

POLICY PURPOSE FROM FORMATION TO IMPLEMENTATION IN THE  
NEW YORK STATE BROWNFIELDS CLEANUP PROGRAM

By

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## ABSTRACT OF THE DISSERTATION

Policy Purpose from Formation to Implementation in the New York State Brownfields

Cleanup Program

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This dissertation examines the New York State (NYS) Brownfields Cleanup Program (BCP). The BCP is a state voluntary brownfields cleanup program for private developers. Participants in the BCP do a site cleanup in compliance with a plan approved by the NYS Department of Environmental Conservation (DEC), and then receive some liability release and varying amounts of refundable tax credits against project costs, including some costs not directly related to the cleanup.

In the dissertation, I use case study methods to document the stated purposes of the BCP throughout its development and compare them to the observed and expected outcomes of the program as it has been implemented, from 2003-2012. The BCP is a program that has been variously characterized by policy stakeholders, the media and in its authorizing legislation as fulfilling purposes including community development, environmental cleanup, and economic revitalization.

Whether all of these purposes can be achieved in one program is both a theoretical and an empirical question. In the dissertation, I examine the underlying

assumptions of the BCP as an example of policy integration, and explore the relationship of this assumption to various dimensions of the geography of program participation. I conclude that the program is not just a "cleanup" program, as its name implies, but is also not achieving the multiplicity of outcomes attributed to it. I suggest that an interdisciplinary planning orientation towards brownfields and other similarly multi-sector policy problems is an important strategy for introducing transparency and democratic models of power into the policy process.

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This dissertation is dedicated to my family: to my parents, for sharing with me a curiosity about neighborhoods and a desire to be an active participant in the communities where I live; to my brother and sister – when all else fails, you two are the only

inspiration that I need to keep on striving; and to Mark, for being my home. I love you all very much.

## TABLE OF CONTENTS

<b>ABSTRACT OF THE DISSERTATION .....</b>	<b>ii</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>iv</b>
<b>TABLE OF CONTENTS .....</b>	<b>vi</b>
<b>LIST OF TABLES .....</b>	<b>x</b>
<b>LIST OF ILLUSTRATIONS.....</b>	<b>xii</b>
<b>Chapter 1: What is the New York State Brownfields Cleanup Program and Why Does it Matter? .....</b>	<b>1</b>
<i>Introduction .....</i>	<i>1</i>
<i>Background: The Emergence of the Brownfields Policy Problem.....</i>	<i>3</i>
<i>Significance of Voluntary Cleanup Programs and the NYS BCP .....</i>	<i>5</i>
<i>Research Design .....</i>	<i>7</i>
Use of Case Study .....	8
Case Selection: The New York State Brownfields Cleanup .....	10
Data and Analysis .....	12
<i>Dissertation Overview .....</i>	<i>12</i>
<b>Chapter 2: Literature Review .....</b>	<b>15</b>
<i>Review of Brownfields Redevelopment Literature .....</i>	<i>16</i>
Describing the Brownfields Problem and Reviewing Existing Policy Solutions.....	16
Suggesting and Evaluating Policy Intervention Strategies .....	18
Critical Evaluations of Brownfields Redevelopment Practice and Policy .....	19
Brownfields and Environmental Justice .....	20
<i>Brownfields Research in an Interdisciplinary Planning and Policy Context .....</i>	<i>22</i>
Policy Process and Evaluation Research .....	24
Critical Perspectives and the Deliberative Turn.....	25
Sustainability and Policy Integration: Emergence and Critical Perspectives.....	26
<i>Conclusion: New Directions in Planning and Policy Research .....</i>	<i>33</i>

### **Chapter 3: Development of the New York State Brownfields Problem, and the Brownfields Cleanup**

<b>Program Solution .....</b>	<b>37</b>
<i>Voluntary Cleanup Programs Overview.....</i>	<i>38</i>
<i>Methods .....</i>	<i>39</i>
<i>Previous and Related Legislation .....</i>	<i>41</i>
The BCP's Predecessor: VCP (1994-2002).....	41
Area Wide Brownfields Planning: Brownfields Opportunity Areas (2003 - ).....	43
Municipally Led Brownfields Redevelopment: The Environmental Remediation Program (1996 - )	45
<i>Development of the 2003 Brownfields Cleanup Program .....</i>	<i>46</i>
Governor's Superfund Working Group .....	47
Pocantico Round Table.....	50
Passing a Bill in the Legislature.....	52
<i>Design and Implementation of the 2003 Program.....</i>	<i>54</i>
Eligibility .....	54
Application Process .....	55
Public Participation.....	56
Cleanup Tracks and Standards.....	56
Tax Credits.....	58
2008 Reforms.....	60
The Role of the Courts.....	63
<i>Conclusion: Multiple and Conflicting Purposes in the New York State Brownfields Cleanup Program .</i>	<i>74</i>
 <b>Chapter 4: The Geographic Distribution of BCP Participation.....</b>	<b>81</b>
<i>Introduction .....</i>	<i>81</i>
<i>Data and Methods .....</i>	<i>83</i>
New York State Geography: Choosing the spatial extent for analysis .....	83
Questions for Analysis.....	89

Data.....	91
Method of Analysis.....	95
<i>Results #1: Program Participation.....</i>	<i>96</i>
All Participating Sites .....	96
Completed Sites .....	98
Ineligible Sites .....	101
<i>Results #2: Comparison of Tract and County to State .....</i>	<i>102</i>
<i>Results #3: Comparison of Tract to County .....</i>	<i>105</i>
All Sites .....	106
Large Sites .....	107
Completed Sites .....	109
Regional Differences .....	110
<i>Results #4: Comparison of Participating and Ineligible .....</i>	<i>118</i>
All Sites .....	118
Non-NYC Sites Only .....	120
<i>Summary of Results &amp; Preliminary Discussion of Implications.....</i>	<i>122</i>
<b>Chapter 5: Lessons from the New York State Brownfields Cleanup Program .....</b>	<b>126</b>
<i>Summary and Discussion of Findings .....</i>	<i>126</i>
Purposes of the BCP .....	126
Purpose Conflicts.....	128
Relationship between purposes, purpose conflicts, and outcomes.....	129
<i>Implications for Theory: Critical Perspectives on Policy Integration Cases .....</i>	<i>132</i>
<i>Policy Recommendations.....</i>	<i>134</i>
<i>Limitations of the Study.....</i>	<i>136</i>
<i>Future Research .....</i>	<i>138</i>
Comparative Case Study and Incorporation of New Data .....	138



Additional Geovisualization for Analysis and Communicating Results .....	139
<i>Concluding Remarks</i> .....	140
<b>Appendix A : Semi Structured Interview Schedule</b> .....	<b>142</b>
<b>Appendix B : Members of the Governor’s Superfund Working Group</b> .....	<b>144</b>
<b>Appendix C : Site Contact List</b> .....	<b>145</b>
<b>Appendix D : Map of Sites Participating in the New York State Brownfields Cleanup Program Fiscal Years 2003-2012</b> .....	<b>146</b>
<b>Bibliography</b> .....	<b>147</b>

## LIST OF TABLES

Table 3-1: Percentage of Site Preparation and On-Site Groundwater Remediation Costs that may be claimed as a refundable tax credits for sites entering the New York State Brownfields Cleanup Program prior to June 23, 2008.....	59
Table 3-2: Tax Credits for Tangible Property Costs Under 2003 Brownfields Cleanup Act .....	60
Table 3-3: Tax Credits for Tangible Property Costs for Sites Accepted to the New York State Brownfields Cleanup Program after June 23, 2008 .....	63
Table 4-1: Large Cities in New York State by DEC Region.....	85
Table 4-2: Names of Regional Classifications for Analysis.....	86
Table 4-3: List of 2000 Decennial Variables Selected for Analysis.....	92
Table 4-4: Options for Geolocating Participating and Ineligible Site Data .....	94
Table 4-5: Total BCP sites by DEC region .....	97
Table 4-6: Completed BCP Sites and Time to Completion by DEC Region .....	99
Table 4-7: BCP Denials by DEC Region .....	101
Table 4-8: Comparison of BCP Site Counties and Tracts to State as a Whole.....	103
Table 4-9: Comparison of site tracts to site counties, all sites (N=324).....	107
Table 4-10: Comparison of BCP site tracts to BCP site counties, top 25% of sites by size (n=79) .....	109
Table 4-11: Comparison of tracts and counties completed sites (N=113).....	110
Table 4-12: Comparison of BCP site tracts to BCP site counties, New York City sites only (n=95) .....	111
Table 4-13: Comparison of BCP site tracts to BCP site counties, non-NYC downstate sites only (Tracts 1 & 3).....	115
Table 4-14: Comparison of tracts to counties for rest of state (n=171) .....	118
Table 4-15: Comparison of counties containing sites denied entry to the BCP to counties containing sites accepted to and entering the BCP for New York State .....	119
Table 4-16: Comparison of tracts containing sites denied entry to the BCP to tracts containing sites accepted to and entering the BCP for New York State .....	120
Table 4-17: Comparison of counties containing sites denied entry to the BCP to those containing sites accepted to and entering the BCP for NYS Excluding NYC .....	121

Table 4-18: Comparison of census tracts containing sites denied entry to the BCP to census tracts containing sites accepted to and entering the BCP for New York State excluding New York City ..122

## LIST OF ILLUSTRATIONS

Figure 1-1: New York State Cities: Populations Over 50,000 in the Year 2000 .....	10
Figure 4-1: Map of NYS DEC Regions .....	83

## **Chapter 1: What is the New York State Brownfields Cleanup Program and Why Does it Matter?**

“My personal priority, I won’t call it a peeve, is the brownfields program that the state put in place a couple of years ago to remediate sites of pollution, which has enormous unintended consequences...the state will be sending \$165 million to the IAC corporation which built beautiful headquarters designed by the famous architect Frank Gehry, in the middle of Manhattan. Can you imagine how far \$165 million would go in upstate New York? We will send \$100 million to the developers of the Ritz-Carlton condominium complex in White Plains. Can you imagine how far \$100 million would go in the Southern Tier?”

Paul Francis, Budget Director for Governor Eliot Spitzer, 2007 presentation to the Public Policy Forum at the Rockefeller Institute

### **Introduction**

The program that Paul Francis, budget director to then Governor Eliot Spitzer, means is the New York State Brownfields Cleanup Program (BCP). Since 2003, developers have claimed \$840 million in tax credits for the remediation and redevelopment of 97 brownfield sites under the BCP. As Francis suggests, the tax credits have not distributed evenly among the projects that have claimed them. Some supporters of the program consider it a success, saying it “has worked as well or better than any other single program in the state” (Nearing, 2013). Others believe that the program is broken, even after its 2008 revamping to limit the total amount of tax credits allowed for non-remediation development activities. Four years after those reforms were enacted, an activist group cautioned that, “before real estate developers bleed the state dry, these incentives need to be fixed” (Environmental Advocates of New York, 2012).

Despite concerns, the program maintains widespread support from affordable housing developers, environmental justice groups, traditional environmentalists and

private business interests. Why does a program with such an uncertain track-record retain its backing? This dissertation approaches this question by conceptualizing the BCP as an attempt at policy integration. The way that the BCP is framed in its authorizing statute frames the program as an attempt to achieve policy integration. Integrated policy means “the management of cross-cutting issues that transcend the boundaries of established policy fields and that do not correspond to the institutional responsibilities of individual governmental departments” (Holden, 2012, p. 306). The crosscutting nature of brownfields redevelopment appears explicitly in the BCP legislation:

The legislature hereby finds that there are thousands of abandoned and likely contaminated properties that threaten the health and vitality of the communities they burden, and that these sites, known as brownfields, are also contributing to sprawl development and loss of open space. It is therefore declared that, to advance the policy of the state of New York to conserve, improve, and protect its natural resources and environment and control water, land, and air pollution in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well being, it is appropriate to adopt this act... (ECL 27-1403)

The statement covers traditional natural resource protection, growth management, economic development, public health, and community development.

It is no coincidence that integrated policy would emerge around a policy problem that is central to urban planning. Policy integration in various forms has been an ideal of urban planning in since the beginning of the field. Sustainable development, which commonly emphasizes integrating economic, social and environmental concerns, is the most recent version of policy integration to become popular in the planning field. With the rise of sustainability, the idea of integration has attracted more mainstream attention. The concept of sustainability has sometimes been met with critical perspective. Scholars and practitioners have devoted attention to the difficulties of defining, implementing and

assessing policy activity that purports to achieve its goals. Moreover, there are still gaps in the research that examines the specific forms that these difficulties take over the lifetime of the policy process.

The purpose of this dissertation is to contribute to filling this research gap. It examines how the multiple and at times competing priorities of improving economic, environmental and social conditions through brownfields redevelopment have played out in the creating and carrying out the BCP. The dissertation first examines the discourse and politics around forming the BCP. The second part probes the outcomes of policy implementation, and their links to the policy process. This research focuses on: Identifying the purposes of the BCP and the related policy fields; Identifying conflicts among those purposes; Examining how those conflicts, such as that between environmental justice goals and economic development considerations, were resolved through the policy process, for instance, through the use of tax credits; and assessing who benefited from those compromises.

### **Background: The Emergence of the Brownfields Policy Problem**

Political awareness of the term brownfield<sup>1</sup> developed from the 1980 creation of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which created liability concerns for sites beyond those it placed on the Superfund list. CERCLA came at a time when economic and political forces were rearranging the

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<sup>1</sup>Unless otherwise indicated, for the purposes of this dissertation “brownfield sites” are defined as, “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant,” (United States Environmental Protection Agency, 2009).

landscape of production and commerce in the urban environment. Sites that had changing uses faced concerns about potential environmental liability associated with past activities.

Most sites did not have enough contamination for cleanup under CERCLA. In fact, the number of sites that CERCLA directly affected dropped as the federal government realized it could not fund remediating all the sites originally placed on the National Priorities List. States created their own superfund programs modeled on CERCLA to address some of the remaining sites; however, many still existed outside the reach of the activities funded by these policies, but still under the influence of the legal and financial responsibilities they placed on property owners and operators. This “in-between” status as a site not directly addressed by other environmental remediation programs but still under their legal and financial influence is the one unifying characteristic of brownfield sites, which otherwise have varying standards through state, agency, and local differences.<sup>2</sup>

Estimates on the scale of the brownfields problem vary widely: in the 1980s there were thought to be between 130,000 and 450,000 sites in the US. The number then increased to a potential 600,000 sites in the 1990s. More recently estimates of as many as one million sites have emerged (Wernstedt et al., 2004). The estimate of 450,000 remains the most frequently cited figure.

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<sup>2</sup>For a clear overview of CERCLA and the emergence of brownfields policy solutions see: Geltman, Elizabeth Glass. 2000. *Recycling Land: Understanding the Legal Landscape of Brownfield Development*. University of Michigan Press.



### **Significance of Voluntary Cleanup Programs and the NYS BCP**

In the early 1990s, local governments concerned with job losses drew federal and then state policy attention to brownfield sites. Their upset was fueled by the recession of 1990-1991, and by the events that immediately followed it. At the end of previous recessions, unemployment had quickly receded. However, after the 1990-1991 recession ended, employment continued to decline, and the economic turnaround was deemed a “jobless recovery” (Aaronson, Rissman, & Sullivan, 2004). One of the reasons for the pattern change was structural, rather than cyclical, forces caused the recession of 1990-1991. In other words, the jobless recovery sprang from changes in the sources of economic growth. During previous recessions, short-term layoffs had risen at the start of the recession and declined at the end. Workers found new jobs in the same company or sector when the economy recovered. However, in the early 1990s the location and type of economic growth after the recession ended harmed workers and their former work places. Residents remained unemployed, and companies abandoned previously active places of work, which then showed physical signs of decline. These sites were becoming brownfields.

In response, the US Council of Mayors, an organization comprised of the mayors of cities with a population of 30,000 or more, created a task force in 1993 to address the brownfields problem. This task force helped to spur the creation of the first federal brownfields redevelopment programs. These federal programs provided grant dollars for remediation and redevelopment activities, and, more importantly, they provided a model of liability relief in exchange for participation in a government-overseen cleanup program. States adopted this model, as they had with Superfund before it, and created

voluntary cleanup programs that allowed various non-state actors to remediate brownfield sites through public programs that reduced liability and allowed for various other benefits such as tax credits, cost reimbursements, and insurance assistance

New York was among the states that adopted voluntary cleanup programs as a model for brownfields redevelopment, but not quickly. The first New York State program was the Voluntary Cleanup Program (VCP). The VCP was an administrative program created by the Department of Environmental Conservation in 1994 and did not have any legislation or tax credits associated with it. Law and tax credits arrived in 2003 under the authority of the Brownfields Cleanup Act, which created the Brownfields Cleanup Program (BCP). The BCP replaced the VCP as the main state vehicle for remediating these troubled sites. Through the BCP, the state provides tax credits and liability releases for voluntary participants.

