirement that waste haulers offer recycling.<sup>102</sup> Menino is serving his fifth term as Boston's mayor and has often used this legislative tool to get policies and programs implemented. The most transformative of these policies was the 2007 *An Order Relative to Climate Action in Boston*.<sup>103</sup> Menino's Executive Orders are announced via press releases from his office. The orders are directed at City government departments, but are made available to the public immediately via the City's website. One of the strongest characteristics of Menino's executive order is that they are in plain language and easily understood. This policy is a third epoch policy that has spurred comprehensive projects that use and support theories of historic preservation.

### **Problem Identification and Policy Objectives**

The goal of the *Order Relative to Climate Action in Boston* is a third epoch policy because it seeks to balance the long term human needs with the natural system needs. It has sweeping goals to address the environmental, social, and economic factors related to climate change. The all-encompassing approach to

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<sup>102</sup> An Ordinance Regarding Recycling Requirements for Waste Haulers, ch. 14 §§ 7-13.8.1 - 7-13.8.8 (2008).

<sup>103</sup> An Order Relative to Climate Change in Boston, (passed April 13, 2007).

the problem of climate change and the recognition that it is related to the E's of sustainability - ecology, equity, and economics - is a third epoch approach. The order seeks to reduce greenhouse gas emissions seven percent below the city's 1990 levels by 2012. The *Order* states that "The City shall prepare an integrated plan that outlines actions to reduce the risks from the likely effects of climate change, and coordinates those actions with the City's plans for emergency response, homeland security, natural hazard mitigation, neighborhood planning and economic development." Though it does not address historic preservation in name, the comprehensive approach and the emphasis on neighborhood planning and economic development bolster the goals of historic preservation. The *Order* also created the Mayor's Climate Action Task Force, outlined energy audit plans, extolled the importance of alternative energy sources, requires new construction to be LEED certified, requires city vehicles to run on alternative fuel, and calls for an increase in recycling rates.

### **Implementation Philosophy**

Though the Executive Order does not outline specific administrative requirements, it does place emphasis on outcomes and improved performance and therefore is a third epoch approach to policy. The focus of the order on the adoption of all of the widespread plans is ambitious and underlines action.

The Executive Order created the Community Climate Action Task Force, which responsible to review and monitor the progress of the Climate Action Plan and make recommendations, set community goals for greenhouse gas reduction,

prepare educational materials, and identify workforce growth opportunities. The Task Force is made up of 22 business and nonprofit leaders, policy experts, and citizens. The members are a knowledge resource; the Task Force has advisory rather than regulatory authority. The experts include people in the fields of historic preservation, environmental science, and real estate among many others. The creation of this Task Force and the breadth of actions that it is responsible for is a third epoch idea because it links sustainability concepts to community.<sup>104</sup> Since the community represents the social and physical expression of interdependence, it is valuable to have a prominent and visible group of community leaders evaluating the first steps of policy implementation.

### **Points of Intervention**

The *Order Relative to Climate Action* in Boston's focus on influencing individual behavior and life-style choices is a vital component of a third epoch approach. The essence of a third epoch approach is to create long lasting results. If a policy is able to transform public opinion and perception of a problem, it is more likely to gain traction and become the accepted norm. Addressing problem solving, like alternative sources of energy, and accountability, by requiring the Climate Action Plan to be updated every three years helps to ensure that plans are not made without being implemented. This very important aspect of the policy contributes to its success as a way to shift public opinion and actions leading to durable solutions.

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<sup>104</sup> Mazmanian, "The Three Epochs," 21.

### **Policy Approaches and Tools**

This type of policy, though extremely ambitious, is a good third epoch approach because it acknowledges that the issue of sustainability is a complex web of human and natural links and interconnections. Because this *Order* addresses the sphere of responsibility of several offices and sectors of the city government, it makes clear that sustainability policies have to penetrate every faction of city planning and management. It is directed at the actions of City government agencies. This *Order*, for example, makes declarations that would effect agencies and offices including, office Environmental and Energy Services, Public Works Department, Boston Redevelopment Authority, and Innovation and Technology, just to name a few. Planning based on sustainability guidelines is a determined activity. The absence of precision in the *Order Relative to Climate Action in Boston* is a benefit; it recognizes that one cannot address the issue of creating a sustainable community by addressing one problem at a time.

### **Boston's Historic Preservation Ordinance**

As discussed above, the *Order Relative to Climate Action in Boston* was a broad stroke approach to sustainability policy making. This policy approach has led to several successful and innovate sustainability projects in Boston. Historic preservation, on the other hand, has seen little policy innovation in recent years.

Boston's historic preservation was a largely private activity until the passage of the National Historic Preservation Act of 1966, after which as in many US cities, Boston's historic preservation ordinance was created and official policy

was shaped. A state act creating the Boston Landmarks Commission in 1975 was the beginning of Boston's coherent historic preservation policy.<sup>105</sup>

### **Problem Identification and Policy Objectives**

The purpose of Boston's historic preservation ordinance is to improve the quality of its environment through identification, protection, and enhancement of the history of the city. This is a first epoch approach to policy identification because its focus is on the curtailment of historic resource loss to development activities. Though the act does state that its purpose is to "promote the public welfare, to strengthen the cultural and educational life of the city and the commonwealth and to make the city a more attractive and desirable place in which to live and work," its functions almost exclusively deal with bureaucratic and administrative duties.<sup>106</sup>

### **Implementation Philosophy**

As opposed to many cities, where the historic preservation ordinance originated in the city, the creation of Boston's ordinance originated from state law. Massachusetts state legislation created the Boston Landmarks Commission as the city's historic preservation agency.<sup>107</sup> The creation of the Boston Landmarks Commission created a special administrative and regulatory government agency to deal with historic preservation. This approach, rather than integrating the

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<sup>105</sup> "An Act Establishing the Boston Landmarks Commission," Ch. 722, M.G.L. 1975.

<sup>106</sup> Ibid.

<sup>107</sup> Ibid.

functions of one agency with another, is a first epoch approach to policy implementation.

### **Points of Intervention**

Boston's preservation policy also focuses on the end of a cycle. The way the Commission is structured, the agency is often reacting to a proposal for change. The point of intervention allowed by the legislation and the resources results in a first epoch approach.

### **Policy Approaches and Tools**

The administration of the historic preservation policies is a command and control approach. The Commission's role is almost exclusively, in the case of Boston, to designate resources, conduct public hearings, and review alteration applications. This is a regulatory policy that focuses largely on deciding what actions are legal or illegal and is typical of the first epoch. This is an important function. Much like the "cleaning up" that early federal environment policy did in the 1970s, regulation is a necessary activity and has helped historic preservation become a valid planning tool. However, as historic preservation as a field changes with different ideas about layers of history and changes in values, a third epoch approach that would include a more holistic and comprehensive approach that has been seen in large scale sustainability plans could be implemented. The foundations laid down in first epoch regulations for historic preservation, such as the identification and preservation of historic sites, could be incorporated into

citywide programming that links historic preservation to a larger picture than only valuing the historic character of a site, like preservation's role in fostering diverse communities.