Generally, the BCP seeks two outcomes: the remediation of contaminated sites and their return to productive use. This is reflected in the dual criteria for admittance into the program. It requires that there is a confirmed or reasonable suspected contamination on the property and that such contamination “may be complicating the development, use or re-use of the property” (6 NYCRR Part 375-3.3(a)(1)). Determining whether a site fits this brownfield definition requires making judgments about local and regional economic conditions, the value of different land uses, and the role of the government in deciding what constitutes a productive land use, as well as understanding of site contamination. The New York State Department of Environmental Conservation decides program eligibility, despite the many non-environmental issues that the BCP is intended to address.

The eligibility decisions have been controversial. Before 2008, stakeholders criticized the BCP for excluding environmentally important sites with profit potential. The DEC's BCP eligibility determinations were not often challenged, and when they were, the courts upheld the DEC decisions. Beginning in 2008, several appellate court decisions changed program eligibility by overruling the State's rejection of an application. Specifically, the courts determined that the use of a "but for" criterion, in which the DEC only offers program participation if the project would not move forward without it, was inadequate grounds to keep a site out of the program (East River Realty Co, 2008).

Increasing concerns also arose about the costs as public and private stakeholders recognized the magnitude of the credits afforded by the BCP. In 2008, the legislature passed major BCP reform. They implemented changes to the structure of the tax credits to reduce the amount of government compensation for site improvement while increasing support for remediation activities and attempting to tie the BCP to the state's Brownfields Opportunities Areas (BOA) Program.

Despite these attempts to improve the program, its future is still uncertain. The tax credits associated with the original legislation will expire in December 2015, and the programs future remains uncertain as of April 2014.

### **Research Design**

This dissertation helps fill research gaps in brownfields redevelopment contributes to a burgeoning "critical" brownfields literature. But its methodological approach is most directly drawn from a growing body of planning and policy work that seeks to join

critical theoretical perspective with empirically grounded research, which I discuss in more detail in Chapter 2.

### *Use of Case Study*

Case study is common in brownfields research, but this is a slightly different usage than has been commonly employed. Past studies of brownfields redevelopment examined particular sites to assess outcomes through varying mixes of environmental, economic, social, and public health concerns (Greenberg, 2003; Wedding & Crawford-Brown, 2007). Or, they evaluated the success of state development incentives at attracting private sector involvement to aid in economic development (Meyer, 2000; Swickard, 2008) or analyzed whether and how the distribution of program funding achieved policy goals like environmental justice (Solitare and Greenberg, 2002).

Work that has addressed the potential conflicts that could arise between and among the different goals of redevelopment policies has been largely limited to theoretical discussion of the conflicts, rather than empirical investigations of how these conflicts play out in a planning and policy context (McCarthy, 2002; Engel, 1997; Greenberg, 2002).

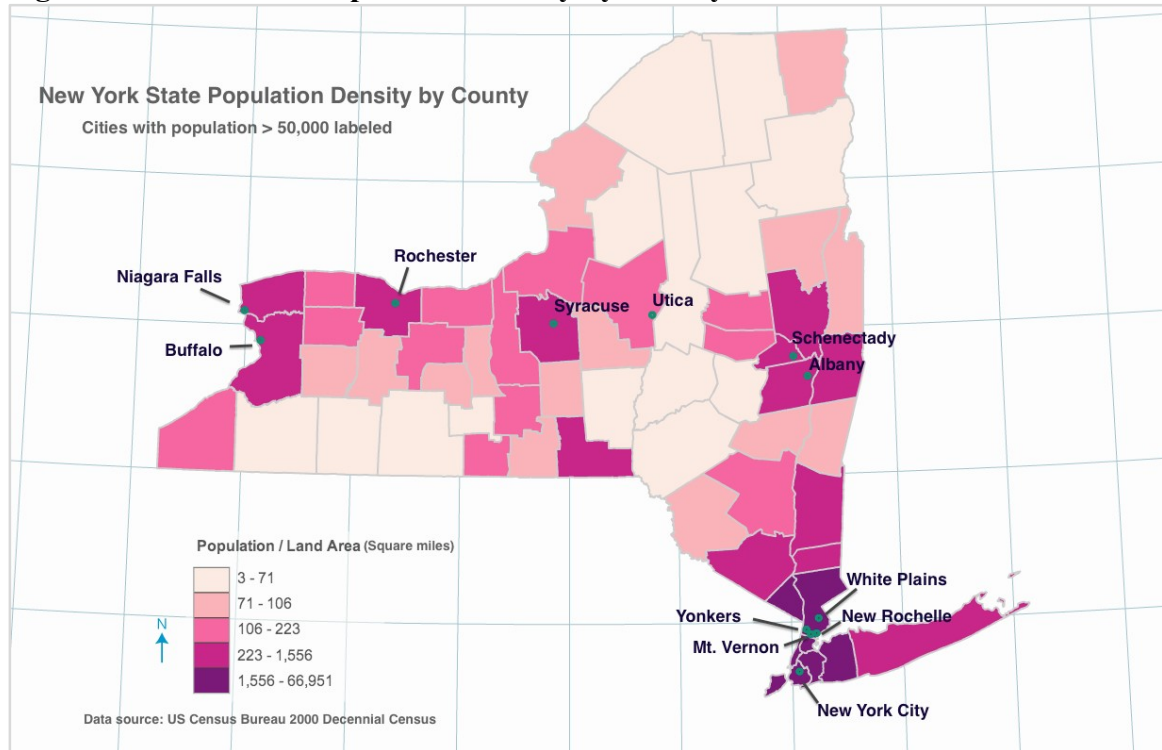
There are still relatively few examples of scholarship that critically examine the effectiveness of these cleanup programs for producing the desired outcomes at their full jurisdictional scale, or that critically examine the proposed purposes of these programs. This study does both. Other studies have asked whether brownfields cleanup policies are environmental programs that can simultaneously act as a real estate, economic development and community development policy. I instead start by asking what

conclusions can be drawn about the purpose of the BCP based on empirical evidence about the policy formation process. In doing so, I reject the notion that the BCP is inherently an environmental program, which creates new possibilities for assessing the effectiveness of the program as it was actually implemented.

Specifically, this dissertation uses a state case study to empirically link policy formation, design and implementation outcomes. Case study is a particularly strong strategy for capturing the complex and multi-faceted systems and processes that are involved in the process of creating urban redevelopment policy for brownfields redevelopment (Campbell, 2003). The case study of the BCP presented in this dissertation is organized in a manner to support theory building (Yin, 2003, p. 154) with the sequence of the exploration designed to build and argument about the challenges of integrated policy. It can be further broken down into two parts. The first part is the history of policy formation and implementation. I identify the purposes of the program and the policy fields with which they are associated. I also highlight key conflicts that emerged between the programs purposes, and discuss whether and how they were resolved. The purposes and conflicts identified through this policy history set the stage for the next stage of analysis, a quantitative assessment of policy implementation that focuses on the geography of program participation.

*Case Selection: The New York State Brownfields Cleanup*

**Figure 1-1: New York Population Density by County**



The New York State BCP displays qualities of exceptional cases and typical cases. The presence of New York City, the uneven geography of New York State, and the amount of financial incentives offered by the program provide the case with exceptional qualities that make it well suited to explore the way that inequality and uneven development are related to brownfields policymaking. Figure 1-1: New York Population Density by County displays the population per square mile for the State by county. It also contains labels for all cities with population over 50,000. The density and magnitude of population varies widely among the cities and regions of the state. Not only is the area surrounding New York City denser than other areas of New York, but New York City has

a total population greater than the combined total of the next largest cities, Buffalo, Rochester, and Syracuse, which are all located in the central and western parts of the state

Issues of distribution are particularly important to the question of how to effect urban redevelopment in a way that is consistent with a democratic system of justice. New York State's uneven geography provides an interesting case for looking at uneven development and thinking about methodologies to compare distributional effects.

However, the case also has typical qualities that offer an opportunity for careful and limited generalization to other state voluntary cleanup programs or redevelopment tax incentives. New York has many smaller cities with declining populations that are characteristic of the Rustbelt. There is a mix of commercial and industrial brownfields present. Significant portions of the sites are located on the aging manufacturing waterfronts that characterized many successful American cities in the 20<sup>th</sup> century. The program's use of tax credits as a development incentive is also typical of the way that development is promoted in contemporary US planning.

The program has now been in place for ten years. The tenure of the policy also makes it attractive for case study. The timeline for redevelopment projects is such that less than five years could not provide enough data. Even with a ten-year timeline, there are limitations on the ability to study the impact of the program because of the long timeline allowed for claiming tax credits. However, even without final figures for the total cost of the program over this time, there is still plenty of evidence with which to proceed. Revisions to the policy in 2008 provide an additional source of information and insight about the program and people's perspectives on it. Finally, though the final number will be higher than what is now known, already substantial resources have been

dedicated to this policy, which gives research on the topic intrinsic value for understanding how public resources are being used in service of private development in this instance.

### ***Data and Analysis***

The policy history uses multiple data sources, including media coverage of the program, government documents related to the BCP, and interviews with key stakeholders in the policy process. Legislative records are used to construct a timeline of the BCP and identify key players involved. Semi-structured interviews with some of these stakeholders provide extra insight into events that were not formally documented.

To better describe implementation, I also performed statistical analysis of quantitative data. The DEC maintains a database of all sites in the program. I used GIS to examine the uneven distribution of program participation, following the goals of redistribution that I identified through earlier parts of the research. I conducted the analysis at the level of the entire state, DEC-defined regions, counties, and census tracts, and made comparisons among the different spatial extents. With this information about the geographic realities of program implementation, I am able to assess the relationship between the policy's stated purposes and the actual outcomes of its design at these geographical scales but not for individual people.

### **Dissertation Overview**

The dissertation is organized as follows: Chapter 2 provides an overview of the academic literature about brownfields redevelopment, especially literature addressing public sector approaches to address brownfields as a policy problem. Then, the



brownfields literature is brought into conversation with key changes that have occurred over the lifetime of brownfields policy in the planning and policy fields, to contextualize the New York State BCP case study narrative I presented in the next three chapters.

In Chapter 3, I present a detailed history of the development of the BCP. I begin by introducing the Federal Superfund Program, and examine the policy discourse that led to the passage of the legislation that created the BCP in 2003. I also identify key policy design choices before and after the program was passed into law. I then follow the BCP through its implementation and reform in 2008. I conducted in-depth analysis of legal challenges that shaped the program, and I discuss their impacts before and after the 2008 reforms. The chapter concludes with a preliminary discussion of the purposes of the BCP as revealed in the processes of formation and implementation. One major theme that emerges is a belief that the BCP can redistribute development to areas and in doing so effect beneficial social, environmental, and economic changes.

In Chapter 4, I take up the question of the distribution of program participation, in order to provide empirical context for making policy decisions related to the BCP. Site data for projects entering the program between 2003 and 2013 is used to analyze the spatial distribution of program participation. Then, key variables related to socioeconomic status of residents, racial and ethnic composition of the population, and housing characteristics for different spatial extents surrounding sites participating in the program are summarized and compared using means testing. Chapter 4 also presents analysis of the sites that were rejected from the BCP. Assessing whether the sites that were rejected from the BCP were different in ways other than environmental contamination from the sites that were accepted into the program enables an evaluation of

whether or not introducing agency discretion into the program encourages deliberate or unintentional “bias” and also lays the foundation for the potential future study of non-participating site outcomes.

In Chapter 5, the results of these analyses are discussed in term of their implications for policy, theory and future research. Among other conclusions, I call particular attention to the need for additional research on the use of tax incentives as a tool for directing development towards particular areas. I caution against the use of this tool without effective guidelines to define the type of development that is desired, and point out that the lack of transparency that comes with the use of tax credits as a financial incentive can make it difficult to ascertain who is defining “desirable” development policy debate. From a theory perspective, I argue that critical work on policy integration and sustainability remains important to examining the benefits attributed to policies that use these concepts to build political support without achieving the underlying normative ideals that are espoused. This is especially critical since attempts at policy sector integration can extend the unequal power dynamic between “experts” and “lay” communities to unequal power relations between specialists from different professionalized fields. I conclude by arguing that by adopting a critical perspective without rejecting empiricism, planning and policy scholars and practitioners can offer important contributions to addressing brownfields redevelopment, as well other complex policy problems that transcend traditionally policy field boundaries and are some of the most pressing questions facing the future of urban development today

## Chapter 2: Literature Review

The literature on brownfields redevelopment<sup>3</sup> is multidisciplinary. Articles about brownfields appear in journals in fields ranging from urban planning to real estate law, environmental science, engineering, and business. Gaps are created in the research by the segregation of research on brownfields redevelopment in the discourse of different disciplines. Social science researchers agree that brownfields are a critical development problem that have the potential to improve and contribute to the resolution of major urban planning challenges, including: affordable housing, adapting the built environment to changes in the economy, and providing space for needed amenities in underserved communities. However, conclusions from existing studies and deficits in the research also demonstrate these advantages cannot be taken for granted as a consequence of all brownfield redevelopment efforts. In some instances, researchers have questioned the viability of using brownfields redevelopment for these purposes, by pointing to conflicting or gaps in empirical evidence about redevelopment outcomes or arguing that conceptual and ethical conflicts arise in attempting to use the lower exchange value of brownfields land to subsidize these efforts.

This chapter reviews key elements of the social science and policy literatures on brownfields redevelopment, and highlights key differences in approach that have emerged since brownfields first drew attention as a policy problem in the United States in

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<sup>3</sup> While the term “brownfield” in the United States in general use refers to any piece of land the redevelopment of which may be complicated by real or perceived environmental contamination, internationally, including in the UK, the term refers more generally to what is known in the US as “infill” development, and may or may not involve the possibility of environmental contamination. This literature review is limited to the literature on brownfields redevelopment that deals with the environmentally contaminated connotation of the term.

the late 1990s. The trajectory of brownfields practice and research is then discussed in terms of its relationship to changes in the distinct but overlapping fields of policy analysis and urban redevelopment planning scholarship that have occurred over this same time period. Finally, the discussion of methods introduced in Chapter 1 is revisited and explained in the context of the turn towards simultaneously empirical and value-based research in the planning and policy fields. This discussions clarifies how the normative ideals of policy integration and sustainability are, if approached with a critical perspective, useful framing devices for understanding and making policy judgments about voluntary brownfields cleanup program such as the BCP.

## **Review of Brownfields Redevelopment Literature**

### ***Describing the Brownfields Problem and Reviewing Existing Policy Solutions***

As described in the previous chapter, the creation of the brownfield policy problem is usually attributed to the passage of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, commonly referred to as “Superfund”) in December 1980. On its face, CERCLA does not apply directly to brownfield sites. However, CERCLA affected many more sites than it directly cleaned up. In the years after its passage, there was concern over the potential for a wide range of sites to be swept up into the program. By associating such significant potential liability with the reuse of potentially hazardous sites, CERCLA’s passage inadvertently created a barrier to the development of brownfields. In fact, one of the unifying features of brownfields sites across otherwise varying definitions is that they are not Superfund sites, but are impacted by the liability that CERCLA created.

Though litigation under CERCLA has not been a highly publicized concern since the 1990s (Abrams 1997), the uncertainty created by the potential for liability under Superfund continues to be a major factor in constituting brownfields, as they are known today. The definition of the term brownfield is a confusing issue, because while brownfields are fundamentally a legal construct, “There is no one legal definition of what constitutes a brownfield” (Geltman, 2000). The most important definitions of brownfields are those contained in the statutes that govern their regulation and redevelopment at the state and federal level. Consequently, much of the early research on brownfields redevelopment focused on identifying and classifying brownfield sites (Simons and Iannone, 1997; Alker et al., 2000; Leigh and Coffin, 2000; Thomas, 2002a; Thomas 2002b), assessing obstacles to redevelopment there (Coffin and Shepherd, 1998; DeSousa, 2000; Meyer and Lyons, 2000; Brachman, 2004; Alberini et al, 2005; Leigh, 1994) and documenting policies and programs in place to overcome those obstacles for different actors (Bartsch, 2002; Bartsch & Wells, 2006; Berger et al., 1995; Sherman, 2002; Geltman, 2000; Kushner, 2005).

As the state Superfund and voluntary cleanup programs emerged, studies explored the changing policy landscape at different levels of government (Kaiser, 1998; Heberle & Wernstedt, 2006). Abrams (1997) related the process to the larger field of environmental policy, determining that state action related to contaminated land was part of a “federal-first” pattern of policy response to hazardous substances in the environment (p. 266). This is a more intrusive approach than that modeled by the Clean Water Act and Clean Air Act, which operated under “cooperative federalism” or NEPA, which operated under a model of federal leadership. While Abrams emphasized the role of the federal

government in determining state policy action related to brownfields, looked to the state level programs as sources of innovation in brownfields redevelopment policy (Roberston, 2001; Dana, 2005).

Descriptive and exploratory inquiry on brownfields redevelopment continued as these policies evolved, for instance when the state brownfield programs were strengthened again with the 2002 Small Business Liability Relief and Brownfields Revitalization Act's explicit exemption of State VCP sites from Superfund enforcement (Adams et al., 2009, p. 95).