Though the official policies of the Boston Landmarks Commission are carried out in a first epoch way, the relationship between historic preservation and the environment seems to be one that Boston has realized for some time and one that can be rediscovered. This is exemplified by the structure of the city agencies. In particular, the office of Environmental and Energy Services is the agency within which the Boston Landmarks Commission is housed. One stated goal of the Boston Landmarks Commission in the state legislation is to "resist and restrain environmental influences" adverse to conservation, enhancement, and maintenance of the historic fabric of the city. From the outset there has been recognition that historic preservation shares a goal with the protection of the natural environment. The office was originally part of the Boston Redevelopment Authority, but was reorganized in the early 1980s to be within what was then the Environment Department. The aligning of this municipal function with environmental endeavors, in addition to the usually associated with historic preservation such as zoning and planning, denotes Boston's prolonged understanding of historic preservation as a field related to environmental management.

## **Boston Bikes**

Many of the programs in the advancement of sustainability efforts of the City are related to the historic character of Boston. For example, in September 2007, just five months after signing the *Order Relative to Climate Change in Boston*, Mayor Menino announced the launch of Boston Bikes. Boston Bikes is an initiative to make Boston a world-class bicycling city. The mayor launched the program by hiring former Olympic cyclist Nicole Freedman to head the initiative. Though it may not seem like a historic preservation activity, its success is a direct result of the historic plan of Boston.

## **Policy Identification and Objectives**

The policy objective of Boston Bikes is to make Boston a world-class bicycling city. The program not only supports ease of travel by bike in the City, but also encourages reduced reliance on carbon emissions heavy form of travel. This approach is a third epoch one because it balances long-term societal needs, the access to alternative travel means and the natural systems, and the reduced reliance on fossil fuels. As such, Boston Bikes is a third epoch program that addresses both needs through system design and management.

## **Implementation Philosophy**

Boston Bikes was created by Mayor Menino in 2007. By creating a new program and a new office Menino utilized a third epoch approach. Through creating a new institution, he encouraged the creation of new mechanisms to



encourage bike riding in Boston. For example, Boston Bikes has been able to create new bike lanes, developed a bikeshare program, and begun bike education and outreach programs. These new mechanisms would not have likely been created had the Boston Bikes program been simply an extension of the transportation office. Instead, it is an independent department within the Mayor's Office. It is a third epoch implementation philosophy.

### **Points of Intervention**

Boston Bikes encourages citizens to choose to bike instead of relying on automobile transportation. It is therefore focused on influencing individual behavior and lifestyle choices, but relies on a road infrastructure that retains a historic pattern. It is not based in a first epoch regulatory design that punishes for failure to act, but encourages people to make individual choices. Though planning goals will always have to have a component of regulation to ensure a minimum standard, third epoch policies that encourage long-term planning is an effective way to implement change in a non-adversarial way. Boston Bikes demonstrates that the creation and investment in a program that inspires change in people is a way that historic preservation can become a part of the larger sustainability context. It is a way for individuals to begin to value historic preservation as an activity supports more than preserve buildings. This is a third epoch point of intervention.

## Policy Approaches and Tools

The Boston Bikes program, though initiated by the mayor to increase the quality of biking in Boston, is directly linked to the City's climate change policy. It is an activity that encourages activity that is environmentally friendly and will help the City reduce its carbon footprint. The fact that the Boston Bikes program is based in the City's guidelines for sustainability is a third epoch policy approach. The Boston Bikes program is not acting in a silo, but is part of a larger patchwork of movements that encourage the drive to create a sustainable city.

One of the main functions of Boston Bikes is to continue to plan and implement the City's network of bike lanes. Though this may not seem like a function related to historic preservation, its success is rooted in the pervasive and ubiquitous remnants of the historic fabric of Boston.

The Siemens Green City Index noted that 18.3% of Bostonians, compared to 13% of the citizens in cities studied, travel to work by public transportation, walking, or biking.<sup>108</sup> This contributes to Boston's goal to reduce greenhouse gas emissions from vehicle travel. Upon her hiring, Freedman correctly stated that "We're a compact city, we're flat, we have a young population and lots of tourists. If we do this correctly, we have the potential to be one of the best bike cities in the country. In three years, I think we will see some very dramatic changes."<sup>109</sup>

All of the factors that Freedman indicated that make Boston a bikeable city are, in

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<sup>108</sup> *Green City Index*, 39.

<sup>109</sup> *Ibid.*

part, the result of valuing historic preservation as a component of city planning and policy.

Boston has been able to survive as a compact city due to its geographic limits while its character has survived with help from historic preservation policies. The protection of historic buildings and the creation of historic districts have helped Boston to manage growth and retain historic fabric. Preservation is a growth management tool that helps to reduce sprawl. It encourages the revitalization of existing neighborhoods and promotes land use patterns that focus public and private infrastructure investments in established urban areas where substantial past investments have already been made. Because historic neighborhoods are typically walkable and mass transit accessible, they also decrease dependence on automobiles, which thus reduces pollution and our dependence on fossil fuel.

Historically, urban development has been motivated and supported by the exploitation of labor and nature.<sup>110</sup> From an economics point of view, the economic rationale of the city and the ability to support economies of scale and proximity allowed the city to thrive. The designation and recognition of the historic remnants of Boston's colonial and industrial past through historic preservation has sustained the urban makeup of the city. The economic advantages of urban mass can also imply environmental efficiency that is still evident today.<sup>111</sup> The

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<sup>110</sup> Haughton, *Sustainable Cities*, 52.

<sup>111</sup> *Ibid.*, 49.

stay of development in the twentieth century reinforced by first epoch historic preservation policies helped to keep Boston small and today has helped to reinforce the environmental efficiency that was so important for the economics of the industrial and manufacturing era. Therefore, what was historically important for economic efficiency exists today for a variety of reasons, not least of which is historic preservation. In turn, the current sustainability efforts, like Bike Boston, can be successful due, in part, to historic preservation successes of the past.

Young adults are the most represented population in Boston: 21.18% of Boston's population is 25-34 years old.<sup>112</sup> They are part of trend of growing cities. Young adults are delaying careers and having children and rejecting homeownership in the suburbs in favor of urban apartment living. The access to public transportation and potential job markets are contributing factors that are drawing youth to cities.<sup>113</sup> Young people living in cities have a decreased reliance on cars. Instead, they are choosing to live in cities that are walkable and have maintained character. They are extolling the way of life that Jane Jacobs advocated in the 1960s. Lively neighborhoods draw young people to cities. Jane Jacobs explained, "Frequent streets and short blocks are valuable because of the fabric of intricate cross-use that they permit among the users of a city neighborhood." This, in fact, describes the organic and varied plan of Boston.

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<sup>112</sup> "Boston Population and Demographics: US Census 2000," accessed January 10, 2013, <http://boston.areaconnect.com/statistics.htm>.

<sup>113</sup> Kristen Wyatt, "Young Adults Choose Cities Over Suburban Living as 'Generation Rent' Faces Tough Economy," *Huffington Post*, June 28, 2012, accessed February 8, 2013, [http://www.huffingtonpost.com/2012/06/28/young-adults-cities-generation-rent\\_n\\_1632952.html](http://www.huffingtonpost.com/2012/06/28/young-adults-cities-generation-rent_n_1632952.html).

Rather than laid out by plan, Boston grew progressively from the Bay. As a result, there are not long straight streets, but short curved and intersecting streets that make travel on foot easy and more easily supports non-automobile centered travel, like biking. The maintenance of the historic urban design lends itself to the maintenance of lively neighborhoods that attract young people who do not need cars to enjoy the city.