### ***Suggesting and Evaluating Policy Intervention Strategies***

Both policy makers and scholars adopted private cleanup of sites as a brownfields redevelopment strategy early on (Werndstedt et al., 2006). In fact, policy makers created the “brownfields” category to cope with the tremendous amount of contaminated land that could not be remediated by the government, but had been recognized as a public health and legal liability after the passage of CERCLA.

Brownfields have been frequently posed as a possible strategy for sustainable urban development as well as for the related concept, smart growth (Eisen, 2007, p. 723; Greenberg et al, 2001; Adams et al, 2009 p 90; Dixon, 2008). In fact, the connection between brownfields and sustainability is now often seen as inherent to brownfields redevelopment. For instance, a report by the Northeast-Midwest Institute stated:

The very nature of brownfields revitalization with its emphasis on infill development, pollution prevention, and environmental remediation, is well suited to advance creative experimentation with sustainable reuse initiatives. (Lewis, 2008, Executive Summary)

### ***Critical Evaluations of Brownfields Redevelopment Practice and Policy***

As brownfields policies and related research matured, studies began to question the assumptions about brownfields and demand that scholars and practitioners justify the claim that these benefits are inherent to brownfields redevelopment. Legal and public health scholars have focused on the difficult questions that emerge from putting some of these issues into practice, for instance the tension between higher cleanup levels and maximum affordability for housing developments and efficiency and equity in targeting public subsidy for brownfield redevelopment (McCarthy, 2002, 2009; Engel, 1997; Greenberg, 2002).

While a lack of clear brownfields definitions can inhibit policy-making, the use of various brownfields definitions can obscure the problems or realities of specific brownfields. For instance, Eisen (2006) finds that the “story” of brownfields provides a justification for funding programs that do not match the reality of the context in which the program operate. Likewise, Page and Berger’s (2006) assessment of two state brownfields programs revealed conflicting results and that “many common assumptions that have shaped our understanding of contaminated brownfield properties may be inaccurate” (p. 558). These are some of the assumptions the study identifies as commonly used in academic and policy research:

“...they are overwhelmingly the result of past industrial land uses” (p. 552); “...contaminated brownfield sites are most prevalent and present the greatest problems in older industrial regions” (p. 552); “...brownfield sites are commonly assumed to be an urban problem” (p. 552); “...the contaminated brownfield sites of the USA of today are a result of pollution events that occurred before this [CERCLA] legislation was enacted” (p. 553)

The results of the empirical analysis of Texas and New York's state brownfields programs presented in the study contradict many of these assumptions. In fact, there are more sites in Texas' brownfields program than in New York's program. Many of the sites in both states are located in suburban, exurban, or rural areas. Moreover, frequently, the activities that caused contamination on sites in the programs occurred after the creation of CERCLA.

Another strand of brownfields research questions the ability of brownfields to serve the multiple purposes attributed to it. For instance, Lee and Mohai (2012) argue that the reputation of brownfields redevelopment policy as serving both an environmental and economic redevelopment purpose may be undeserved, because current research has not sufficiently it (p. 607). Guehlstorf and Coffin (2012) argue that brownfield programs operate very similarly to conventional economic development programs, but are often inadequate to achieve environmental justice goals. For example, one common assumption is that brownfields are competing with greenfields for new development. However, studies such as Abrams (1997) compared the cost of development at greenfield and brownfield sites, he found that tangible development costs are likely to be higher at brownfield sites than greenfield sites for reasons unrelated to contamination.

### ***Brownfields and Environmental Justice***

Environmental justice literature is distinct but related to work on community participation in brownfields redevelopment. There are two ways in which EJ is linked to the brownfields problem. On a policy level, brownfields relate to EJ because they emerged as federal government issues through a series of related events, the most famous



of which is the community environmental disaster of Love Canal. In 1980, the federal response to Love Canal was the creation of CERCLA, which, as discussed in earlier chapter spurred the formation of the brownfields policy problem. By 1994, when state and federal brownfield policies were developing rapidly, President Clinton was signing Executive Order #12898 on Environmental Justice. In a public policy context, then, EJ refers to the notion that there must be an equitable distribution of environmental resources and equitable protections from environmental hazards for all people. However, the grassroots EJ movement defines itself less instrumentally, and calls for self-determination and involvement at all levels of the decision making process .

Both aspects of EJ have produced a robust research tradition that transcends many of the categorizations used earlier in this chapter to classify brownfields redevelopment literature. Some examples of brownfields literature that rely on the EJ concept belong to the category of critical brownfields redevelopment studies discussed in the previous section. However, another important strand of EJ research, while sometimes done in the style of earlier more traditional evaluation of brownfields policy (see, for instance, Solitare and Greenberg, 2002), aligns for closely with the movement towards value-rational social science inquiry that I discuss in the conclusion of this chapter. For instance, while it addresses a wider set of environmental justice issues than brownfields, Sze (2003) uses EJ as a central frame for assessing devolution and privatization in environmentally hazardous land uses in New York City.

Another example, Steil and Connolly (2009), is a case study of New York State's BOA program that investigates how the socially just city can be moved from a theoretical

framework to practically applied concept. They draw an important distinction between Western liberal conceptions of social justice and EJ, stating that:

The EJ principles resist commodification, either through the payment of community benefits before development or monetary damages after the fact, seeking instead the transformation of our relations to one another and to the earth. The transformations of these relations in the EJ model must begin at the grassroots, from the particular context of specific everyday lives. Justice for EJ organizers then cannot be defined abstractly, but must be achieved through self-determination of marginalized communities at the local level.”

The critique of the commodification of environmental resources is one scholars can and should consider carefully in the conceptualization of a contextually appropriate value-rational frame for analyzing public policy. Nevertheless, the point about the privileging of grassroots perspectives is also important in explaining why EJ is not the primary frame used in this dissertation. This study addresses the BCP at the current site of debates around the policy, and while EJ groups play an important role and EJ scholarship is used to contest characterizations of the BCP by various policy actors in this case study, using the EJ lens to assess power relations and outcomes in this policy process would not be an effective way to answer the central questions of the dissertation.

### **Brownfields Research in an Interdisciplinary Planning and Policy Context**

One reason for the dearth of conclusive information about the accuracy of the various brownfields “stories” being told is the way that brownfields research often takes place. The interdisciplinary approach used in the Environmental Justice research on brownfields redevelopment is a critical and important contribution to overcoming these difficulties, but it is not the only frame through which researchers should seek to understand brownfields redevelopment policy.

EJ studies tend to focus on specific communities or place-based issues.

Brownfields redevelopment studies that address larger special extents are siloed in disciplinary and sub-disciplinary contexts. Because research assesses brownfields program based on environmental, economic *or* social outcomes, researchers often to not compare the interplay between and among the three factors, despite their interrelated nature. Even when multi-disciplinary perspectives are adopted, the frameworks used for assessment are often methodologically limited in their ability to suggest changes or provide an explanation for the why the outcomes they identify have occurred.

In this dissertation, I address a local planning issue (brownfields redevelopment) as shaped by a State level policy (the BCP) so it is appropriate to address the ways that the theory and methodology of each has shaped the project. One way of understanding the phenomenon of fragmentation in brownfields redevelopment research is to consider changes in the theoretical and methodological orientations of policy analysis and urban planning scholarship that have occurred since the identification of brownfields as a policy and planning issue in the US in the years following CERCLA's 1980s passage. Planning and policy literature offer different but related suggestions for informing an approach to the situation of brownfields and each discipline is also subject to its own critiques in its abilities to do so. The lines between these the disciplines is not a hard one. While I discuss them separately here at times to maintain a sense of narrative structure, it is not my assertion that there is a privileged division or hierarchy between them.

### ***Policy Process and Evaluation Research***

Changes in public policy scholarship parallel the way that brownfields redevelopment research has shifted over the last 25 year. Changing conceptions and uses of the policy process in policy analysis, the program evaluation movement, and the emergence of critical and deliberative policy studies as a more recent paradigms for doing relevant and value based policy analysis research may all be directly related to the trajectory of brownfields research described in the first part of this chapter.

The field of policy analysis is a relatively young one. Early debates centered on different approaches to understanding the policy process. Several basic phases of the process that are now commonly accepted: “*agenda-setting, policy formulation, decision making, implementation and evaluation*” (Wegrich and Jann, 2006, p. 44). One approach to studying the BCP would be to isolate one aspect of the policy cycle and use it as the sole framing mechanism for analyzing the policy. However, while such an approach could be useful in terms of theory building around the policy process, it requires turning the focus away from understanding how these aspects of the policy process are interdependent and in fact inseparable. This has been one of the main critiques of the policy cycle concept, even from those who have relied on it heavily in their work. Regardless, the concept of the policy cycle has value for organizing policy analysis:

...it also offers a perspective against which the democratic quality of these processes could be assessed (without following the assumption of a simple, discrete sequence and clear separation of stages). (Wegrich and Jann, 2006, p. 58)

The policy cycle alone is not a sufficient basis for analyzing the work that a policy does. So, while this dissertation references aspects of the policy cycle as a mechanism for building a narrative of the history of the BCP, it is only the precondition to an analysis.

In the next section I discuss some of the policy analysis literature that has focused on the critical assessment of policy processes.

### ***Critical Perspectives and the Deliberative Turn***

A longstanding body of work in the policy literature that struggled to get as much attention as the more positivist approaches mentioned has questioned whether rationality-based theories of policy analysis that attempt to remove bias are effective for understanding or creating public policy. Law and science, which are often used as the basis of instrumental rationality, are in fact subject to and agents of the type of normative judgments that are used in less “objective” analyses of policy outcomes (Stone, 1988, p. 89). Brownfields, with their emphasis on environmental risk and legal liability are heavy with the influence of these two fields. Stone emphasizes the importance of deconstructing underlying arguments and “causal stories” to understand how multiple, and at times conflicting, ideas work together to create policy outcomes.

While it is not desirable to oversimplify the tangled causal relationships whose portrayal Stone describes as a politically unattractive habit of academic research, we can identify key points of tension in the existing causal stories and target them. By constructing a research design that connects policy outcomes with the causal stories and normative claims that enable them, it becomes possible to manage the complexity of public policy without reducing the factors that shape it to oversimplified truths that do not make room for reform. As Fischer (2009) directs us,

Rather than taking the actions and assertions of politicians and policymakers as straightforward statements of intent, accounts of policy problems and issues need to examine and include the varying presuppositions about the meaning of social and political events. (p. 174)

This, Fischer suggests, allows for the simultaneous practice of empirical evidence or reason giving with normative argumentation. As I stated in the introduction to this section, the divide between planning and policy research is used here primarily as a device to create a comprehensible narrative of the evolution of brownfields-relevant scholarship. The evolution of policy analysis described above can be seen in the evolution of planning work over the history of brownfields policy development as well. The deliberative turn in policy research emerged out of work that treated planning and policy in an interdisciplinary fashion.

### ***Sustainability and Policy Integration: Emergence and Critical Perspectives***

In addition to the emergence of the deliberative movement in planning, the movement toward critical evaluations of sustainability and policy integration concepts has also informed the analysis presented in this dissertation. Sustainability and brownfields emerged in the policy arena within a decade of each other. Sustainability came out of the international development community in the 1980s. The United Nations World Commission on Environment and Development report *Our Common Future* (Brundtland Commission, 1987) brought the term to prominence and presented the most often cited definition: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

By the 1990s it was common in the planning profession, with a 1993 *Planning* magazine article making the somewhat contradictory that, “‘Sustainable’ has become the decade’s newest buzzword,” and arguing that, “planning must make sustainable communities the single organizing concept for planning now and into the 21st century.”

The contradiction is, of course, the juxtaposition of a term whose most foundational principle is longevity over time with the use of the term “buzzword,” which implies a transience that is not consistent with common conceptions of the idea of sustainability.

There has been significant effort dedicated to measuring the success of efforts to achieve sustainability or sustainable development in policy and practice. However the development of effective metrics to assess sustainability has been hampered by the difficulty of accounting for differences in time, space and scale; the challenge of thinking outside of the traditional “silos” of policy field; and, at times, concern over the possibility that the ideal of sustainability can never be achieved, and is therefore not measurable.

Partially because of its imprecise meaning and the difficulty of measuring sustainability, the term has been criticized for being easily co-opted for political gain. The fact that the idea means different things to different people makes it easier to generate agreement around proposals that are called “sustainable” even though there may be substantive areas of disagreement remaining. The idea that sustainability is difficult to assess as a policy outcome can obscure the fact that policy purposes are not clearly enough defined in the public domain to even assess whether they may qualify as sustainable. These qualities of sustainability as a policy ideal may keep policy debate alive, but they do not promote democratization of the policy process when they are used in this fashion.

Dixon (2006) discusses the way that ‘sustainability’ or ‘sustainable development’ has evolved as a term since the publication of the Brundtlandt report. Most significantly for brownfields policy, the temporal aspect of sustainable development has been supplemented by a second aspect of sustainable development. The integration of

economic, environmental, and social equity concerns has been conceptualized variously as a ‘triple bottom line’, a ‘three pillars’ model, and as a ‘Russian Doll’ or ‘concentric circles’ model in which economic development is at the core of these three concerns (Dixon, 2006, pp. 238).

This may be characterized as the policy sector, which Holden (2012) identifies as the most commonly used normative argument for policy integration for sustainable development. It is visible in the voluntary cleanup programs that have proliferated at the state level across the country, including the BCP, which claim to simultaneously function in various permutations as environmental protection, economic development, and community development programs. However, other aspects of the policy integration ideal also emerge in activity around VCPs.

Inherently, a program that claims to effect environmental protection through incentivizing private sector activity will “integrate” these two policy areas in that it will likely attract the attention of stakeholders from both. Because brownfields redevelopment has implications for local scale processes of urban redevelopment, community concerns are relevant, even if they are frequently ignored or treated as a nuisance. The centrality of the environmental justice movement to brownfield policy debates including those in New York State, and the vocal grassroots organization of the movement, has ensured that a connection between the brownfields problem and social justice is recognized, if not realized. Thus, brownfields redevelopment, and particularly state voluntary cleanup programs, provides an empirical test of the critiques of and models of policy field integration and sustainable development that have emerged in the policy and academic



communities over the past thirty years as the term “sustainability” has gained traction in these circles.

However, much of the early descriptive and assessment research on brownfields redevelopment gives little treatment to the integrated policy approach by focusing only on one aspect of policy goals, often while accepting the assumption that integration of fields and purposes is possible. Challenges to assessing the effectiveness of integrated brownfields redevelopment policy solutions or measure the sustainability of brownfield redevelopment carried out under such programs echo many of the problems that critical perspectives on policy integration and the sustainability paradigm raise.

Even when the area of concern is narrowed to the field of brownfields, sustainability is often found to be only a rhetorical concern, when it is possible to measure the extent of a projects’ sustainability at all (Dixon, 2006). Efforts to measure the sustainability of brownfields redevelopment often focus on measuring the sustainability of individual site cleanup. However, site level measures of sustainability may overlook important factors in the larger context of redevelopment. This has been a problem elsewhere in the evaluation literature on brownfields redevelopment policy as well. Program evaluation approaches to state level policies have been attempted, though they have frequently only looked at particular jurisdictions within the state. The quality of pollution removal under a brownfields redevelopment program must meet some criteria for sustainability in order for pollution removal to be a sustainable outcome of brownfields redevelopment. In some cases, a “sustainable” reuse such as the creation of open space is inconsistent with the inherent sustainability of the brownfield over

greenfield choice. For example, if a brownfield is turned into open space, it cannot absorb the development from which it is supposedly protecting greenfields.

Holden (2012) describes the emergence of newer conceptions of policy integration and a parallel phenomenon in the field of sustainability research that “focuses on process rather than targets set in advance” (p. 308). This vision of sustainability as integration goes beyond the “win win” approach of the triple bottom line understanding of sustainability to recognize that normative arguments about how to contextually represent and prioritize conflicts when not all parties can “win.” This provides a useful framing device for assessing outcomes of policies that attempt integration. As Holden (2012) asks: “Are expectations of going beyond the zero-sum game in political compromise without betraying democratic principles borne out in practice, following integrated process protocol?” (p. 315).

One important example from the existing literature provides a point of departure for assessing existing practices to answer this question. Campbell (1996) develops a model of three fundamental conflicts of the integration of policy sector priorities in sustainable development. He argues that the difficulty of realizing sustainability originates from fundamental tensions existing between the “three pillars” of sustainability, resulting in what he calls the “planner’s triangle,” which leaves practitioners struggling toward an aim that cannot be achieved without resolving conflicts that reach far beyond the bounds of any individual planning issue. This model can be used to understand the challenges of developing brownfields redevelopment policy and have in fact already been identified as challenges to brownfields redevelopment by brownfields researchers.

Here I will briefly describe this framework and how it can inform an understanding of competing priorities in brownfields redevelopment.

#### Property Conflict – Between Equity and Economic Development:

The first conflict that Campbell describes arising for planners is that between equity and economic development, which he deems the “property conflict” (p. 5) Campbell discusses the conflict primarily in terms of industrial production – that communities look to the government to intervene in land use in ways that protect the economic and social value of land, even as they regard it as a private commodity that should not be tampered with by the public sector. However, it can also be interpreted as relating to the development of land for profit as is more often the case in the post-industrial city.

#### Development Conflict – Between Equity and Environmental Protection:

The second conflict Campbell describes is the so-called “development conflict” between equity and environmental protection. Allowing lower levels of cleanup for residential use based on income would have been politically untenable and thus is not permitted, but the development conflict is still an issue here because of the alternative for non-residential uses, which may unfairly burden lower income populations. The lower cost of industrial and commercial level cleanups may have made these reuses more likely for lower income neighborhoods. Even if they are needed, they still represent the absence of choice, which is important for the realization of any type of procedural justice. Additionally, it seems unlikely that affordable housing projects, for which keeping costs down is always a struggle, would be built on land cleaned up for unrestricted, rather than restricted residential, reuse, when the latter option is made available specifically to provide a less

costly path to redevelopment. This is a result of both economic logic and the fact that restricted residential usage cleanup standards can only be applied to multi-family dwellings. The exact impact of the lower cleanup standards for these sites on health is unknown, but it is still an additional risk burden being placed upon a population because of their lack of social and economic power. Also, the more costly the remediation process the more obstacles to development, the less likely it is that brownfields in lower income areas will be redeveloped or that redevelopment will occur for anything other than profit maximizing uses.

#### Resource Conflict – Between Economic Development and Environmental Protection

The third conflict Campbell describes is the “resource conflict” arising from the tension between investment to achieve economic development goals and expenditures to achieve environmental protection. In the context of urban brownfields land, this resource conflict is even more complicated by the fact that the idea of sustainable environmental conditions is so contested: what is a sufficient level of cleanup is not clear when we are discussing urban land rather than forests that need to keep producing at a certain rate. Urban land is not typically thought of as a natural resource, but to the extent that the land itself is a natural resource that is, as Campbell describes, being turned into a consumer product, the BCP plays a large role in setting the price of that product. Variable cleanup standards enable companies to profit in different types of property markets.

While Campbell does not see a universal solution for resolving these conflicts, he suggests using the sustainability concept as an opportunity for producing change and reform. He argues that:

“In fact, the idea will be particularly effective if, instead of merely evoking a misty-eyed vision of a peaceful ecotopia, it acts as a lightning rod to focus conflicting economic, environmental, and social interests. The more it stirs up conflicts and sharpens the debate, the more effective the idea of sustainability will be in the long run.”

Campbell’s suggestion to use sustainability as a “lightening rod” to focus debate is consistent with a second move in planning and policy studies towards new forms research that has also informed the design of this study.

### **Conclusion: New Directions in Planning and Policy Research**

In *Making Social Science Matter*, Flyvbjerg (2001) poses the question “Can social and political science be scientific in the same sense as is natural science?” Relying heavily on Bourdieu, he concludes, “context dependence does not mean just a more complex form of determinism. It means an open-ended, contingent relation between contexts and actions and interpretations.” He suggests, among other strategies, “studying case and contexts” as a methodological approach to carrying out empirical research without submitting to instrumentalist forms of rationality.

There are several strands of work in planning and policy, as well as in urban geography, that echo this suggestions as a strategy connect the critical and deliberative turns in planning and policy research with the types of analysis that produce policy relevant results. They amount to the emergence of a new methodological tradition guided by value based, rather than instrumental, notions of rationality.

This argument is further developed in *Real Social Science* (Flyvbjerg, Landman, Schram eds, 2012), which is comprised of planning and policy case studies that demonstrate and build on the arguments in *Making Social Science Matter*. He concludes

that key tension that identifying key “tension points” is critical to producing relevant social science.

To evaluate brownfields policy effectively, an analysis must look critically at the idea of sustainability and policy integration, and include critical perspectives on the context for urban redevelopment in which brownfields redevelopment is taking place. While CERCLA shaped the legal landscape of the brownfields problem, as it exists today, the problems of brownfields have a much larger set of causes than legal liability (Abrams, 1997). To create effective brownfields redevelopment policy – policy that truly addresses the problems within its reach – the frame of brownfields policy analysis must be expanded to combine politics, process and outcomes. It and the assessment of these processes and outcomes based on both the overarching goals and specific objectives of a policy, as well as the normative frames provided by the literature on sustainability, policy integration, and socially and environmentally just urbanism.

Adams et al (2009) theorizes a second stage of brownfield policy development that “involves an appreciation of the potential overall contribution of brownfield land towards the achievement of broader policies” (p. 86). They recognize the importance of articulating “new urban visions and development products” through this process, but argue specifically that:

“This stage is much more than a simple promotional exercise...because realisation of potential requires a mature understanding of the actions needed to achieve it. Since brownfield land is by definition often intricately embedded into the urban fabric, recognition of potential is thus clearly associated with an appreciation that its realisation requires practical action to overcome physical, ownership and other constraints to its redevelopment” (p. 87).

This approach to scholarship is echoed in the approach to practice that Eisen identifies as characterizing “second generation” brownfields programs that focus on an area-wide approach such as New Jersey’s Brownfields Development Area Initiative and New York’s Brownfields Opportunities Areas grant program.

Whether or not programs explicitly take into account the broader context of brownfields redevelopment, that broader context has significant consequences for the outcomes of brownfields policies. Moreover, even if brownfields policies do begin to address the larger context for urban redevelopment, the frame through which this context is understood will have significant impacts on the policies that are created. In the case of the New York State Brownfields Cleanup Program, the frame through which policy actors define the policy’s purpose is unclear, and has been an obstacle to assessment. This dissertation contributes to the growing literature on brownfields redevelopment that is designed to assess the policy’s stated goals, document and interpret how the policy actually works to achieve its outcomes, and contribute theoretically and empirically supportable suggestions for policy change.

## **Summary**

Early brownfields research has relied on earlier, less critical conceptions of policy process, and more descriptive modes of planning inquiry. It was at times empirically rigorous, but most often from a positivist or instrumentalist perspective. The increasing presence of critical perspectives planning and policy research has been paralleled by a move towards critical perspectives in brownfields research. However, there is still a gap between empirical work on brownfields policy and practice and the critical perspectives that are increasingly applied to it. The Environmental Justice

movement provides the strongest body of brownfields-relevant scholarship that uses empirical evidence to create value-rational arguments around the importance and resolution of planning questions. This dissertation incorporates similar methods while combining aspects of EJ ideals with normative concepts of sustainability and policy integration. These perspectives inform a value-rational frame within which empirical evidence of the purposes of the New York State BCP are assessed in this dissertation.



### **Chapter 3: Development of the New York State Brownfields Problem, and the Brownfields Cleanup Program Solution**

This chapter provides an overview of the politics and history of voluntary brownfields cleanup in New York State, and describes in detail the creation and subsequent reform of the Brownfields Cleanup Program (BCP), as authorized in Article 27, Title 14 of the 2003 State Environmental Conservation Law (ECL). The BCP is a voluntary cleanup program to encourage eligible parties to determine the extent of contamination on brownfield sites, and to then clean them up and return them to productive use.

Under the BCP, the investigation of contamination and remediation of a brownfield site are conducted by an eligible site owner or operator, with some oversight by the DEC. Like many state voluntary cleanup programs, New York's BCP offers liability relief to participants. What makes New York's program unique is the financial incentives that are attached to participation. When the agreed upon cleanup is completed, site owners and operators can claim refundable tax credits for site preparation expenses as well as the costs associated with actually redeveloping the property. These tax credits can include up to 24% of the non-remediation project cost and, before 2008, were not capped, making them some of the most generous in the country.

The way that these tax credits are calculated determines the overall cost of the program. The location and type of cleanups and development that the program incentivizes has been a major cause of controversy related to the program since its inception. Many argue that the tax credits have been inadequate based on the number of

sites that have been cleaned up under the program, while at the same time voicing concern about the large expenditure of public money on refundable tax credit incentives without a clear payoff in the form of cleanup and development outcomes at the BCP sites (New York State Office of the Comptroller, 2008 & 2013).

To determine the validity of the praise and criticism, and, in fact, the efficacy of the program itself, it is first necessary to understand the purpose of the program and its intended consequences. The BCP may be considered an attempt at policy integration because it explicitly crosses traditional sector boundaries to address environmental, economic, and community development concerns. Its appeal to a wide stakeholder audience reflects the many policy areas to which the BCP is relevant. However, while policy integration can create a wider base of appeal for a policy, it also creates its own set of policy challenges. In this chapter, I examine aspects of the policy that different stakeholders were interested in, and how these interests relate to the specifics of the program design. In particular, I highlight when in the process different stakeholders' agendas came into conflict and what resolutions emerged through policy design and implementation.

### **Voluntary Cleanup Programs Overview**

As discussed in the previous chapter, the aftereffects of CERCLA's creation as well as the continued loss of manufacturing jobs in the US catalyzed federal and then state activity around brownfields redevelopment. Much of the state level activity has centered on voluntary cleanup programs. Unlike CERCLA, which was meant to recoup the cost of cleanup from the polluter, if possible, voluntary cleanup programs as their name suggests encourage owners and developers of brownfield sites to proactively

engage in a government sanctioned cleanup of the site. In exchange for taking part in these “voluntary” cleanups, participants receive incentives that range from liability relief and subsidized insurance to financial incentives such as those offered by the BCP.

According to the EPA, all states and territories in the United States had some sort of brownfields program or institutional controls program or processes to oversee brownfields cleanup as of 2011. Of these, 33 (out of 55) had some sort of tax incentive in place (*State Brownfields and Voluntary Response Programs: An update from the States*, 2011).

## **Methods**

A combination of archival research and interviews were used to construct a history of New York State’s BCP. Document review began with the text of the legislation itself, as well as the bill jackets of the 2003 and 2008 legislation and guidance documents issued by the administering agency (DEC). Keyword searches were conducted on the main Albany newspaper, the *Times Union*, as well as the *New York Times*. I also reviewed the websites of organizations that were mentioned in the newspaper articles and submitted materials that were included in the bill jackets and consulted the records of public events related to the BCP.

Conclusions about policy intent may also differ depending on context. Law binds judicial interpretations, and the intent of policy makers only becomes important when a statute is in some way ambiguous. This was true of the BCP and, later in this chapter, I review the courts’ interpretations of the policy as it was finally written into law. However, from a social science perspective, the intent of policy makers is relevant even if in some cases it may conflict with the laws that eventually codify the policy. In fact,

those conflicts between policymakers' intent and policy design are of particular interest from a policy analysis point of view, and this chapter highlights those that exist in the case of the BCP.

Originally, semi-structured interviews with 6 key individuals who have firsthand experience with the policy were planned. Interviews were confidential. Participants were selected based on experience and representation of relevant stakeholder groups. The interviews were used to gather information for verification and to capture undocumented aspects of the process. Half a dozen interviewees were recruited, however engaging interviewees on the topic was challenging. Ultimately, only two in-person interviews were conducted. Each lasted for over an hour. A copy of the semi-structured interview schedule can be found in Appendix A.

Fortunately, there were two significant consensus building processes around the 2003 Brownfields Act: Governor Pataki's Superfund Working Group and the Pocantico Roundtable for Consensus on Brownfields. These collaborative efforts engaged overlapping but distinct constituencies, as is detailed later in this chapter. Documentation of these efforts proved useful for offsetting the small number of interviews that were conducted specifically for this dissertation. Published reports and news stories provide valuable information about the points of compromise and disagreement for the Governor's Superfund Working Group. The Pocantico Roundtable for consensus on brownfields was facilitated by Allan Zerk, a New York University professor. An NYU Masters of Urban Planning student documented the process (Bieler 1999), and her unpublished thesis provided many important details of its specifics. Publicly available data relating to program activity and performance were also consulted.

## **Previous and Related Legislation**

The BCP is only one of three brownfields-related programs currently operating in New York State. The following program summaries describe the other two active brownfields programs, as well as the BCP's predecessor, which, though discontinued, still has some active sites enrolled.

### ***The BCP's Predecessor: VCP (1994-2002)***

The VCP was New York State's first attempt at a voluntary cleanup program. It began in 1994, as an administrative program. The creation of the VCP was driven primarily by the Department of Environmental Conservation (DEC) and did not involve the creation of new legislation. Its scope was broad, but the benefits to participants were limited, especially in comparison to the later Brownfields Cleanup Program (BCP). The VCP provided only for participant funded approval and oversight of the cleanup by the DEC, and the issuance of a No Further Action (NFA) letter upon successful completion of the agreed upon cleanup plan. The NFA letter relieved the site from liability from the DEC as well as the Department of Health (DOH) who also played an important role in the program.

Sites listed on the National Priorities List, PRPs and persons subject to RCRA enforcement were excluded from participation in the program. Cleanup standards for the program were determined individually for participating sites, typically based on the DEC's Soil Standard Guidelines and Groundwater Standards Regulations (Geltman, 2000, p. 147).

Starting when the VCP was enacted by the DEC, Governor Pataki pushed for the introduction of a bill to formalize a state brownfields cleanup program in the legislature. However, it would take almost ten years to move New York State from the non-statutory VCP to the first version of the current BCP.

During the 8 years that the VCP was in place, 411 sites were accepted into the program. For comparative purposes, Page and Berger (2006) found that while from 1995 – 2002, Texas had received 1375 applications to its voluntary cleanup program, New York State had entered into only 202 voluntary cleanup agreements between 1994 and 2001 (p. 553). The study notes that the difference in participation is likely a product of policy design and market forces, stating:

“Variations in the VCA programs in these two states and their implementation can influence which properties enter these programs and which do not. These differences may explain the disparity in the number of the properties in the VCA programs of the two states. We do not believe this difference is the result of greater contamination in Texas” (Page and Berger, 2006, p. 554).

In fact, their review of the number of federal Superfund sites in both states led them to the opposite conclusion about the frequency of contamination there. Notably, despite the prevalent belief that brownfields are urban industrial sites, more than half of both past and present land uses in the VCP sites in the study were commercial (p. 557).

While the VCP stopped accepting applications when the BCP went into effect in 2003, sites remain active in the program. Eligible sites were given the opportunity to transfer into the BCP when it was first created, and some did, but many VCP participants elected to stay in the administrative program. Though there is no formal record of the reasons some sites did not elect to move to the BCP program to take advantage of its

financial incentives, stakeholders have suggested that the stricter eligibility restrictions and additional time to transfer to the BCP were both obstacles.

***Area Wide Brownfields Planning: Brownfields Opportunity Areas (2003 - )***

The Brownfields Opportunity Areas (BOA) Program was created in 2003 alongside the BCP. It is a different type of program than the VCP or BCP. The BOA Program provides grants to support community-led planning and site assessment in areas that are particularly impacted by the presence of brownfields. BOA does not fund cleanup of individual sites. While BCP participants are owners or operators of a specific site, eligible BOA participants are municipal governments, community groups, and, in New York City, community boards. Multiple community groups, or a local government and a community group, can apply to the program together. A site in a BOA can be admitted to the BCP, and the two programs are intended to work together, though participants and supporters of the BOA's creation have criticized the coordination efforts for being ineffective and slow.

Unlike the BCP, the BOA program has a competitive selection process. Accepted applicants receive funding to complete the activities necessary for the area to become a designated Brownfields Opportunity Area (BOA) in three phases. Many of the activities funded under BOA are not brownfield specific, and consequently BOA is a mechanism not only for brownfields planning, but also for community development. The three BOA steps consist of a number of different studies that examine the economic, social, and physical context of the proposed BOA as well as the exploration of site-specific environmental issues in some cases. The only activity that may be eligible for funding

under BOA and for a tax credit under the BCP is site investigation, which may be done as part of the BOA process and/or by an individual site owner/operator participating in the BCP.

Several persistent implementation issues have plagued the BOA. One criticism of the BOA has been the reimbursement payment model. Though the program does provide a grant for participants to pay for associated costs, the money is not actually disbursed until the costs have been incurred. It is possible to submit a request for an advance of 25% of the project cost, but administrative delays in processing reimbursements and the unavailability of funds to cover project costs up front has nevertheless been a point of concern for program participants.

Another issue that affected the BOA early in its existence was a multi-agency model of implementation. In 2003, when the program was created, the Department of State (DOS) was responsible for interacting with BOA applicants and grantees, but oversight of the program remained with the DEC. This added time to the process and required additional bureaucratic activity for coordination.

A third issue that was a major focus of the 2008 debate over the reform of the state brownfields legislation is the relationship between BOA and the BCP. Under the first iteration of the BCP, BCP participation did not require compliance with a BOA plan, even if a site was being redeveloped in the BOA planning area. In 2008, that changed, when BCP-linked Brownfields Tax Credit awarded for developing a brownfields site within a BOA in a manner consistent with a BOA plan was adjusted. A 2% tax bonus for BOA participation was added to the BCP. The impact of this change is unclear, as caps were implemented at the same time. Therefore, a project that reached the cap before it



exhausted all the other incentives might not need the BOA bonus to get the full financial benefit. Significantly, control of the BOA was moved from DEC to DOS at this time.