This demonstrates that historic preservation and sustainability can be cooperative endeavors. The maintenance of historic resources encourages tourism and neighborhood development, which in turn makes sustainable transportation, like biking, more feasible. Before Boston Bikes' implementation there were no bike lanes in the city. As of 2011, there are 52.2 miles of bike lanes in the city.<sup>114</sup>

Delores Hayden properly asserted, "every American city and town contains fragments of historic cultural landscapes intertwined with its current spatial configuration."<sup>115</sup> The vernacular landscape reveals the human patterns on the natural landscape. It tells the story of how places are planned, designed, built and used. As such, older neighborhoods, like those preserved and used for Main Street programs, relate history to the present. They represent the history of cultural, social, and urban history. The historic urban landscape, often times, is

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<sup>114</sup> *State of the Hub: Boston Bikes Year-End Update*, (Boston: City of Boston, 2011), 8, accessed on January 30, 2013, [http://www.cityofboston.gov/Images\\_Documents/Annual%20Report%20-%20FINAL%202011\\_tcm3-31029.pdf](http://www.cityofboston.gov/Images_Documents/Annual%20Report%20-%20FINAL%202011_tcm3-31029.pdf).

<sup>115</sup> Hayden, "Urban Landscape History," 111.

also sustainable. Liveable city criteria of walkability, appropriate human scale architecture, traditional neighborhood structure, and distinctive, attractive communities with a strong sense of place are all things that are achieved by historic preservation.<sup>116</sup>

Any city looking for a planning model of a society that used a lot less fuel per person could look at virtually any city that developed in the era before petroleum. In term of density and land planning, the sustainable city of the future may be more like a city of 1860 than a city of 1960. Historic preservationists know how traditional urban neighborhoods function from cultural, social, and economic perspectives.<sup>117</sup> Boston, by encouraging the revitalization of historic neighborhoods through historic district designations and Main Street initiatives, has promoted the continuity of an efficient use of land patterns that focus on private and public investment in established urban areas. Historic preservation has contributed to Boston's holistic approach to sustainable development. In particular, the mayor's *Order Relative to Climate Change in Boston* as official policy has supported actions, like improved bike lanes that both capitalize on and support historic preservation. As Boston moves forward and further develops its sustainability plans, the first epoch historic preservation policy successes that have supported environmentally friendly programs can be made explicit in third

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<sup>116</sup> Eric Allison and Lauren Peters, *Historic Preservation and the Livable City* (Hoboken, NJ: John Wiley and Sons, 2011), 11.

<sup>117</sup> Jeffery Chusid, "Teaching Sustainability to Preservation Students," 45.

epoch long-term planning policies that can help more people understand historic preservation as a sustainable activity.

## **Chapter 7 - Case Study Three: Philadelphia**

Philadelphia is the most populated city examined in this study with a population of nearly 1.6 million.<sup>118</sup> It is the second largest city on the east coast. It is also the largest at 134 square miles.<sup>119</sup> Philadelphia has a rich history and was founded on an ideal of access to land and resources. However, the 20<sup>th</sup> century, with energy and water plentiful and inexpensive, Philadelphia lost ground to cities that used these abundant supplies to their advantage. It lost its place in a world of cheap energy prices. However, Philadelphia's environmental performance has been steadily increasing in recent years. This problem identification and the steps taken to improve the environment have earned Philadelphia the number 13 spot on the Siemens Green City Index.

Since the election of Mayor Michael Nutter, Philadelphia has been working on improving its sustainability policies. Philadelphia is working with its inherited assets of walkable neighborhoods, its far-reaching transit system, and historic building stock to consolidate its policies and enhance its sustainability potential.

### **Pennsylvania's Response**

In 1998 Pennsylvania took a huge step towards environmental sustainability when Governor Thomas Ridge created the Governor's Green Government Council by executive order. The creation of this council was a continuation of the state's efforts to respond to environmental protection. During

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<sup>118</sup> US Census Bureau, "State and County QuickFacts 2010", accessed February 13, 2013, <http://quickfacts.census.gov/qfd/states/42/42101.html>.

<sup>119</sup> Ibid.



the same era, the Environmental Protection Agency had begun to delegate certain programs to be administered by the state instead of the federal government. Pennsylvania responded with the creation of the Department of Environmental Protection in 1995 and the Office of Pollution Prevention and Compliance Assistance in 1996.<sup>120</sup> Though the reorganization of the Environmental Protection Agency prompted Pennsylvania to create the state's Department of Environmental Protection, it only took a few years for the state to realize that environmental protection is only one piece of creating a healthy environment. While today, many states have only begun to create state sustainability offices, Pennsylvania has since 1998 recognized the need to shift its "environmental expectations beyond compliance toward the goal of zero emissions achieved through pollution prevention and energy efficiency."<sup>121</sup>

### **Policy Identification and Policy Objectives**

The executive order recognizes that the approach to environmental legislation has to be different in the 21<sup>st</sup> century than it was in years previous. The identification and acceptance of this fact is indicative of the third epoch policy because it looks beyond the immediate future. The Executive Order establishes the Governor's Green Government Council. The purpose of the Council is to facilitate the incorporation of environmentally sustainable practices into the state's planning, operations, and policymaking. The policy objective of this Order

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<sup>120</sup> Executive Order: Governor's Green Government Council, 1998-1 (passed March 25, 1998).

<sup>121</sup> Executive Order: Governor's Green Government Council, 1998-1 (passed March 25, 1998).

is a third epoch policy because of its overarching theme of an eco-centric ethic. The Order identifies that environmental sustainability not only involves pollution prevention, but community involvement, economic and environmental performance, environmental accounting, and life cycle analysis.

### **Implementation Philosophy**

The Order creates a Council that is responsible for providing advice and assistance in the creation and review of agency Green Plans and the implementation of initiatives started to achieve the plans. The creation of a new institution to balance the needs of the natural and human environment is a third epoch approach to environmental policy.

### **Points of Intervention**

The point of intervention suggested in the Order is at the strategic planning level. The Council is made up of the Secretaries of the Departments of Environmental Protection and General Services and other individuals appointed by the Governor. Each executive agency participating in the initiative is required to develop an annual plan, a Green Plan, outlining the actions the agency will take in the coming year to incorporate “environmentally sustainable practices into its planning, operations, policymaking, and regulatory functions and to strive for continuous improvement in environmental performance with the goal of zero emissions.”<sup>122</sup> The emphasis on strategic planning across state departments is a

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<sup>122</sup> Executive Order: Governor’s Green Government Council, 1998-1§4(a) (passed March 25, 1998).

third epoch environmental policy, but it only had bearing on state agencies and did not include participation from municipalities. Planning for the future and having a road map to follow helps an agency's ideas become an agency's actions. The intervention requires that the Green Plans be done by June 1<sup>st</sup> of the year so that they can be incorporated into the annual budget. The inclusion of practical guidelines for Plan completion demonstrates that Plans should be put into action, rather than simply created for review.