***Municipally Led Brownfields Redevelopment: The Environmental Remediation Program (1996 - )***

The Environmental Remediation Program (ERP) was created through the 1996 Clean Water/Clean Air Bond Act. Its purpose is to allow municipalities to receive funding to clean up publicly owned land. To be eligible, a municipality cannot be responsible for the contamination that exists on a site. Once redeveloped, a site is not restricted to public use. It may be used for private commercial, industrial, or residential development. Like the VCP and BCP, the program is not designed for Superfund sites, and Class 1 or 2 sites on the Inactive Hazardous Waste Registry are not eligible for participation.

Some environmental groups opposed the bond act that created the ERP because it allowed for reduced cleanup standards in comparison to the federal Superfund program (“Key Issues Made Record-Late Budget”, *Times Union*, 7/14/96). However, once the program went into effect, some actually argued that the program was not being as widely used as was hoped for because it required a higher level of cleanup than the VCP, which was the main cleanup program in place at the time. Some also criticized the ERP for being biased towards upstate or western New York and for having too many restrictions on eligibility.

Of the \$200 million authorized by the original bond act, only \$180 million was made available because of disagreement between the governor’s office and the

legislature. Since 2008 the program has been frozen, neither accepting nor approving new applications due to a lack of funding. As of October 2013, the program was still at a standstill.

### **Development of the 2003 Brownfields Cleanup Program**

In the late 1990s, there were several issues related to hazardous waste cleanup facing New York State. One was that the State Superfund program was expected to run out of money by 2001. In 1986, \$1.1 billion had been made available to the State to deal with inactive hazardous waste disposal sites for which responsible parties were not available to conduct remediation through the Environmental Quality Bond Act. 1982's State Superfund Law established fees for waste generators in and exporting waste to New York State to create revenue for the Superfund cleanup program. In 1985, petroleum storage license fees were added to fund the spill response program. Despite these sources of revenue, there were more sites than originally anticipated, and by 1998 it was clear that the program would need additional funding imminently.

At the same time, the State's VCP was attracting attention from multiple directions. New York State only had an administrative cleanup program. Those interested in brownfields redevelopment in New York State did not consider the VCP to be a sufficiently robust program to address the problem of brownfields sites in New York State. In addition to being an issue with private developers and business interests, brownfields had registered on the radar of affordable housing developers, who were having difficulty accessing loans after a federal court decision declared that lenders could incur liability for contamination found the sites they financed.

### ***Governor's Superfund Working Group***

Governor George Pataki (Republican) served three consecutive terms in New York, from 1995 to 2006. An early proponent of a statutory brownfields program, Pataki also pushed for the passage of a bond act including \$200 million to be dedicated to the cleanup of municipally owned brownfields through the ERP. Governor Pataki had been trying for years to pass a voluntary brownfields cleanup program in the state legislature, but failed repeatedly, due to conflicts over downstate participation and cleanup standards.

In order to handle the budget issues facing Superfund, Governor Pataki created the New York State Superfund Working Group (Superfund Working Group) on August 7, 1998. The purpose of the group was to develop recommendations to finance and reform the programs that deal with the assessment and cleanup of sites that are contaminated or suspected of contamination with hazardous wastes, hazardous substances, and petroleum. The issues were not only financial. The existence of “hazardous substance sites” which do not meet the state definition of a “hazardous waste” site but still require remediation was a problem that needed to be dealt with. In 1998 DEC had identified between 118 and 161 sites that fell into this category and also might have posed a significant threat to public health and the environment, however no statutory program existed to address these sites.

The working group included members of State agencies dealing with environment, public health, and economic development issues; environmentalists; the business community; municipal government representatives; and individuals from the finance community (Appendix B). The group's findings were reported in *Recommendation to Reform and Finance New York's Remedial Programs*, on June 2,

1999. A draft was issued on April 30, 1999, and public comments were accepted until May 24, 1999. Public meetings were held on May 11, 1999 in Queens, and May 12, 1999 in Buffalo.

Some members of the working group would not sign off on the final report because the group could not reach agreement on certain key issues. Specifically, SWG could not agree as to whether all Superfund sites located adjacent to residential areas should be remediated to residential levels and whether or not the state could mandate a residential cleanup at certain Class 2 superfund sites. Additionally, the SWG could not agree on the funding formula for providing 50% of the funding for State cleanup programs through special revenue sources.

Then Attorney General Eliot Spitzer was one Working Group member who did not join the report because of concern over a lack of stringency in cleanup standards for some sites. He also objected to reliance on cost considerations in relation to groundwater cleanup standards.

“In addition, because there was no consensus on the report as a whole, many of the other provisions in the report, arrived at through negotiation, would not be supported by the Attorney General in a context other than a consensus report or final legislation containing adequate safeguards for public health and the environment.” (Superfund Working Group, 1999, p. 3)

The disagreements over the Superfund report foreshadowed many of the issues that would become important in the debate over the BCP.

As stated in the report’s non-consensus summary, the major recommendations therein included:

Permanently financing the State’s cleanup programs on a “pay-as-you-go” basis; Adding hazardous substance sites to the State Superfund Program; Adopting protective and consistent cleanup standards; Providing liability releases to parties

that appropriately clean up sites; Expanding public participation in cleanup decision-making; Providing incentives to parties not responsible for contamination to cleanup sites in an attempt to level the playing field between brownfield redevelopment and greenfield development and to further encourage the revitalization of our urban areas; and imposing severe penalties for polluters who refuse to clean up sites. (Superfund Working Group, 1999, <p>).

The working group was unable to address the issue of how to manage sites that do not pose a significant threat to public health or the environment. “The Working Group feels that there may be property owners, community groups and others who will want guidance on what to do when substances are discovered at levels which exceed the cleanup table values” (SWG Final Report, p. 73). This evidences early identification of the issues that eventually arose about sites that did not qualify for the BCP but did exceed the SCO levels in some tests.

The report clearly stated that, “...the Voluntary Cleanup Program would be even more effective if grounded in statute. A statutory basis for the Voluntary Cleanup Program would provide a permanent program with predictable requirements” (SWF, 1999, p. 14). The report also recognized that the development of financial incentives to produce economic development through brownfields redevelopment would require targeted incentives:

“The Working Group recommends that Empire State Development (the State’s economic development agency) be empowered to develop the standards, criteria and incentives that will foster the beneficial reuse of formerly contaminated properties.” (SWG Final Report, p. 51)

These suggestions were ultimately taken into account in the creation of the BCP.

### *Pocantico Round Table*

At the same time as Pataki's working group was taking on Superfund, a group of constituents concerned with brownfields in New York State was being convened in Pocantico, NY in December of 1998 (Bieler, 1999). The Pocantico roundtable was spearheaded by Jody Kass, who had worked in the affordable housing sector and was at the time of the roundtable employed by the Partnership for NYC. Her participation in the roundtable ultimately led her to become a cofounder of a non-profit organization called New Partners for Community Revitalization (NPCR) who would go on to play a key role in the passage of the 2003 bill and subsequent brownfields policy activity in New York. An initial meeting was held on October 14, 1998. The Ford, Robert Sterling Clark, and Chase Manhattan Foundations funded the project. Alan Zerk, a director of the conflict resolution center at NYU created a process to create consensus.

Definitional issues arose early at Pocantico. The working definition used was, "Any real property where the actual or suspected presence of contamination is an impediment to reuse" (Connolly, 2012, p. 247). Some argued that it was too narrow. In interviews with participants, Connolly found that there was already concern about unevenness of the brownfields redevelopment process creating unequal opportunities to direct outcomes of the group's work.

The group's recommendations were initially supposed to achieve a set of 4 key goals related to the economic development and social equity purposes of brownfields redevelopment. However, after environmentalists in the group objected to the absence of more specific cleanup related objectives, they expanded the list to include another seven goals for the Pocantico process recommendations. The expansion of the list to an

unwieldy 11 goals was an early sign of the difficulties of finding compromise with the environmentalists in the group.

There was some overlap between the Superfund group and Pocantico. Jody Kass was a member of both groups, however, Kass's role at the SWG was as a representative of business interests, not community development. The overlap between the groups came to be seen as the cause of the SWG taking credit for many of the best Pocantico ideas by some of those involved. Ultimately, community development interests as such were not represented in the Superfund working group, even though they had played a key role in negotiating between business and environmental interests at Pocantico.

Pocantico participants had a very difficult time agreeing on cleanup standards. Environmental groups wanted higher standards than anyone else, and were not flexible on the issue. Community development groups and business interests were in favor of risk-based cleanups. For community groups, the desire to keep costs low was to facilitate affordable housing development, while business interests were more concerned about profit maximization and not having profits held up or made unfeasible by cleanup requirements. Community groups also saw lower cleanup costs as increasing the likelihood of redevelopment activity:

“The community development organizations that adopted more of a local neighborhood redevelopment orientation and the environmental groups concerned with larger-scale ecological issues began to see each other's interests as at odds” (Connolly, p. 255).

The agreement of community groups with business interests on this point led at least one environmentalists to express concern that members of the Pocantico group were “viewing

the brownfields discussion as an economic issue and not as an environmental one” (Connolly, 2012, p. 254).

Public participation was also a contentious issue, though developers eventually moved towards compromise in that area. The innovative idea of area-wide brownfield redevelopment planning emerged at Pocantico and made it into the final legislation. It was widely agreed that financial incentives were needed for the program, however the incentives were not a main issue for debate.

In February 1999, a second meeting was held to negotiate remaining issues, but they could not be resolved. Three months later, in May of 1999, the roundtable had its final meeting and determined that a final document could not be produced because no consensus had been reached. After Pocantico, a group called the Brownfields Coalition emerged out of what remained. It was primarily community development and business interests. Most mainstream environmental groups and all municipal governments had left the discussion.

### ***Passing a Bill in the Legislature***

Legislative activity surrounding brownfields revitalization in New York State preceded both of the previous coalition building efforts. According to a report by the New York Citizens Housing and Planning Council (CHPC, 2002), there were, “approximately 13 different bills related to brownfields remediation, reuse, and financing...percolating in the state legislature,” as of 2002 (p. 3).

These bills did not reach fruition for a variety of reasons. Notably, the Governor’s bill originally excluded New York City sites (CHPC, 2002, p. 4), which proved a major



obstacle. Another bill put forward by a legislator failed because it had stricter liability for responsible parties and more aggressively targeted distressed areas.

Republican State Senator Carl Marcellino, from Long Island, sponsored the bill that eventually led to the creation of the BCP. Marcellino's bill originally mandated that brownfields be cleaned up "in the most feasible way, using previously remediated brownfields as benchmarks" ("Brownfields Rules Divide Groups, *Times Union*, 3/19/03). However, when enacted, the program relied upon future use-based cleanup standards.

The form of the final legislation was impacted by a number of issues that are common to the New York State legislative process. New York's legislature is notoriously slow, and there is not much room for public deliberation once a bill is in the legislature. Committee work is limited. It is common for the Governor's office to pass a message of urgency that preempts the need for a three day long period for legislators to review the bill before it is passed (Brennan Center, 2004). Consequently, the final changes to the final brownfields bill were made overnight the day before the legislature vote.

The bill jacket reveals primarily letters in support of the bill, though much of the support is limited or conditional. Ultimately, environmental groups like the Sierra Club, NYPIRG, and Citizen's Environmental Coalition supported the bill because they were concerned about refinancing Superfund, despite concerns about clean-up standards that they felt could be inadequate.

At the same time, private interests were concerned about DEC's ability to request a higher cleanup standard depending on anticipated future use. Both the NYC mayor's office and representatives of municipal governments and private interests in Buffalo and

the surrounding area were concerned that the cleanup standards did not reflect background standards for an urban area.

Those writing letters of support for the bill before its passage emphasized the need to move the bill forward because it had taken so long to reach a three party compromise among the Governor, the Senate, and the Assembly. Policy-making fatigue seems to have been one reason that the bill moved forward with certain compromise issues unresolved.

### **Design and Implementation of the 2003 Program**

When it eventually passed, the legislation authorizing the program was very specific about some aspects of the program's regulation and administration, and vague about others. The structure of the tax credit and the applicable cleanup standards were spelled out explicitly, however eligibility to participate in the program was not as cut and dry, as described below, a fact that led to the program's eventual reform.

#### ***Eligibility***

The BCP is not a competitive program – there are no limits on how many sites may apply and be accepted, and the applications are not judged on their merit. A site that meets the definition of a brownfield as set forth in the ECL will enter into the program, unless certain site or applicant specific situations apply. The following types of sites are excluded from participation in the statute: Class 1 and 2 Superfund sites; sites listed on the NPL; solid or hazardous waste sites subject to enforcement actions; petroleum spill sites subject to cleanup order; and sites with other enforcement actions pending. There are also criteria for applicants that can result in exclusion from the program. Applicants

to the BCP cannot have any enforcement actions pending against them, nor may they be subject to an enforcement order. An applicant is also disqualified from participation if there is an oil spill fund claim pending against them.

The definition of the brownfield under the state ECL is taken directly from the 2002 Federal Small Business Liability Relief and Brownfields Revitalization Act. Therein, brownfields are defined as: “real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant” (ECL §27-1405). Contamination is defined as hazardous waste and/or petroleum. The definition of hazardous waste is taken from the ECL as well as any rules or regulations promulgated by the DEC Commissioner pursuant to the ECL.

In DEC regulatory documents, the definition of a brownfield is further enumerated as containing two essential elements, the present of a “contamination factor” and a complication factor.” Satisfying these two elements of the definition requires that:

- There must be confirmed contamination on the property or a reasonable basis to believe that contamination is likely to be present on the property; and
- There must be a reasonable basis to believe that the contamination or potential presence of contamination may be complicating the development or re-use of the property.

### ***Application Process***

A 2010 DEC guidance document states, “To provide a basis for an eligibility determination by DEC, the information must be sufficient to establish that the site

conforms to the definition of a brownfield.” This could lead to a Phase I or Phase II study being carried out before application to the program.

Timeliness is emphasized in the policy documents surrounding the program. The DEC requires an application be submitted only when an applicant is “ready willing and able...to enter into a BCA [Brownfields Cleanup Agreement] with the DEC within 100 days of submitting the application. Such application will include a statement acknowledging and agreeing to the requirement to execute a BCA within 60 days of notice of approval.” (DEC Guidance Document, p. 3)

### ***Public Participation***

Public participation is a requirement of the application process. A copy of the application must be provided to a contact list, the members of which are specified by statute and the DEC (Appendix B) and a document repository must be established so that any member of the public can review the application materials.

### ***Cleanup Tracks and Standards***

One of the most important developments to come out of the passage of the 2003 Brownfields Cleanup Act are a set of clear soil cleanup objectives (SCOs) for most of the contaminants that are found on brownfield sites within the state. Ideally, the creation of these standards should reduce much of the uncertainty and risk associated with involvement with brownfields sites. SCOs are the maximum amount of parts per million (ppm) of any particular contaminant that can be present in the soil at a site. Under the law, SCOs are provided for a range of redevelopment scenarios and site-specific factors.

These SCOs can then be applied within four different types of remediation strategies to complete a satisfactory cleanup within a state program.

A Track One remediation in New York State is the strictest level of cleanup. SCOs allow for reuse that is protective of public health and the environment regardless of reuse scenario. After cleanup, on site soil will comply with these SCOs from the surface to the top of bedrock. In this case, once remediated, there are no restrictions on how the site may be reused. Institutional and engineering controls are only allowed in the short-term (defined as less than five years) with very limited exception.

Track Two cleanups utilize the restricted use SCOs. These SCOs are dependent on end use and the ecology of a site. Restricted SCOs are provided for residential, commercial, and industrial uses, with residential SCOs being the most stringent, and industrial SCOs allowing the highest levels of contaminant presence. A site may need to comply with lower (more stringent) SCOs than indicated for the applicable end use if it is determined that there are significant groundwater or ecological resource concerns. In these cases, the strictest rule applies, so a site where groundwater contamination is an issue that is being remediated for industrial use may be required to remediate soil to a lower level of contamination than is indicated in the restricted industrial use SCOs. SCOs apply to the soil from surface to 15 feet below ground, or down to the bedrock, if it is less than 15 feet underground. Institutional and engineering controls are again only allowed in the short term, with the exception of those controls relating to restricting site use or the use of onsite ground water. These controls may remain in place indefinitely.

A third category of cleanup, Track Three, allows for site-specific modifications to a cleanup plan under limited circumstances. Specifically, it allows different SCOs to be

applied in situations in which site-specific parameters were used to calculate the SCOs promulgated in the regulations, and in which substituting the actual site data for the assumption used would result in a different SCO. This exception to the standard SCOs is made based on the following considerations:

1. Protection of the groundwater pathway
2. Particular inhalation pathway
3. Volatile inhalation pathway
4. Protection of ecological resources pathway

Other than site-specific modifications, Track Three cleanups follow the same guidelines as those for a Track Two cleanup.

The final approach, Track Four, provides the most flexibility in cleanup standards. Under this cleanup track, the remedial party can conduct a more detailed site investigation and propose a cleanup strategy that uses alternative cleanup standards or uses different cleanup methodologies to achieve those standards. On these sites, institutional and engineering controls may be used to achieve protection of public health and the environment in the short and long term. The top foot of exposed soil must comply with the use-based SCOs that apply for Track Two and Three cleanups on commercial and industrial sites, and the same standard applies to the top two feet of exposed soil if the site is being redeveloped for residential use.

### ***Tax Credits***

As previously stated, New York's voluntary cleanup program stands out in the national landscape for the magnitude and type of financial incentives it offers. The

“cleanup” portions of the cost are defined broadly under the program to encompass “site preparation.” Site preparation can include costs such as fencing in the site or digging a foundation. Refundable tax credits are available for up to 50% of these eligible costs, depending on the level of cleanup attained at the site (Table 3-1).

**Table 3-1: Percentage of Site Preparation and On-Site Groundwater Remediation Costs that may be claimed as a refundable tax credits for sites entering the New York State Brownfields Cleanup Program prior to June 23, 2008**

Cleanup Track	Tax Credit for Unrestricted Use	Tax Credit for Residential Use	Tax Credit for Commercial Use	Tax Credit for Industrial Use
Track 1	50%	N/A	N/A	N/A
Track 2	N/A	40%	33%	27%
Track 3	N/A	40%	33%	27%
Track 4	N/A	28%	25%	22%
Source: <a href="http://www.dec.ny.gov/chemical/45734.html">http://www.dec.ny.gov/chemical/45734.html</a>				

Additional financial incentives for development set the New York program apart from others. A site located in an Enzone, which are census tracts defined as “in need” due to high levels of unemployment, and with the highest level of cleanup could receive up to 24% of their tangible property costs – basically the cost of the actual development on the site – as a refundable tax credit (Table 3-2). Under the 2003 program, at minimum all participants that successfully completed a cleanup were eligible for refundable tax credits in the amount of 22% of their site preparation and on-site groundwater remediation costs, and at least 10% of their tangible property, or redevelopment, costs. The rationale behind the design of the tangible property costs tax credit was that sites should not be remediated and then left vacant if they were in undesirable locations. The full tax credit benefits of the program can only be claimed if the site is redeveloped and put into active use.

**Table 3-2: Tax Credits for Tangible Property Costs Under 2003 Brownfields Cleanup Act**

	Taxed Under Article 22	Taxed Under Article 9-A
Baseline Tax Credit	10%	12%
At least 50% of the site is located in an EN-zone	8%	8%
Track 1 Cleanup	2%	2%
Total Possible Tax Credits	22%	24%
<a href="http://www.dec.ny.gov/chemical/45734.html">http://www.dec.ny.gov/chemical/45734.html</a>		

The tax credits are frequently cited as an unintended consequence of the program. Why were they unforeseen? Some of this may have had to do with the complicated way that the tax credit section of the bill itself was written. According to several individuals involved with the program, it took several months after the bill was passed for the general brownfields redevelopment community to realize the magnitude of the tax incentives.

### ***2008 Reforms***

#### *Problems Arising from the 2003 BCP*

According to participants in the policy debate surrounding the BCP, almost as soon as the 2003 program was enacted, awareness began to emerge about the problems that would be caused by the generosity of the tax credits that the program awarded. Already, in 2004, one of the legislative sponsors of the bill, Vito Lopez, stated, “It was not my intention to include projects like the Times-Ratner building. It wasn’t about projects that could afford to underwrite the costs of remediation. My intention was that this would get us out and able to do projects that wouldn’t have been done anyway.” However, the way that the bill was written did not limit its scope to projects that needed to tax credits to move forward. Some worried that if the tax credit claims became too



large, that the law would not survive in the long term and that it would have negative consequences for the State's finances.

The reform process in 2008 lacked the involvement of an activist coalition of the type that was involved in the creation and passage of the 2003 legislation. The 2003 policy formation process involved a wide range of stakeholders, including developers, members of the environmental justice community, and environmentalists. In 2008, possibly due to the absence of an opening to debate cleanup standards, environmentalists were widely absent from the debate. Environmental justice advocates were still involved, and their interest was primarily in the BOA program.

#### *Changes Implemented in 2008*

Finally, in 2008, at the behest of the Governor's office, reforms to the original 2003 bill were passed. The main driver of these reforms was the budgetary pressure from claims of Brownfields Tax Credits (BTCs) generated by the BCP. However, concerns that the structure of the incentives being offered was not a match for the goals of the program were also considered and resulted in changes not only to the magnitude, but also to the structure of the tax credits.

According to the Sponsor's Memo put forth with the bill to reform the program in 2008, the lack of "cap" on the tangible property credit, "resulted in the availability of excessively large tangible property credits to developers who invest relatively little to remediate a site, or who would likely redevelop a site in the absence of tax credit incentives" (2008, S8717 Statement in Support). By adding a relationship between development credits and cost of cleanup, the new bill created greater rewards for greater

environmental benefits, but there was still little done to change *where* development was incentivized.

The primary changes to the law in 2008 were revisions to the amount and structure of the tax credits that the program provides (Table 3-3). The 2003 law did not have any limit on the amount of refundable tax credits a participant could claim for the tangible property (i.e. “development”) portion of their costs. If a participant spent \$500 million developing a project on a brownfield site, under the 2003 law that participant was eligible to claim at minimum \$50 million and potentially as much as \$120 million in refundable tax credits, regardless of the cost of remediating the site. The Syracuse site mentioned earlier that received \$54 million in tax credits for development costs had less than a million dollars in cleanup costs. The 2008 legislation would not have permitted such a situation to occur. The new law tied the amount of tangible tax credits a participant could claim to a multiple of the site preparation and groundwater remediation costs: ten times the sum of the two for industrial projects, and six times for all others. It also imposed a cap on the total amount of tangible tax credits that could be claimed for any one project: \$45 million for manufacturing projects, and \$35 million for all others. Notably, the criteria for eligibility and the language contained in the law was not significantly changed in the 2008 reforms, despite the level of controversy it had raised.

The main impact of the EJ community’s involvement in the 2008 reforms on the BCP was the introduction of a tax credit incentive to develop an individual BCP site in accordance with an existing BOA. Participants in the earlier program would not be penalized for redeveloping a brownfield site in a BOA in a manner inconsistent with a BOA plan. This, in spite of the fact that on the first official day of Pocantico a group from

Harlem “suggested that the end uses developed within the community-based area-wide program be tied to strong financial incentives for developers that conform to the community plans...[to] give the area-wide plans implementation power” (p. 262). The addition of a 2% tax credit for conformance with a BOA plan within a BOA was not as big of an incentive as the EJ groups had pushed for, however it was seen as a victory to be built upon.

**Table 3-3: Tax Credits for Tangible Property Costs for Sites Accepted to the New York State Brownfields Cleanup Program after June 23, 2008**

	Taxed Under Article 22	Taxed Under Article 9-A
Baseline Tax Credit	10%	12%
At least 50% of the site in located in an EN-zone	8%	8%
Track 1 Cleanup	2%	2%
Development conforms with the goals and priorities of the designated Brownfields Opportunity Area (BOA) in which the site is located	2%	2%
Total Possible Tax Credits	22%	24%
<p>The total tax credits issued may not exceed \$35 million or three times the site preparation and on-site groundwater remediation costs, whichever is less, for non-manufacturing projects. For manufacturing projects, the cap is \$45 million, or six times the site preparation and on-site ground water remediation costs.</p> <p><a href="http://www.dec.ny.gov/chemical/45734.html">http://www.dec.ny.gov/chemical/45734.html</a></p>		

### ***The Role of the Courts***

One of the most important factors in determining the final form of the 2003 BCP policy and motivating subsequent efforts to reform it were several New York State court cases related to eligibility for the program. The issues that were decided by the courts included whether and to what degree the DEC was allowed any discretion in deciding

which sites to allow into the program. During the time that these cases were ongoing, there was an atmosphere of uncertainty that is especially problematic in light of the goal of voluntary cleanup programs like the BCP to *reduce* the uncertainty that would otherwise act as an obstacle to redevelopment on brownfields sites. The following applicants to the BCP are not the only ones who sued the DEC over eligibility. However, they are the cases that dealt with the issues of whether or not a site qualified as a brownfield. They also provide insight into the intent of the policy, as the court decisions include research on legislative and statutory intent.

### *377 Greenwich LLC*

377 Greenwich, LLC is the name of a development company that filed an application to the BCP in July of 2004. The DEC denied the application in October of 2005. The site in question was being developed into a luxury hotel and restaurant. Subsequently, 377 Greenwich LLC challenged the DEC determination in court. On November 15, 2006, Judge Judith Gische ruled to uphold the DEC's decision not to allow the site into the program.

In this case, the developer dug for a 25' deep foundation before a decision was made on the application. Contamination was light and primarily historic fill. Contamination was only 14 feet deep, so the soil removal required for the foundation exceeded the soil removal that would have been required for remediation. The site also had an approved remedial plan in place under the Spill program that was used to guide the cleanup related to the excavation.

In the denial of the application, the DEC noted that the design and financing for the project were put into place before the program was created. Therefore, any

contamination on the site was not an impediment to redevelopment. Further, the contamination seemed to be relatively minor, and did not result from the hazard waste generating processes on the site.

This is the first instance in which an applicant sued because the DEC had determined that contamination was present, but that it was not a “complicating” factor in the development of the site. The decision from the court supported this agency decision, stating that:

[w]hile the legislation is broadly drawn, it is clear from the actual language of the BCPA, that all contaminated sites that are not expressly excluded are not necessarily intended to be included or accepted to the BCP. The statutory definition of “brownfield site” expressly conditions qualification upon the presence of contaminants that make the development of the site more “complicated (377 Greenwich LLC, 2006).

The court also noted that the legislative history of the program gave some indication of whether or not the legislature intended “complication” to be a factor in determining site eligibility, noting that:

“In enacting the BCPA, the legislature rejected other versions of the bill which did not contain the qualifying requirement of complication, but would have allowed all contaminated sites to participate in the BCP” (377 Greenwich LLC, 2006)

The decision made by the judge in this case also made note of the fact that the list of exclusionary factors listed in the legislation is not exclusive. In other words, it does not follow that the exclusionary factors listed in the legislation are the *only* factors that can disqualify a site from participation. Further, the judge concluded that:

“If the real estate in question is going to be restored to productive use, regardless of the presence of contaminants, then it is entirely rational for the agency to conclude that the “complication” statutory requirement has not been met. That is exactly what happened in this case” (377 Greenwich LLC, 2006).

In this case, the plaintiff also argued that the DEC should have promulgated its Eligibility Guidance Manual as “rules” according to the State Administrative Procedure Act. The Judge, however, found that the Manual fell under the umbrella of, “forms and instructions, interpretive statements and statements of general policy which in themselves have no legal effect but are merely explanatory.” She also noted that the cleanup plan for a BCA must be approved before being enacted, and by going forward prior to such approval the developer forfeited the opportunity to participate in the program.

#### *Lighthouse Pointe*

This case involved two sites located next to each other in Monroe County at the Port of Rochester. The proposed use for the sites was a major waterfront development including condos, retails, a hotel, and recreation areas. The developer’s lawyer claimed that denial of entry into the program resulted in inability to obtain financing and necessary Department of Health permits.

The sites included an out of use City of Rochester landfill and a sewage treatment plant for a nearby town. There was also lead waste present, as well as industrial waste and dredged river sediments which had been disposed of there. Historically, the sites had been used as a rail yard and for marina operations. At the time of the application, the sites were used for boat storage and parking, or were otherwise vacant. In the rejection letter issued to the applicant, the Department claimed that site contamination resulted from the solid waste present from the landfill, not from hazardous waste.

In the first decision *against* a DEC action related to BCP eligibility, the lower court overturned DEC decision calling it “arbitrary and capricious.” The lower court

argued that the use of the wording “may complicate” and “potential presence” indicated an intent to have a low threshold for entry into the program.

In 2009, a judge of the Appellate Division heard the case. The first appellate court decision related to the BCP reversed lower court decision, based on “agency discretion” – in other words, it deferred to the agency’s expertise, and ruled that the agency had given a reasoned explanation for its original decision. A dissenting opinion written by an appellate court judge criticized the guidance documents put forward by the DEC for being too vague, and described their mere existence without going through a formal rulemaking process to be “arbitrary and capricious”:

“...if we accept the DEC’s contention [that the SCOs are for determining cleanup standards, not program eligibility], then there is no objective guideline for evaluating the presence and levels of contaminants on a property. Stated differently, if the soil cleanup objectives are not the standard for determining whether a property is contaminated, then there is no standard at all.” (Lighthouse Pointe Prop. Assoc. LLC, 2009)

The dissenting opinion also expressed disagreement with the exclusion of the site because of the type of waste. It found no justification in the legislation for excluding solid non-hazardous waste from the issue of redevelopment complication.

A Court of Appeals decision reversed the site’s admission once again. On February 18, 2010, a higher court overturned the Court of Appeals decision and once again the site was deemed eligible for the program. The decision revolved around the need for a cleanup to secure liability release, and the need for liability release to secure funding and permits, including by the Department of Health (Lighthouse Pointe Prop. Assoc. LLC, 2010).

*Destiny USA Development LLC*

This site in Syracuse was contaminated from waste disposal and industrial use dating back to at least the early 1900s. One part of the site had been cleaned up in the 1980s and 1990s with the cooperation of DEC to be developed into the Carousel Center Shopping Mall. Much of the cleanup then involved capping the contaminated soil, and to redevelop the site for DestiNY USA, the petitioner would need to remediate the site again. Another part of the site had been remediated to a level acceptable for vacant lots or temporary parking, and would need additional remediation for development as well.

The plan for the site was DestiNY USA, a multi-use shopping and recreation facility. The developer had the cooperation of the local, state, and federal government. It was seen as a major local economic development project and potentially a major job creator. The project was proposed to be LEED certified.

Part of the Oil City site was denied because there were already enforcement actions pending against it. Some of those parcels were included. The Carousel site was rejected entirely, for the following reasons because according to the DEC it was already in productive use, and has been remediated to a level that is protective of public health in its current use. Additionally, the project had been in planning stages before the BCP existed and some construction activities were under way before a decision had been made about the site; because such a large project, remediation expenses are proportionately low. Consequently, the DEC concluded there was no “complication” because redevelopment would go forward with or without contaminants. One parcel was excluded because of ongoing enforcement action.



In the first decision, the judge delved into the purpose of the program. Description of brownfields program effect from first decision:

“Developers and volunteers were lured to Brownfield properties. Enticements under the program were real. The entitlements were measurably identifiable. Extensive Tax Credits and liability limitations were designed to be the profound catalyst that would lead developers to the distressed Brownfields of the inner city to build restaurants, residential housing, condominiums, hotels, commercial office buildings and tourist and recreational attractions. The plan was sound. The legislature, after decades of misdirection, had finally found the vehicle that would, once and for all, change the course of urban decay, and allow the major metropolitan cities of the State of New York to become prosperous, beautiful and usable once again...Indeed, the statute was a statute designed to take not only abandoned properties, but older properties that had been used for retail, residential or commercial use and allowed developers to develop them in a way that was modern, cost- worthy and effective.” (Destiny USA Dev., LLC, 2008)

In this case, the DEC did not dispute need for cleanup in the original rejection of the site from the BCP; rather, the agency stated that the tax credits weren't economically necessary for the site's redevelopment. The court eventually said that since economic necessity was one criterion of several in the statute — but not a statutory requirement — it couldn't be used to exclude this site and that by making it a requirement, “the DEC has opted to make itself a fiscal watchdog without legislative authority” (Destiny USA Dev., LLC, 2008). In other words, while an agency is allowed to use discretion when specialized knowledge is needed, fiscal policy is not seen as the agency's expertise here.

The court found several issues with the way that the program was operating. It found it to be a violation of local power: “Local and urban planners must invite DEC to the design table when courting developers.” It also questioned the idea of weighing cost of remediation against the cost of development. This, seemingly, is because of the perception that the development investment could produce manifold returns: “DestiNY USA could be the one singular project that changes the legacy that our generation gives

to the next.” Interestingly, the revised formula produced by the 2008 revisions to the law were actually based on the idea that the cost of cleanup should have a relationship to the tax credits ultimately awarded for redevelopment costs.

There were also issues of fact that affected the outcome of the case. The court found that the sites that DEC said were under enforcement action were actually in voluntary agreement contracts, so those sites were allowed into the program. The Fourth Department of the Appellate Division upheld the decision on June 5, 2009.

*HLP Props. LLC*

The 76th Eleventh Avenue Development Site that was the subject of this court case is located in West Chelsea in Manhattan and is a former Con Ed site containing a manufactured gas plant. The property is 1.75 acres. It is currently a parking lot used by the DEA. HLP Properties, LLC owned the site and wanted to develop it into two mixed used residential and commercial high-rise towers.

The question in this case was whether the site met the statutory definition of a brownfield that determines eligibility to the BCP. The court’s decision in this case noted that the legislature did not adopt the wording of DEC’s guidance document when passing reforms to the bill in 2008. Therefore, the broad eligibility that had been available under the 2003 version of the law was maintained and the site was allowed into the program.