### **Policy Approaches and Tools**

The future visioning aspect of the Governor's Green Government Council is what makes this Order a third epoch policy. The Order specifies that initial focus should be on planning and operations, particularly energy efficiency. The creation of such a Council that helps agencies create their own annual sustainability guidelines is a third epoch approach. Though the Order urges where to initially focus, the overall emphasis of the Order on long-term planning is a third epoch idea. The fact that Pennsylvania instituted an all-encompassing Order early in the sustainability movement suggests that they would continue to be on the cutting edge in terms of sustainable planning and development. However, the Governor's Green Government Council has not released a Green Plan since 2007. The inactivity over the past six years suggests that the program was not successful. Though overarching plans for sustainability are indicative of a third epoch policy, the scale at which they are implemented affects their

success. For this reason, individual cities, like Philadelphia, have chosen to respond to environmental concerns on their own.

The City of Philadelphia is in Philadelphia County. Philadelphia County does not have a government. Instead, the City of Philadelphia has made Philadelphia County a legal nullity as all county functions were taken over by the city in 1952 with the passage of the Philadelphia Home Rule Charter. The Charter states that “pursuant to Section 1 of Article XV of the Constitution and the Act of the General Assembly, approved April 21, 1949, P.L. 665, of the Commonwealth of Pennsylvania, the City of Philadelphia shall have and may exercise all powers and authority of local self-government and shall complete powers of legislation and administration in relation to its municipal functions, including any additional powers and authority which may hereafter be granted to it.”<sup>123</sup> The Home Rule Charter further states that, “the executive and administrative power of the City, as it now exists, shall be exclusively vested in and exercised by a Mayor.”<sup>124</sup>

When Mayor Michael Nutter was elected mayor in 2008 he pledged to make Philadelphia the number one green city in the United States. To achieve this goal he created the Mayor’s Office of Sustainability. The Office of Sustainability took a year to draft *Greenworks Philadelphia*. *Greenworks Philadelphia* sets 15 sustainability targets in the areas of energy, environment,

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<sup>123</sup> Philadelphia Home Rule Charter, Article 1, § 1-100 (adopted April 17, 1951).

<sup>124</sup> Philadelphia Home Rule Charter, Article 1, §1-102 (adopted April 17, 1951).

equity, economy, and engagement. As discussed below, the explicit relationship between historic preservation and sustainability planning is introduced in the *Greenworks Philadelphia* plan.

## **Philadelphia's Response**

### **Problem Identification and Policy Objective**

*Greenworks Philadelphia* is Philadelphia's response to how to enable actions that will help they city become more sustainable. As the largest city in the state of Pennsylvania, the actions that Philadelphia takes are likely to influence not only surrounding communities, but other cities in the United States that are faced with some of the issues that Philadelphia is facing. *Greenworks Philadelphia* is a third epoch approach to sustainability because it seeks to bring into harmony human and natural systems on a sustainable basis. The plan explains that Philadelphia knows "that the Mayor's call for Philadelphia to become the "greenest city in America" is not just about preventing ice caps from melting or crops from drying up thousands of miles away, but also about decreasing the cost of cooling a Southwark house in the summer or heating it in the winter; reducing the number of trips a mother in Oak Lane takes to the hospital with her asthmatic son; preventing sewage from backing up into a basement in Northern Liberties; and giving every child in every neighborhood a safe, clean, healthy place to play."<sup>125</sup> This sentiment is a broad and compelling

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<sup>125</sup> *Greenworks Philadelphia*, Mayor's Office of Sustainability (Philadelphia: The City of Philadelphia, 2009), 3.

view of what a sustainable city can achieve, and it emphasizes the importance of balancing long-term needs with improved system design and management.

### **Implementation Philosophy**

The focus on outcomes and performance is one of the strongest third epoch elements of *Greenworks Philadelphia*. The comprehensive plan sets out 15 targets. The impressive feature of *Greenworks Philadelphia* is that annual updates with goal progress are released every year. Implementation philosophy goes to the heart of beliefs about how best to achieve policy goals. The focus on outcomes demonstrates a commitment to following through with the plan. The understanding of the problem of how to create a sustainable city and how to bring the desired changes in people's actions are revealed in how they decide to assign various responsibilities. The identification of five areas of focus: energy, environment, equity, economy, and engagement demonstrate an emphasis on enduring solutions. This approach goes well beyond the compartmentalized focus of earlier federal and state policy formulation that treated air, water, and other pollutants separately. Though this approach was an important first step in environmental regulation, it is not a framework that a city can adopt by itself for achieving a sustainable city. Instead, linking sustainability concepts with community concepts like bringing local food within ten minutes of 75% of residents shows that Philadelphia is striving to link sustainable activities to

people.<sup>126</sup> This direct relationship between people and environment is a third epoch approach.

### **Points of Intervention**

*Greenworks Philadelphia* underlines the individual behavior and lifestyle choices that can contribute to becoming a sustainable community. This is a third epoch approach because it does not put responsibility solely on the government to create and carry out solutions. Instead, it highlights how communities and individuals have to be engaged to establish long-term solutions. For example, the Public Tree Planting Campaign relies on individuals and volunteers to plant trees throughout the city. Though this campaign is not an official policy of the city, but an initiative, it is a way that individual citizens can “help reduce air and surface temperatures.” Tree planting helps to cool neighborhoods. The Plan explains, “City neighborhoods that lack street trees experience urban heat island effects during summer months, leading to higher energy demand to cool homes and heat-related illnesses and death.”<sup>127</sup>

### **Policy Approaches and Tools**

The most important aspect of *Greenworks Philadelphia* is the accountability in the plan. Every year the Mayor’s Office of Sustainability releases a progress report, which tracks the success of initiatives and goals laid out in the *Greenworks* Plan. Planning based on sustainability guidelines is a third epoch

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<sup>126</sup> *Greenworks Philadelphia*, 51.

<sup>127</sup> *Greenworks Philadelphia*, 56.

approach to environmental policy. The added effect of having progress reports is especially forward thinking and an important tool for becoming a sustainable city.

### **Philadelphia's Historic Preservation Ordinance**

As discussed above, Philadelphia has addressed sustainability issues at a vigorous pace since 2008. The city has done an impressive job of not only implementing projects, but following through on their goals. It is a third epoch approach that has combined several sectors of city government with varying issues, projects, and ideas. The comprehensive nature of the plan along with its annual updates has made it an excellent example of large scale sustainable planning.

Philadelphia's historic preservation planning could incorporate the methods and ideas of *Greenworks Philadelphia* to its own planning and could also seek to be a more meaningful contributor to *Greenworks Philadelphia*. Philadelphia's historic preservation ordinance was passed in 1955. It explains that the aim of the ordinance is "declared as a matter of public policy that the preservation and protection of buildings, structures, sites, objects, and districts of historic, architectural, cultural, archaeological, educational, and aesthetic merit are public necessities and are in the interests of the health, prosperity, and welfare of the people of Philadelphia."<sup>128</sup>

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<sup>128</sup> City of Philadelphia Historic Preservation Ordinance, ch. 14-1000 (passed in 1955).



## **Problem Identification and Policy Objectives**

The authorities identified in Philadelphia's historic preservation ordinance are the preservation of buildings, establishment of historic districts, and the encouragement of the restoration and rehabilitation of buildings. These actions are first epoch attitudes in that they focus on the curtailment of development and the ending of historic buildings loss. Though based in an idea of resource management that would qualify as a third epoch characteristic, the ordinance lacks a specific commitment to accepting preservation as an action that will benefit the future generations of Philadelphians.

## **Implementation Philosophy**

First epoch policies are focused on administrative and regulatory endeavors. As such, Philadelphia's creation of the Philadelphia Historical Commission in the historic preservation ordinance is a first epoch policy implementation practice. The Commission designates properties, regulates preservation through a permit process, and conducts preservation reviews of municipal agencies. Like many other cities, it is a regulatory approach to enforcement.

## **Points of Intervention**

Philadelphia's preservation policy also focuses on the end of a cycle. The way the Commission is structured, the agency reacts to change rather than managing change. The point of intervention allowed by the legislation results in a

first epoch approach. Instead of encouraging that people value historic preservation as an activity, the regulatory approach only allows for decisions that determine the legality of an action.

### **Policy Approaches and Tools**

Philadelphia's historic preservation ordinance uses first epoch approaches to policy implementation and tools in that it relies on command and control as a policy tool. Rather than envisioning innovative approaches to historic preservation, the current regulatory framework only allows for determining the legality of an act. The Commission responds to current issues and creates an adversarial atmosphere to discuss historic preservation.

Fortunately, there is a way to integrate the discussion of historic preservation in a positive way to the city's sustainable planning activities. The ideas of historic preservation, though often carried out in a first epoch manner, are based in third epoch ideals. Historic preservation has, in many ways, exhausted what it can achieve with the first epoch approach. Though regulation will always remain a component of preservation policy, sustainability planning offers a new manner to create historic preservation. Many of the positive attributes that are discussed within the historic preservation professional community, now have a way to be introduced and revealed to a larger audience through some of the city's sustainability initiatives. The city's benchmarking activities are a small example of how preservation and sustainability can work

together to create citywide awareness of the benefits of both fields and the activities they encourage.

### **Benchmarking**

The General Provisions of the recently updated zoning code explicitly state the relationship between sustainability and historic preservation. It states that one of the principles of the zoning code is to “promote sustainable and environmentally responsible practices by...restoring and conserving the city’s natural and historic resources.”<sup>129</sup> This relationship is further expressed in *Greenworks Philadelphia*. The plan states, “*Greenworks Philadelphia* asks that the Philadelphia Historical Commission work with the Preservation Alliance, the National Trust for Historic Preservation and the building and solar energy industries to develop guidelines that balance Philadelphia’s past with the need to reduce energy demand.”<sup>130</sup> As of date, there has not been anything released by the Philadelphia Historical Commission to indicate that they have made any overarching plan to address this. It has, though, allowed for alterations to historic buildings to increase energy efficiency, like the use of energy efficient glass in historic windows. On May 17, 2012 Philadelphia’s City Council passed Bill #120428. It requires that all buildings in Philadelphia that are 50,000 square feet or larger to be benchmarked and disclose energy and water consumption data.

Benchmarking is the practice of recording performance metrics of a

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<sup>129</sup> City of Philadelphia Zoning Code, Ch. 14-100, § 14-101.

<sup>130</sup> *Greenworks Philadelphia*, 19.

building's energy and water use. Several cities have undertaken this activity to ensure that buildings perform at a standard that would support a sustainable city. Benchmarking was part of target 1, energy, in the *Greenworks Philadelphia* plan. Though it is not a direct historic preservation policy, it is a vital practice to understand the relationship between historic buildings and sustainable development.

### **Policy Identification and Policy Objectives**

Benchmarking is a third epoch policy because it seeks to balance long term societal goals and natural system needs through system management. Buildings use more energy than any other sector, making up 40% of total US energy consumption.<sup>131</sup> The bill's purpose is not only to make organizations aware of their energy use, but also to identify opportunities for improvement and assist in establishing energy consumption baselines that will help set goals for the future. Making building performance more transparent through benchmarking policies can help to eliminate energy waste. Philadelphia's benchmarking policy is a third epoch policy because it does not exempt historic buildings from benchmarking requirements. Though the benchmarking ordinance currently only affects commercial buildings with 25,000 square feet or more, it is the first piece in a plan to make the benchmarking requirement extend to other building types within the next few years.

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<sup>131</sup> "EPA Analysis Shows Big Benchmarking Savings," *Performance Policy Press Release*, October 11, 2012, accessed March 3, 2013, <http://www.imt.org/news/the-current/epa-analysis-shows-big-benchmarking-savings>.

The inclusion of historic buildings on the benchmarking ordinance allows for transparency and a point of discussion about how historic buildings perform. The argument that the greenest building is the building that is already built relies on an argument that preserving a historic structure save embodied energy that would be lost if the building were to be demolished. The National Trust for Historic Preservation’s Green Lab explained that the “reuse and retrofit of buildings of equivalent size and functionality can, in most cases, meaningfully reduce the negative environmental impacts associated with building development.”<sup>132</sup> The report further explains, “even if it is assumed that a new building will operate at 30-percent greater efficiency than an existing building, it can take between 10 and 80 years for a new, energy efficient building to overcome the climate change impacts that were created during construction.”<sup>133</sup> Though this concept is not explicitly stated in the benchmarking ordinance, the inclusion of existing and historic buildings suggests that there is an understanding that the value of an existing building can help mitigate climate change.

### **Implementation Philosophy**

Benchmarking is a third epoch policy because it focuses on outcome and performance. Though the practice of benchmarking is information gathering, it is a useful tool to address change. The embodied energy argument in historic

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<sup>132</sup> *The Greenest Building: Quantifying the Environmental Value of Building Reuse* (Washington DC: Preservation Green Lab, National Trust for Historic Preservation, 2011), 84.

<sup>133</sup> *The Greenest Building*, 84.

building performance is a useful tool when extolling the benefits of historic preservation, but with better and more available information about how historic buildings perform compared to new construction, the relationship between historic preservation and sustainability can be strengthened. The National Park Service explains, “historic buildings can be energy efficient. Per square foot, historic commercial properties rank among the best in terms of energy consumption.”<sup>134</sup> The implementation of a benchmarking policy will create information that historic preservation professionals can use in order to relate to the sustainability movement in a profound way. The information gathering aspect of benchmarking is a useful first step in better understanding how all buildings perform and how they can perform better.

### **Points of Intervention**

Another particularly important outcome of benchmarking is the industry level attention to environmental planning that it can bring. Benchmarking, by being a public activity, brings awareness to building performance that might not otherwise be revealed. The Benchmarking Ordinance requires that, “the seller or lessor of any covered building shall, upon request, provide prospective purchasers or prospective lessees with a copy of the building’s most recent Statement of Energy Performance.”<sup>135</sup> The transparency of this policy will provide information that will become embedded in everyday decision-making routines of

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<sup>134</sup> “Technical Preservation Services,” National Park Service, accessed March 23, 2013, <http://www.nps.gov/tps/sustainability/energy-efficiency.htm>.

<sup>135</sup> The Philadelphia Code, Ch. 9-3400 § 9-3402 (passed May 17, 2012).

information users and information disclosers.<sup>136</sup> By requiring that all commercial buildings participate in benchmarking, Philadelphia is creating change where people will start demanding to understand the performance of their buildings. Mitigation strategies that are suggested for new construction can often times be used in historic structures as well, and the inclusion of historic buildings in the benchmarking ordinance suggests that Philadelphia understand that their historic buildings stock can perform at a environmentally sustainable level.