There was another party willing to take on the cost of the cleanup in this case. The court found that this was not a problem, since the amount of the tax credits issues would be related to how much the applicant actually spent since the project entered under the terms of the 2008 BCP.

*East River Realty Co.*

In this second Manhattan decision from 2008, the court addresses the idea of a “but-for” criterion for determining eligibility into the BCP. On October 9, 2007, the DEC determined that the East River parcels were ineligible for the BCP. The four sites were located at 616, 685, 700 and 709 First Avenue. All sites were formerly in industrial use. They were in the VCP, and in 2004 applied to transfer into the BCP. In 2005, the DEC indicated that the sites were eligible for the BCP, but then in 2007 rejected the sites. The plaintiff withdrew objection to the exclusion of the site at 685 First Avenue before the court made a decision. The decision summarizes:

“DEC's principal defense to the petition is that DEC has construed the statutory eligibility criteria of "complicated" to include a "but for" test, i.e., that DEC could consider whether remediation would have occurred without the benefits of the BCP, and for such reason exclude such site from the BCP. DEC's position is that it applied such standard in rendering the determination. East River contends that the statute neither includes nor allows a "but for" test to be imposed and that any site where its redevelopment or reuse is "complicated" by the presence of contaminants, and which is not excluded by other limitations here not relevant, is entitled to participate in the BCP as of right.”

In other words, the court and both parties agree that the BCP is an “entitlement” program – one to which any applicant who meets the eligibility criteria should be admitted.

However, eligibility is still contested.

The court allowed that there were several reasons that the DEC could be allowed to use a “but for” test to determine eligibility: if the definition of a brownfield required a “but for” test to determine whether it has been met; if the DEC were somehow granted this right by virtue of being the administering agency for the BCP; or if some principle of statutory construction allowed the court to look outside the text of the legislation to make

such a determination. However, after exploring these three scenarios the judge ruled that none of them applied in this case.

With regard to the definition issue, the court noted that the state legislature had taken the definition of brownfields, including the use of the term “complicated” from which the “but-for” criterion had been derived, from the federal brownfields definition:

“The United States Senate report on the bill which enacted these amendments noted that the definition of a brownfield was drafted to be consistent with the Federal Environmental Protection Agency's (EPA) traditional working definition of a brownfield, which as early as 1997, defined a brownfield as an “abandoned, idle or underused industrial or commercial site where expansion or redevelopment is complicated by real or perceived contamination that can add cost, time or uncertainty to a redevelopment project.””

The use of the federal definition was an intentional policy decision to balance the wishes of the two houses of the legislature, since the senate wanted to expand eligibility and assembly wanted to restrict it. It was the product of an important moment of compromise, and was not to be changed by the DEC. Therefore:

“Accordingly, “complicated” must be construed as having the same meaning it has under CERCLA, and thus under the Federal EPA working definition of a brownfield, where “complicated” means where contamination “can add cost, time or uncertainty to a redevelopment project.””

By this logic, the court found that a but-for test was too strict a criterion to restrict eligibility.

The court found that the DEC was not specifically granted the authority to impose a but-for test in the BCA statute, and so the addition of the but for criterion amounts to the DEC making laws, which is it not allowed to do.

Finally, the court noted that nothing in this situation to suggest looking outside the law is appropriate in this case. Consequently, the DEC’s use of the but-for criterion was

overturned, and the sites ordered into the BCP. Three sites were accepted in, and also grandfathered under the first set of tax incentives. Importantly, the decision notes that a but-for test was rejected by the legislature as a 2008 modification to the bill.

*29 Flatbush Assoc, LLC*

This case did not create new precedent that is relevant to this dissertation, but is an illustrative example that relied on the previously discussed decisions. In this case, a surface parking lot in Brooklyn was denied entry into the BCP in April of 2009. The development planned for the site was a high-rise residential structure with some retail on ground floor. The majority of contamination was found in historic fill materials, not native soil.

DEC found that against two of the complication factors, the site did not qualify.

From the DEC internal memorandum, quoted in court decision:

“The available data do not indicate that the existing contamination would complicate the redevelopment or re-use of the property. The soil analytical data presented in the application materials indicate that the soils are contaminated with various SVOCs and lead, which may require the off-site disposal as "contaminated fill." However, the concentrations do not exceed the threshold level of hazardous waste, therefore the incremental cost of disposal should be minimal.”

And:

“[B]ased on the magnitude of the redevelopment project (342 residential units plus 10,000 sf of retail space in downtown Brooklyn) and the environmental data provided by the petitioner, the cost of any necessary remedial program would likely be insignificant in comparison to the anticipated value of the proposed site as redeveloped or reused. According to the NYC Department of Taxation and Finance, the property's Market Value was \$554,700 as of January 1, 2004, and its sale price in November 2007 (following completion of the Phase and Limited Subsurface Investigation Reports) was \$28,000,000.”

The court stated that,

“...according to the DEC, the Site having an excessive amount of seven separate toxins is insufficient to complicate the Site’s development, even though ECL 27-1405(2) only requires the “presence or potential presence of *a* contaminant [*emphasis added*].””

The judge ordered the DEC decision vacated and further investigation be completed to document extent of contamination and whether the project had in fact had difficulty securing financing because of the BCP rejection. However, in March of 2011 on appeal it was found that the Judge’s ruling about additional information required was incorrect and ordered the site into the program. The appeal decision also ordered that costs of court cases be reimbursed to the petitioner.

#### *Court Cases Summary*

Ultimately, the court cases found that the law as it was passed should allow for the widest range of sites to be included in the program. A “but for” criterion for entry to the program could not be upheld based on existing legislation. In reading the court decisions, it was evident that there were conflicting statements of purpose associated with the law, and that the court decisions were not based on a clearly identifiable intent from the legislature.

#### **Conclusion: Multiple and Conflicting Purposes in the New York State Brownfields Cleanup Program**

The history of the formation of the BCP reveals that the policy had multiple intended purposes, and that these purposes transcended the boundaries of traditional policy fields. Not all stakeholders involved in the policymaking process held the same goals for the policy or prioritized the goals that they did recognize in the same way, but most acknowledged that the program should serve multiple purposes.

The history of the BCP's development shows that this inclusion of competing interests in the policy formation process allowed for the passage of a program that had been long delayed. Due to the multiple and at times competing priorities that stakeholders had for a new voluntary brownfields cleanup program for the state, it took a very long time to pass a bill to create one. Once the 2003 bill passed and enacted the BCP, stakeholders who had previously supported the bill were disappointed in its performance and criticized it for having unintended consequences.

However, many of the compromises were not made through actual negotiations between stakeholders to before the bill was passed. Rather, they were resolved through legal interpretation that resolved the conflicts in way that was not agreeable to all those who had supported the bill.

The reasons that stakeholders passed a bill that they did not ultimately support are related to the integrated nature of the BCP policy. First, because stakeholders had different reasons for supporting a brownfields redevelopment program, their attention was often focused on a small portion of the policy. Stakeholders were busy putting forth their own agendas, not policing the agendas of others. According to one interviewee, the "omnibus" nature of the bill made it difficult to manage.

Policy integration itself can become a point of agreement that overshadows the need to resolve the conflicts that come with such integration. This is reflected in the finding Connolly (2012) study that addressed the BCP, that smartgrowth acted as an important "tag" to facilitate heterarchic governance (p. 209). The use of such tags does not necessarily prevent the resolution of underlying conflicts but it can enable the policy process to move forward without resolving them. In the case of the 2003 BCP, while

stakeholders took the first steps to recognize that a single policy could address issues across traditional policy fields, potential conflicts among the multiple goals were not actually successfully negotiated through the policy formation process. By 2008, policy stakeholders from the environmental movement especially had returned to more traditional policy silos, and no longer saw the policy as being as central to their individual agendas, and activity around the policy was less integrated.

Writing and implementing a successful integrated policy also proved complicated. Agency discretion and control becomes a difficult issue when it is not clear where a policy belongs. DEC, tasked with administering the program, was not seen as having the expertise to make decisions about the economic development aspects of program eligibility. Of course, there are other agencies under whose purview such “expert” determinations would fall. However, introducing oversight from multiple agencies comes with its own set of challenges, as seen in the difficulty of interagency cooperation surrounding the BOA. Including other agencies in the BCP would likely lead to similar problems. In the end, because no one agency can claim expertise over all aspects of the program, drafting clear and precise legislation is especially important in creating integrated policy.

In addition to becoming higher stakes, the drafting process also becomes more difficult to manage in the case of policy integration. This is not just because more people are involved. The use of tax credit incentives in the BCP provides a good illustration of this point. Tax incentives are not a direct budget issue, and as such, they are much less contentious than providing grants or other cash or in-kind assistance to private entities. Viewing tax incentives as “off budget” leads to less scrutiny of the specifics of the



incentives. Had the same amount of funding for the program been proposed through a grant, it would have been impossible to pass. Even a lesser amount of money would have resulted in scrutiny that could have ruined the delicate compromise upon which the BCP was based.

At the same time, tax incentives are a technical complex way of providing the subsidy. Pocantico Roundtable members from the affordable housing and EJ communities saw the drafting of tax credits as outside their areas of expertise. A member of the business council ultimately drafted the tax credits. The final version of the tax incentives was not vetted by other stakeholders because the final vote on the bill took place so soon after it was written. The rush to a vote exacerbated the fragmented nature of stakeholders focus on different aspects of the policy, but was not its cause. If more stakeholders had been involved in drafting the tax credits in the first place, the version of the bill that eventually passed might have looked very different, even without time to debate once the bill was introduced.

The complications of drafting legislation to support policy integration are not limited to the area of economic development and financial incentives. Writing any statute requires not only an understanding of the relevant subject matter, but also a command of the discourse of those who occupy positions of influence in the professional sphere. In other words, drafting effective legislation requires “expert” knowledge of a topic. The role of expertise in determining who benefits and who is harmed in resolving political conflict is much discussed in research on environmental justice and communicative planning.

In addition to the economic incentives, other issues such as environmental risk and procedure serve as examples of how expertise played an important role in determining whether and how different stakeholder priorities were represented in the 2003 bill. In the case of “Expertise” dominates the conversation surrounding environmental risk in a different way than economic development. The conversation surrounding environmental cleanup often remained abstract between traditional environmental stakeholders and others for whom environmental quality was not the sole priority – or perhaps not a priority at all, in some cases.

An interesting event related to expert knowledge and environmental risk can be seen in one of the court cases reviewed in this chapter. Judicial involvement played an important role. The judge’s lack of understanding of the cleanup standards was an issue — they did not understand why SCOs should not act as absolute eligibility criteria, despite the availability of cleanup options within the program that would not require that a site remediation achieve the SCOs.

Similarly, the lack of legal expertise among those involved in the drafting and implementation of the legislation allowed the belief that the DEC would be able to exercise greater control over the financial aspects of the program than was legally viable. Legislative intent in the legal sense is a narrower concept than policy intent in a social science setting. As the judge in the HLP property case noted,

“...while the implementation of a statute may place an agency in a position where they are forced to deal with competing interests, striking a balance between those interests is exclusively a legislative function (*Boreali v Axelrod*, 71 NY2d 1 [1987])” (HLP Prop Decision).

In other words, if a law is unambiguous, it may not be re-interpreted in its implementation, even if those who created it are not pleased with the result.

A final and significant aspect of how integrated policy can raise the stakes for resolving competing priorities is through tradeoffs. This can especially be seen in the case of the BOA Program and the environmental justice community. Because a brownfields cleanup bill was seen as serving necessary purposes by both the environmental justice and the real estate development community, the groups worked together to pass one. While a lack of resources to devote to keeping track of the entirety of the policy and a lack of expert knowledge with which to engage in certain aspects of the bill may have limited EJ groups abilities to engage with the larger policy picture; However, even if they had been completely engaged, their fortunes were tied to the passage of the bill. Drawing too much attention to the shortcomings of aspects of the bill that related to goals that, whether due to capacity limitations or by choice, were outside of their purview could have served to undermine the policy entirely.

These types of tradeoffs are always a possibility in policymaking. In the case of integrated policy, however, the scope of the tradeoffs made can be even wider than usual because integrated policy creates unusual alliances. This can be a positive development in some cases – if not at first, there is certainly potential for these relationships to create compromise and reduce policy siloing over time. However, in the short term, stakeholders can find themselves supporting policies that run counter to their own interests or that they do not fully understand in order to hold onto their initial goals.

With the BCP approaching its sunset date of 2015, there has been increased activity around the legislation over the past several months. The conversations over its

reform have raised another issue that impacts whether or not this type of integrated policy making is an effective way to gradually work towards actual integration. Policy durability, the ability of a policy to be predictable and unchanging over time, is an issue of particular import to brownfields redevelopment because of the long timeline of development projects — participants must have faith that the policy will be in place for the lifetime of their project.

In the next chapter, I examine the outcomes of the program. One area of debate that arose once the policy was implemented was the way that the program's benefits were targeted. Chapter Four presents an analysis of the location and characteristics of the communities where brownfields sites are being redeveloped in the BCP. How did the policy, as it was ultimately implemented, work for or against the goals of the program in the way that it distributed of program benefits impacts statewide, and at the local level?

## **Chapter 4: The Geographic Distribution of BCP Participation**

### **Introduction**

In the previous chapter, I reviewed the purposes of the BCP and established that it is a program meant to address environmental, economic development, and community development problems. In this chapter, I evaluate the implementation of the program as it relates to stated objectives about redistribution by examining program participation across various geographical extents. In addition to documenting the extent and location of program participation, I also describe and compare select indicators of resident socioeconomic status, racial and ethnic composition of population, and housing characteristics in areas where BCP sites are located.

This factor—the geography of BCP program participation—is key to comprehensively assessing the effectiveness of the BCP program’s design and implementation because the spatial redistribution of remediation and redevelopment activity is important to three of its policy goals. With respect to environmental goals, the program is intended to move investment and development to areas that are already densely populated, to prevent new greenfield development and to encourage smartgrowth. From an economic development perspective, the program is intended to target development in economically distressed areas. With regard to community development and environmental and social justice goals, the program is intended to yield increased development in areas with minority and low income populations which have suffered the twin negative impacts of brownfields, i.e., the environmental and health

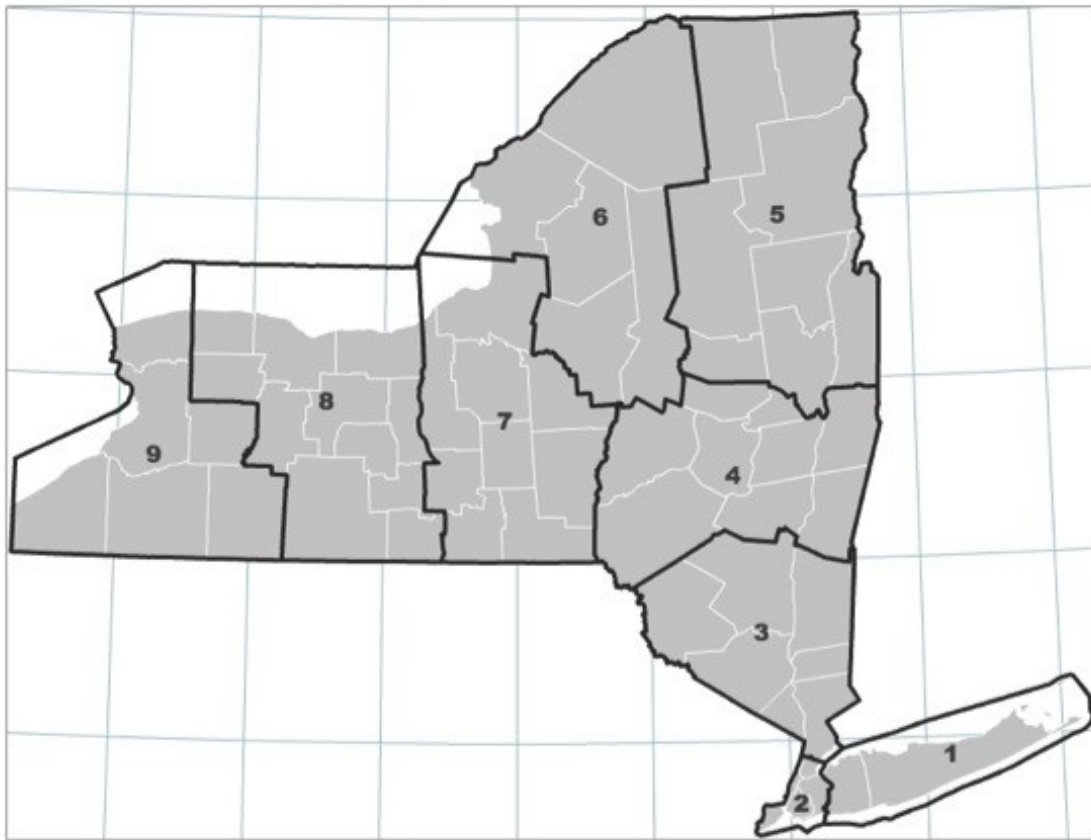
hazards created by the brownfields and the absence of economic activity caused by the existence or threat of those hazards.