### **Policy Approaches and Tools**

Though benchmarking is becoming a popular policy strategy (six US cities and 2 states have passed benchmarking legislation) it is still in a state of innovation.<sup>137</sup> Experimenting with new approaches is a third epoch policy hallmark. Communities around the US are significantly increasing their use of community indicators to assess their well-being and to measure their progress toward shared visions and goals.<sup>138</sup> Benchmarking is a transparent activity. This aspect of benchmarking, like the *Greenworks Philadelphia* annual progress reports, makes information widely available in the public domain where it is able to generate social benefits.<sup>139</sup>

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<sup>136</sup> David Weil et al., "The Effectiveness of Regulatory Disclosure Policies," *Journal of Policy Analysis and Management* Vol. 25, No. 1(2006): 155.

<sup>137</sup> "If You Benchmark You Will Save," Next American City, March 27, 2012, accessed March 21, 2013, <http://www.buildingrating.org/content/if-you-benchmark-you-will-save>.

<sup>138</sup> Milan Dluhy and Nicolas Swartz, "Connecting Knowledge and Policy: The Promise of Community Indicators in the United States," *Social Indicators Research* Vol. 79, No. 1 (Oct. 2006), 1.

<sup>139</sup> Weil, "Effectiveness of Regulatory Disclosure Policies," 157.

Benchmarking is an important exercise in policy because it connects knowledge about how a building performs to the policy. This can then effect how citizen participation and indicator tracking can be used to further the development of better policy.<sup>140</sup> This is particularly important when contemplating the energy performance of historic buildings. Gathering information about how historic building types across different climate zones perform will add to the body of knowledge about the end use breakdowns of energy.<sup>141</sup> The addition of this information to historic preservation will help to better understand the life cycle costs of a building. Understanding how buildings use energy is an important part of reducing their environmental impacts in a meaningful way. For people in the historic preservation field it will create a way for preservation to be related to people who are not solely interested in the cultural value of preserving historic structures. For citizens, it will educate them in a way to appreciate historic structures as being part of sustainable development. For many communities preservation is more about social issues and having a say in the future than it is about architectural integrity.<sup>142</sup> The energy performance of historic buildings is an additional way to link communities to value historic buildings and support historic preservation.

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<sup>140</sup> Dluhy, "Connecting Knowledge and Policy," 4.

<sup>141</sup> *The Greenest Building*, 90.

<sup>142</sup> Stephanie K. Meeks, "Sustaining The Future," (remarks, California Preservation Conference: Preservation on the Edge, May 16, 2011).



## **Chapter 8 - Conclusion**

The important relationship between sustainability and historic preservation needs to be further understood. Sustainability and historic preservation share several positive traits and overlapping goals that can strengthen the use of the two movements and bring them together in a way that is only beginning to be seen. However, historic preservation and sustainability also share several points of formidable challenge. Both historic preservation and sustainability are values-based endeavors and because values change over time there is no one measurement of success in either field.<sup>143</sup> As cities lead the way in sustainable planning, they can serve as models of how to achieve truly holistic planning.

The use of case studies for the investigation of the relationship between sustainability and historic preservation has revealed insights into the future of cities as laboratories for sustainable policies and practices.

### **Best Practices**

As cities continue to develop, implement, and change their sustainability policies, they have opportunities to realize holistic planning approaches. Though each city's culture is to a certain extent a distinctive and original asset, many other elements of city planning can be duplicated successfully by other cities. Historic preservation, as a community asset, can become an integrated sustainable planning tool. The use of case studies revealed several practices in

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<sup>143</sup> Andrew B. Whitford and Karen Wong, "Political and Social Foundations for Environmental Sustainability," *Political Research Quarterly*, Vol. 62, no. 1 (2009): 190.

San Francisco, Boston, and Philadelphia that signal the beginning of historic preservation as being considered an elemental cultural component of the creation of a sustainable city.

### **Master Sustainability Plan**

The construction of a master sustainability plan has proven to be a successful approach to sustainability policy-making. The use of first and second epoch approaches helped sustainability transform from an environmental issue to a way of life issue. This approach is an integral third epoch translation of policy planning that can be developed and used to support historic preservation. The resources, stakeholders, issues, and challenges addressed in comprehensive sustainability plans are important components in the first step to change. The discussion and exploration of how to create sustainable cities at several levels and sectors in one document is a favorable approach to understanding the city as a living, changing, and complicated entity. The conception of an inventory of goals through an overarching plan is a beneficial way to map out routes to attain a sustainable city. To have a master plan, or vision, for the future, is a noble way to initiate policy design. It is a chance to think beyond existing limits, and, through describing the future, challenge government, departments, and people to change.

San Francisco and Philadelphia both have adopted sustainability plans. These principal plans clearly state the goals of sustainable planning, the geographical, political, and policy areas in which changes can be made, and the associated challenges. The honest publication of goals, though optimistic,

focuses on real solutions to material problems and is a positive way to engage the community.

Boston, on the other hand, created its sustainability plan through patch-working several executive orders and initiatives. Boston's *An Order Relative to Climate Action in Boston* was nascent to its working towards becoming a sustainable city. But the city has recently recognized that though this approach has helped it improve greatly in the way of stewardship, the collection of separate orders and initiatives have to be readdressed to fit the city's future goals. As such, the city is embarking on the creation on *Greenovation*, a citywide marketing campaign to connect the city's sustainability movement to the larger effort.<sup>144</sup> It is not a replacement of a master sustainability plan, but it is a way to incorporate the activities undertaken by the city and connect it to citizens. Disclosing all of the efforts, successes, and challenges in one place is a basic component to future planning.

### **Statement of Values**

A "statement of values" is an advantageous planning activity that is unique to San Francisco in the cases examined for this study. San Francisco was the only city that made clear and explicit connections between sustainability and culture. This is perhaps the fundamental advantage that put San Francisco at the top of the Green Cities Index. The development and integration of a city identity

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<sup>144</sup> Interview with Jacob Glickel, March 6, 2013.

to help lead the creation of policy can be the most important factor for successful change. The city's adoption of the precautionary principle -- i.e., the practice that if a policy could be harmful to the public or the environment it should be avoided - has stated a value: precaution as the guiding light for policy creation. The adoption, identification, and statement of the value of caution permeated all policy and created a point of focus. When thinking about what the best future is for their city, all cities could adopt this approach. They may not agree that the precautionary principle is one of their core values, like San Francisco has, but they could easily identify what is vital to the survival of their city and adopt it as the guiding principle to policy development.

### **Leadership**

Leadership is crucial to both continuity and change. A charismatic leader can be a crucial element to a city's successful adoption of a sustainability policy. The ability of a leader to communicate a vision to a group, like a city, can inspire people with zeal to follow their mission.<sup>145</sup> Boston's Mayor Menino, through his extensive use of the Executive Order, has been able to give birth to Boston's sustainability policies. He has nearly single-handedly transformed the city into one of the greenest cities in North America. He has been elected mayor five times, proving that people are supportive of his strong mayor approach. Though the omnipotent approach to sustainability policy-making may not fit the culture of all cities, it can be assumed by other cities to a lesser degree and still be

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<sup>145</sup> Trice, "Cultural Leadership in Organizations," 154.

effective. All movements have their supporters and opponents, and the benefit of having an effective leader is an essential element of success.

## **Accountability**

Transparency and accountability aid with the creation of successful sustainability policies. Though the foundation of an overarching sustainability plan, as discussed above, is an integral concept development step in sustainability policy, it is focused on the future and not grounded in the present. Philadelphia is the only case study city that updates its sustainability plan with annual progress reports. The use of progress reports is a way to ensure that long-term plans do not get stuck in the idea state of development. To demonstrate practice and progress is a way to capitalize on successes and work to overcome challenges. It is also a chance to engage with the public further, to be able to show how policy actually transforms places. It is also a way to be honest with the public about the difficulties of the plan's goals. Through progress reports, the city can assess what is, and what is not working and allow for policy redesign if necessary. All cities can and should adopt this practice in their efforts to become exceptional, sustainable places.

Long-term planning, statement of values, leadership, and accountability are also practices that can aid historic preservation's integration into sustainability planning. The historic preservation movement has to look beyond the building. It has to, as a field, look toward what the sustainability movement is doing right and insert themselves in the conversation. Historic preservation, too

often seen as reactive and adversarial, can, through the espousal of master planning, statement of values, leadership, and accountability continue to be a relevant pursuit in the future.

The sustainability movement and the historic preservation movement are responsibility movements, not rights movements.<sup>146</sup> The stewardship of culture and the stewardship of cities can be connected in a way analogous to the early environmental movement's connection to the early historic preservation movement. Though both movements are interested in the conservation of resources, the central feature of each movement is people's relationship to place.

### **Culture as the Fourth Pillar of Sustainability**

The tools discussed above are broadly applicable tools that can be altered and adopted by any city as a way to create better, more comprehensive sustainability policies. However, for historic preservation to become a fully integrated tool within sustainability planning, it has to be accepted as more than architectural conservation. This can be done through a new understanding of the component parts of a sustainable community.

As discussed earlier in this study, there are usually three pillars identified as part of sustainability, the three E's: environment, economics, and equity. However, for sustainability plans to be effective, a fourth pillar – culture, has to be addressed. One can argue that environmental concerns are the cornerstone of sustainability, but the concept has matured in recent years and increasing

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<sup>146</sup> Rypkema, "Economics, Sustainability, and Historic Preservation," 38.

emphasis has been placed on the interconnectedness of social and economic dimensions of sustainable development.<sup>147</sup> In many cases, when a community undertakes sustainable planning, there is an impulse to address cultural assets as being a part of the social pillar of sustainability. In fact, an emphasis needs to be placed on the fact that social and cultural are not the same thing and culture has a distinct role in sustainability planning. A sustainable community depends on a sustainable culture.

Culture is an idea that has no singular accepted definition, much like sustainability. It can be interpreted to be a developed state of mind – as in ‘a cultured person,’ the processes of this development – as in ‘cultural activities,’ or the means of these processes – as in culture as ‘the arts.’ However, if one accepts culture as the social production of meaning, it can be a fundamental way to integrate historic preservation as elemental to sustainability planning.<sup>148</sup> When discussing and addressing sustainable development it is critical to move beyond talking about preservation of ‘the arts’, ‘heritage’, and ‘identities’ to include the broader notion of culture as a ‘whole way of life’.<sup>149</sup> The ‘whole way of life’ conveys, informs, and reveals the underlying belief systems that shape human interaction with the environment. Culture is an important tool to evaluate the past

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<sup>147</sup> Keith Nurse, “Culture as the Fourth Pillar of Sustainable Development,” (paper presented for Commonwealth Secretariat, Marlborough House, Pall Mall, London, June 2006): 34.

<sup>148</sup> John Hawkes, “The Fourth Pillar Revisited: Key Questions About Cultural Sustainability: Let Them Eat Culture, or Here Comes Another Bandwagon,” (paper presented at The Fourth Pillar Conference for Cultural Development Network, Melbourne, December 2004).

<sup>149</sup> Nurse, “Culture as the Fourth Pillar,” 36.

and plan the future. As a component to future planning, culture brings together a range of concepts and issues that developed in parallel: well-being, cohesion, capacity, engagement, and distinctiveness. As demonstrated in the case studies used, these ideas are beginning to be addressed in sustainability plans, but have yet to be incorporated in an operationally functional model that integrates them fully. The concept of culture is a tool that can help build a more effective policy structure.<sup>150</sup>

The concept of culture as the fourth pillar of sustainability cannot simply be added to the existing framework of the three E's. Instead, it needs to become the central component of the framework for sustainable development.<sup>151</sup> Culture determines how people act in the world and is therefore a paramount feature to planning sustainable cities. There are several ways that cities can realize the linkage between sustainability and culture. By making culture the central component of sustainability planning a greater allowance is made for diversity in policy choice.

Culture has a role in long-term sustainable development and is a basic need and the bedrock of human society.<sup>152</sup> By integrating historic preservation as a cultural component of sustainability planning, a city is able to clarify a major component that contributes to it being a distinctive place. Historic preservation is

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<sup>150</sup> Hawkes, "The Fourth Pillar Revisited."

<sup>151</sup> Nurse, "Culture as the Fourth Pillar," 38.

<sup>152</sup> John Hawkes, *The Fourth Pillar of Sustainability: Culture's Essential Role in Public Planning* (Victoria, Australia: Cultural Development Network, 2001), 3.



physically and visually expressed in a community's buildings, sites, structures, districts, objects, and landscapes. Complemented and facilitated by historic preservation strategies such as building rehabilitation, heritage tourism, and preservation planning, a community's history can be a strong building block for revitalization, improvement, and sustainability.<sup>153</sup>

It is through cultural interaction that we as humans "make sense of our existence and the environment that we inhabit, find common expressions of our values and needs, and meet the challenges presented by our continued stewardship of the planet."<sup>154</sup> Any city can duplicate another city's water lines, industrial park, or development incentives, but no community can completely replicate another community's historic and cultural resources.<sup>155</sup> There are several reasons for this, including different stocks of resources and varying values of cultural and historic resources. Historic preservation can thus serve as a community catalyst for sustainability planning.

All of the case studies benefited from inherited assets. Both Boston and San Francisco are confined by water, which helps to curb development beyond city limits. In many ways, this makes sustainable planning more manageable for these cities. Philadelphia has inherited well-built historic structures that could be easily incorporated into new energy standards for buildings. While these inherited

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<sup>153</sup> Amy E. Facca and J. Winthrop Aldrich, "Putting the Past to Work for the Future," *The Public Historian* Vol. 33, No. 3 (2011): 40.

<sup>154</sup> Hawkes, *The Fourth Pillar of Sustainability*, 4.

<sup>155</sup> Facca, "Putting the Past to Work for the Future," 40.

advantages help these cities incorporate some principles of sustainable planning, cultural considerations, though recognized, were not incorporated into city sustainability plans – except in the case of San Francisco. Though there are inklings of the importance of culture appearing in all of the cities’ sustainability plans, they could all be doing a better job of incorporating culture. These cases demonstrate that connections between culture related planning and policy contexts have been slow to develop. Also, culture related planning and policy practices, though somewhat visible, have only been weakly situated within the sustainability context.<sup>156</sup>

By examining sustainability policies and initiatives using the Mazmanian epoch framework, it is clear that a third epoch is in full swing in the case study cities along with appropriately continuing first and second epoch policies. Each city that is being celebrated for their sustainability efforts is doing something right, as discussed above. However, this does not mean that they are progressing without fault.

Although many people may think of historic preservation as solely saving old buildings, it has evolved and expanded to embrace much more in the recent past. As a field, it relies on the expertise and engagement of diverse professionals and organizations.<sup>157</sup> By incorporating historic preservation

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<sup>156</sup> Nancy Duxbury and M. Sharon Jeannotte, “Culture, Sustainability, and Communities: Exploring the Myths,” (working paper presented at the 6<sup>th</sup> International Conference on Cultural Policy Research, Jyväskylä, Finland, August 24-27, 2010): 19.

<sup>157</sup> Ibid., 51.

strategies into sustainability planning, cities can manage history and culture and recognize that historic preservation contributes to strong foundations for resource management and growth. In a world increasingly characterized by rapid change, globalization, and impermanence, the regenerative capacities of historic preservation provide added stability, contributions to understanding and retaining special local character, increased quality of life, and greater economic health.<sup>158</sup>

The whole point of sustainable development is to keep that which is important, which is valuable, which is significant.<sup>159</sup> Many advocates define sustainable development too narrowly. This includes people in the historic preservation field, who must work to look beyond individual buildings and districts and consider how cities grow and develop.<sup>160</sup> Cultural identity manifests itself in the distinct landscape of the city and encompasses all the ways we use culture to remind ourselves and show others who we are. In that way, historic preservation has to be understood as more than an aesthetic value by public policy makers and citizens. By integrating historic preservation planning more transparently within sustainability plans, it can be a strong and valuable planning tool in every city. As part of a comprehensive sustainability plan, historic preservation can identify significant historic resources, protect against unwanted demolition, determine the need for design guidelines, and support educational initiatives to

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<sup>158</sup> Ibid.

<sup>159</sup> Donovan Rypkema, "Economics, Sustainability, and Historic Preservation," *Forum Journal* (Winter 2006): 37.

<sup>160</sup> Nick Kalogeresis, "Incorporating Sustainability Into Downtown Master Plans and Codes," *Main Street Now* May/June (2011): 5.

inform citizens about their city's history.<sup>161</sup> Most importantly, the integration of the principles of historic preservation into sustainability policies aids the protection of the distinctiveness of every city's identity.

Multiple agendas can be served using historic preservation as a sustainable planning tool. Both historic preservation and sustainability require a culture of stewardship.<sup>162</sup> Many misconceptions persist about historic preservation: that it is a luxury, that it is elitist, and that it causes gentrification and displacement.<sup>163</sup> But historic preservation is a major tool in the quest for sustainable, livable cities. As cities have to reevaluate what it means to grow and develop, the role of historic preservation as a sustainable planning tool will become more central. The primary focus on building anew has been engrained as a sign of progress and prosperity and will have to be meaningfully adjusted in the pursuit of sustainable cities.

The link between sustainability and development is challenging. The discussion of two different principles in one idea – sustainability as the limit of growth and development which often times is synonymous with growth, is problematic. At its very root, sustainable development may be a contradiction. Long term concern with the natural environment and the continuing push of the sustainability movement may help promote repair over replacement and

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<sup>161</sup> Kalogeresis, "Incorporating Sustainability," 13.

<sup>162</sup> Rypkema, "Economics, Sustainability, and Historic Preservation," 38.

<sup>163</sup> Eric Allison and Lauren Peters, *Historic Preservation and the Livable City* (Hoboken, NJ: John Wiley and Sons, 2011), 6.

transform previous misconceptions about historic preservation as an anti-development activity.<sup>164</sup>

Cultural resources, which include historically significant buildings and districts, are among the most commonly mentioned ingredients of livable cities.<sup>165</sup> Despite the emergence of historic preservation as a more mainstream interest, and despite its becoming recognized as a legitimate concern of both national and local government, historic preservation still occupies a niche and it is often overlooked and marginalized in public debate.<sup>166</sup>

Historic preservation has to be addressed as part of a larger public policy framework. The most effective way forward is the development of a cultural framework that includes historic preservation that can be applied to all policy.<sup>167</sup> Policymakers have to continue to consider the city as a system and address public needs accordingly. A system is a set of things interconnected in a way that they produce their own behavior over time.<sup>168</sup> Every city's system will be different. Once policy makers begin to identify the relationship between structure (the city) and behavior (policy), we can begin to understand how the city works as a

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<sup>164</sup> Charles E. Fisher, "Promoting the Preservation of Historic Buildings: Historic Preservation Policy in the United States, *APT Bulletin* Vol. 29, No. ¾ (1998):10.

<sup>165</sup> Allison, *Historic Preservation and the Livable City*, 89.

<sup>166</sup> *Ibid.*, 88.

<sup>167</sup> Hawkes, *The Fourth Pillar of Sustainability*, 32.

<sup>168</sup> Donella H. Meadows, *Thinking in Systems: A Primer*, editor Diana Wright (White River Junction, Vermont: Chelsea Green Publishing, 2008), 2.

system, what produces poor results or good results and how to shift them into more effective and consistent behavior patterns.<sup>169</sup>

As the world continues to change rapidly, thinking and approaching the city as a system will help manage, adapt, and identify root causes of problems and see opportunities to address them.<sup>170</sup> The systems approach, most importantly, allows for system redesign. Famed Philadelphian planner, Ed Bacon, captured the sentiment perfectly explaining, “The test of our achievement is whether we are able to break away from our fragmented approach to this problem and begin to see the city as a whole, dealing with it as a complete organism.”<sup>171</sup>

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<sup>169</sup> Meadows, *Thinking in Systems*, 1.

<sup>170</sup> *Ibid.*, 2.

<sup>171</sup> Edmund Bacon, *Design of Cities*, (New York: The Viking Press:1967), 322.

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## **Appendix**

### **San Francisco's Green City Index Scores**

Siemens Green City Index evaluated and ranked 27 US and Canadian cities for the measures they have taken to create a sustainable city. Each city was assessed in nine categories. They are as follows: Carbon Dioxide Emissions, Energy, Land Use, Buildings, Transport, Water, Waste, Air, and Environmental Governance. For each city the indicators were evaluated and then ranked against the other cities to indicate its relative position. San Francisco scored as followed:

- Overall – 1
- CO<sub>2</sub>- 8
- Energy – 3
- Land use – 8
- Buildings – 2
- Transport- 2
- Water – 5
- Waste – 1
- Air – 2
- Environmental governance – 8

### **Boston's Green City Index Scores**

Siemens Green City Index evaluated and ranked 27 US and Canadian cities for the actions they have taken to create a sustainable city. Each city was assessed in nine categories: Carbon Dioxide Emissions, Energy, Land Use, Buildings, Transport, Water, Waste, Air, and Environmental Governance. For each city the indicators were evaluated and then ranked against the other cities to indicate its relative position. Boston scored as followed:

- Overall – 6

CO2 - 11  
Energy – 2  
Land Use – 4  
Buildings – 10  
Transport – 17  
Water- 2  
Waste – 15  
Environmental Governance – 15

### **Philadelphia's Green City Index Scores**

Siemens Green City Index evaluated and ranked 27 US and Canadian cities for the measures they have taken to create a sustainable city. Each city was assessed in nine categories. They are as follows: Carbon Dioxide Emissions, Energy, Land Use, Buildings, Transport, Water, Waste, Air, and Environmental Governance. For each city the indicators were evaluated and then ranked against the other cities to indicate its relative position. Philadelphia scored as followed:

Overall – 13  
CO2- 12  
Energy – 10  
Land use – 7  
Buildings – 21  
Transport- 21  
Water – 23  
Waste – 13  
Air – 6  
Environmental governance – 5

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