The purpose of this chapter is to assess whether the BCP's implementation has even created the possibility of impacting these latter two objectives of economic development and social and environmental justice, by using publicly available data to empirically assess the distribution of program participation. Before introducing the questions that I address in this chapter, it is important that I clarify the purpose of this analysis. Without further investigation, the analysis presented here does not provide any conclusive evidence about the *impact* of BCP activity in various types of communities. Rather, it provides better information than has previously been available about features of the areas around the BCP that I have identified as of interest for addressing New York State's brownfields problems through my own research on the BCP as well as other literature discussed in Chapter 2.

The evidence from the Chapter 3 and other literature on the political economy of urban redevelopment provide useful additional context for this analysis that inform my discussion of the policy implications of the dissertation as a whole in the concluding chapter. However, the statements I make about distribution in this chapter are only meant to indicate that there is a statistically valid probability that the differences in the characteristics of the areas in which BCP participation is occurring are non-random. I will discuss opportunities for additional empirical research on the causes and consequences of these differences in the next chapter.

## Data and Methods

### *New York State Geography: Choosing the spatial extent for analysis*



**Figure 4-1: Map of NYS DEC Regions**

As I discussed in Chapter 1, New York State has highly uneven geography. The most pronounced of New York’s regional divides is the distinction between “upstate” and “downstate.” The latter refers to New York City as well as several of its surrounding counties, and the former usually refers to the entirety of the rest of the state. The divide between “upstate” and “downstate” in New York has existed almost as long as the US itself. In 1788, a vote on the issue of creating a more powerful, centralized federal

government was divided along regional lines, with New York City and its now suburban counties supporting a stronger government and upstate voting in favor of more local autonomy (Ward, 2011, p. 88).

The DEC uses 9 regional designations to divide New York State, pictured in Figure 4-1: Map of NYS DEC Regions. One source of differentiation among counties can be seen in the population of the DEC-defined regions of the state and the locations of cities with over 50,000 residents (Table 4-1). With over 8.2 million people, New York City has a population almost 8 million people greater than the next most populated city, Buffalo, which had 261,025 residents as of the 2010 Census. Of the 12 cities and one village other than New York City with a population of over 50,000 as of 2011, four are in Westchester County, directly adjacent to New York City, and one is on Long Island. Three more, Albany, Schenectady and Troy, are located in the Capital Region, which is generally considered a part of upstate, but has a different economy because of a concentration of government offices associated with Albany's role as the state capital, hospitals, and institutions of higher education.



**Table 4-1: Large Cities in New York State by DEC Region**

DEC Region	Total Population	Population as % of State Total	Cities over 50,000 residents in Region
1	2,753,913	14.51%	Hempstead (Village, 53,891)
2	8,008,278	42.20%	New York City (8,175,133)
3	2,179,189	11.48%	Yonkers (195,976); New Rochelle (77,062); Mount Vernon (67,292); White Plains (56,853)
4	895,968	4.72%	Albany (97,856); Schenectady (66,135); Troy (50,129)
5	555,311	2.93%	None
6	550,509	2.90%	Utica (62,235)
7	1,180,938	6.22%	Syracuse (145,170)
8	1,365,184	7.19%	Rochester (210,565)
9	1,487,167	7.84%	Buffalo (261,310); Niagara Falls (50,193)
All	18,976,457	100.00%	

For the purposes of the analysis in this chapter, the names defined in Table 4-2 will be used in discussing the regional geography of New York State, unless otherwise indicated. These classifications obscure significant differences that exist among these places. However, for the purposes of statistical analysis, with a relatively small number of brownfields cleanup site cases to assess, the benefits of maintaining a larger sample size outweighs the loss of detail from simplifying these regional boundaries. Differences within categories are considered in descriptive presentation of the data and in the examples used to illustrate the analysis later in the chapter.

**Table 4-2: Names of Regional Classifications for Analysis**

<b>Name Used in Analysis</b>	<b>DEC Regions Included</b>	<b>Description</b>
Downstate	Regions 1, 2 and 3	The five counties of New York City as well as seven counties located north of the New York City in (Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester) and Nassau and Suffolk counties on Long Island.
Upstate	Region 4-9	This includes all non-Downstate counties. Many of these counties are more properly thought of as their own distinct regions, but for purposes of statistical analysis and because they are often referred to as one area politically, this is the term that will be used here.
New York City	Region 2	Includes only the five counties that constitute the City of New York: Bronx, Kings, New York, Queens, and Richmond.
Non-NYC Downstate	Regions 1 and 3	Includes the counties north of New York City (Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester) and Suffolk and Nassau counties on Long Island, but not the five counties of New York City.
Non-NYC	Regions 2-9	All counties in the state outside of New York City.

The Upstate and Downstate economies have had uneven and at times divergent trajectories in the 20<sup>th</sup> and 21<sup>st</sup> centuries. During the post-World War II period, Upstate New York enjoyed economic growth while New York City's fortunes declined. However, since the 1980s, New York City has recovered, while Upstate has suffered population and employment loss (Ward, 2011). Because of the disproportionate concentration of wealth in the Downstate area, the role of government in redistributing wealth is more important in New York than in most states (Ward, 2011, p. 89).

The divisions within the state are also political. New York City is historically home to a Democratic voter majority, while the rest of the state has a larger Republican voter base. This disparity has been decreasing over the last decade, with Non-NYC voters increasingly registering as Democrats, but the political division of the state is still a major issue in state level policy making. New York City enjoys a majority by population in the State House of Representatives but not in the State Senate. New York City's population should also give it an advantage in selecting state level officials, but upstate tends to have

greater voter turnout, so state level elected officials may respond to their concerns in a way that is disproportionate to the number of constituents the area represents.

Policy actors from different parts of the state blame each other for posing an unfair financial burden to the rest of the state. According to a report issued by the Nelson A. Rockefeller Institute of Government at SUNY Albany, “Upstate residents often believe they subsidize generous social welfare programs that disproportionately benefit Downstate; New York City and suburban interests frequently quarrel over funding for education and other programs; the Capital Region generally benefits when state government expands but may suffer disproportionately during periods of budget difficulties” (2011, 1). It is difficult to verify these beliefs empirically, for several reasons, including the particulars of public accounting in New York. The Rockefeller report relied on cash expenditures to assess the financial contributions and burdens of each region, and therefore excluded any tax credit benefits, such as those allowed by the BCP, from the analysis. Another reason that it is difficult to assess the financial inputs and outputs of different parts of the state has to do with their environmental, economic and social interdependence. For instance, New York City gets clean drinking water because of watershed management practices carried out elsewhere in the State. Upstate cities are made more attractive to residents and businesses that desire proximity to New York City but cannot or prefer not to locate there directly. New York City may be made more attractive for business owners because of its proximity to less urban areas and the flexibility afforded by its many commuting suburbs.

Because there is considerable diversity within and among different regions of New York State, assessing the equitable distribution of a state level program requires

comparison across multiple spatial extents. Ideally, a needs-based program would manage to target not only neighborhoods in need of assistance or reinvestment, but also metro areas and regions of the state that are more in need. Conversely, it would be undesirable for a program's benefits to accrue disproportionately to one region of the state, or to target needy neighborhoods in only some regions. However, because of the disparity in population, population density, and total size of the different jurisdictions within the state, defining what constitutes a disproportionate benefit is a matter of political judgment. Because it is not clear what the criteria would be for equitable distribution of the sites throughout the state based on need, I did not endeavor to measure it rigorously here. Instead, I have focused on assessing three aspects of the population and housing in the areas in which BCP participation occurred from the program's inception through the end of Fiscal Year 2012-13.

I present an analysis that is conducted over four different spatial extents. The smallest unit of analysis, the census tract, is used as a proxy for the neighborhood, to allow for unit of comparison that is smaller than the city. Census tracts generally contain between 2000 and 8,500 people. In New York City, neighborhoods may often be made up of multiple census tract, and in smaller cities, tracts may more frequently be larger than a single neighborhood. The block group is a unit that is measured by the census. In theory, block groups could be aggregated to form areas that conform more accurately to neighborhood boundaries as they are identified locally. However, much data is not available at the block group level, so it was not selected for this analysis. Ultimately, the choice of census tract as the unit of analysis is based on practical considerations: it is the smallest unit for which the desired data is consistently available.

State is the largest unit of analysis, because it is the full area eligible for the program. Two intermediate geographic units, the metropolitan and regional scales, are the most difficult to assess. There are multiple ways of defining these meso-level spatial extents within New York State. In this analysis, county, rather than metropolitan statistical area, is used as the closest proxy for a metropolitan area, because it provides full coverage of the study area and the required data. It also helps to ameliorate discrepancies in the structure of urban areas across the state. For instance, in New York City, a county represents each borough. While in the Capital Region (DEC Region 4), the Albany, Schenectady and Rensselaer counties each contain a separately defined central city as well as surrounding suburban areas.

A second intermediate scale for analysis is called for by the regional upstate and downstate divides described earlier. In this analysis, I use several different permutations of the sub-state areas described in Table 2 to analyze whether the trends observed in the full data set express differently in different regions.

### ***Questions for Analysis***

#### *Overall program participation*

I begin my analysis by examining asking three questions about program participation throughout the state. Specifically, I ask, for each DEC Region:

- 1) What is the total number of sites participating in the program<sup>4</sup>?
- 2) Of those participating sites,
  - a) How many sites have received a COC?

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<sup>4</sup> Participating sites are defined here as sites that have an active Brownfields Cleanup Agreement (BCA), as determined by the DEC, and are working towards a Certificate of Completion (COC), as well as completed sites that have carried out a BCA and have received a signed Certificate of Completion.

- b) What is the average time from entry into the program, as defined by the signing of a Brownfields Cleanup Agreement (BCA), to the receipt of a COC for each of these sites, by DEC Region?
  - 3) How many sites applied to the BCP and were deemed ineligible because the DEC determined that they did not meet the statutory definition of a brownfield site?
- Comparison of selected population and housing characteristics between different geographic extents in areas surrounding participating BCP sites*

The second part of my analysis focuses on comparing characteristics of the areas surrounding participating BCP sites. For each of three categories of interest, socio-economic status of the population, racial and ethnic composition of the population, and housing characteristics, I ask:

- 4) Are there differences in the mean values of target variables for the county areas surrounding each BCP sites, as compared to the variable value for New York State as a whole?
- 5) Are there differences in the mean values of target variables for the census tract areas surrounding each BCP sites, as compared to the variable value for New York State as a whole?
- 6) Are there differences in the mean values of target variables for the census tract area surrounding sites participating in the BCP as compared to the county area within which the site is located?
  - a) For all sites
  - b) For select regions of the state as defined in Table 6;
  - c) For the largest 25% of sites as measured by site acreage;
  - d) For sites that have received COCs.

*Comparison of selected population and housing characteristics of participating sites with sites deemed ineligible at the census tract and county level.*

Finally, in a limited way, I address the issue of whether the DEC's use of agency discretion to reject sites was consistent with any of the stated goals of the program by answering a final question:

- 7) How do the neighborhoods and counties where sites that were rejected from the BCP compare to the neighborhoods and counties with participating sites, in terms of these three categories of variables?
  - a) For all areas of the state.
  - b) For Non-NYC sites only.

## ***Data***

### ***Non-Site Data***

Table 4-3 displays the non-site variables selected for analysis. The first two sets of variables I selected are measures of population socioeconomic status and racial and ethnic makeup. These variables are of interest because of the relationship between socioeconomic status and race and ethnicity to environmentally undesirable land uses and economic opportunities. The third set of variable that I selected provides information about housing characteristics. I selected housing as a third focus area. Property values have impact on the potential profit from real estate investment. In an area with high real estate values, the cost of redevelopment is less of an obstacle to profitability, which is one of the types of "complication" that the BCP is intended to address. Housing prices and home ownership levels together can provide some indication of the relative

attractiveness of a neighborhood for speculative investment, and of the power neighborhood residents may have readily available to them to play a role in shaping community change. Conversely, displacement is one of the central concerns of gentrification researchers. A high number of renters can indicate vulnerability to gentrification. Renters also do not benefit directly from market rate development in their area, which calls into question whether the targeting of this program to low income neighborhoods is in fact a desirable policy outcome.

**Table 4-3: List of 2000 Decennial Variables Selected for Analysis**

Variable Category	Variable Heading in Tables	Variable Description
Socioeconomic Status	Bachelor's degree or higher	Percentage of population 25 years and over having attained a bachelor's degree higher
	Family poverty	Percentage of families living below the poverty level in 1999
	Individual Poverty	Percentage of individuals living below the poverty level in 1999
	Median household income (\$)	Median household income in 1999, reported in dollars.
	Unemployment	Percentage of population in civilian workforce that is unemployed
Race/Ethnicity	Black or African American population	Percentage of the population who self-identified as black or African American (alone).
	Hispanic or Latino population, any race	Percentage of the population who self-identified as Hispanic or Latino (of any race).
	Linguistically isolated households	Percentage of population who spoke a language other than English at home who speak English less than "very well."
Housing	Different residence than 1995	Percentage of the population who lived elsewhere (in a different residence) in 1995
	Median value of owner occupied housing units (\$)	Median value of owner occupied units, reported in dollars.
	Renter occupancy	Percentage of occupied housing units occupied by renters

This data is the most recent census to have been taken before the program was put into place. Therefore, it reflects the state of the site areas recently before the development, and is not impacted by the presence of the program itself. Percentages were



used to control for the difference in sizes of the tracts, as well as the difference in size between tracts and counties.

### *Site Level Data*

The site level data for the BCP sites was extracted from the DEC's environmental remediation database. It includes all sites that had completed or were active in the program from its inception through May of 2013. The number of sites used in the analysis was reduced in two ways. The DEC site data was cleaned to eliminate secondary cleanup sites that are included in the data base but are not actual redevelopment projects. Then, large sites that were divided into multiple brownfield cleanup agreements (BCA) for administrative purposes were combined and counted as one site. The determination that the multiple BCAs should be counted as one site for this analysis was made based on information in the long-form site descriptions. Considerations included whether the sites shared a common participant; whether they were accepted to the program within six months of one another (while both sites were active); and whether they were contiguous with one another. 321 active or completed BCP sites were included in the dataset to be geocoded.

The data for the rejected sites was obtained through a FOIL request and includes any sites rejected from the program between its beginning in 2003 and the end of the 2011 calendar year. The original data set included sites that were withdrawn or rejected, as well as the correspondence associated with those sites. Using the correspondence it was determined that 75 of the sites had been definitively rejected from the program, and those 75 sites were included in the dataset to be geocoded.

## Geocoding

**Table 4-4: Options for Geolocating Participating and Ineligible Site Data**

Geolocating Strategy	Advantages	Disadvantages
Option 1: Geocoding with Tiger Linefiles	Tiger Linefiles are used to map census boundaries.	Low match address match rate Address data is not ideal for locating the midpoint of an industrial property.
Option 2: Geocoding with a Commercial Geocoder (Bing)	High match rate. Random verification of the geocoded locations against satellite imagery displayed similar results as the Tiger geocoded locations where both options included a match.	Address data is not ideal for locating the midpoint of an industrial property.
Option 3: Latitude and Longitude Coordinates from the DEC Database	High match rate. DEC staff reported that the XY coordinates represented an attempt by the agency's staff to match the coordinate points with the center of aerial raster imagery of the sites. Latitude and longitude information is more likely to be located within the site boundaries than a mailing address. Random verification of the geolocated coordinates against satellite imagery displayed results consistent with DEC description of geolocation method.	Limited information about the methods used to identify this information in the remedial site database. Only available for the participating sites.
Option 4: Latitude and Longitude Coordinates from the Site Applications	Latitude and longitude information is more likely to be located within the site boundaries than a mailing address.	Many applications missing the information. Latitude and longitude coordinates were formatted incorrectly and could not be interpreted with any consistent degree of accuracy.

I considered four options for assigning a location to each participating and rejected BCP site. They are summarized in Table 8. Brownfields present a number of the common challenges to accurately assigning location data to features of the built environment. Identifying an industrial site using address matching presents an additional challenge because the sites are often large and the mailing address may represent the location of the administrative offices on the site rather than the actual location of the manufacturing. Address based location frequently placed the point at an edge of the site, rather than near the center.

The DEC Database coordinates (Option 3) were selected as the most accurate for the active and completed BCP sites. For the rejected sites, a commercial geocoder (Option 2) was used to match addresses to map locations. 72 out of the 75 sites were successfully matched with an XY coordinate.

After the sites were uploaded to a GIS based on the XY coordinates provided by the DEC, the site layer was joined with Tiger maps of New York State census tracts to identify what tract the center of each site was located within. The tract and county geographic identifiers were used to join each of the sites with the census data for both the tract and county within which they were located. 317 of the 318 Active or Completed BCP Sites, and 71 out of the 72 Rejected Sites were successfully joined with a New York State census tract. The census tract was then used as the identifier to join each site with its respective tract and county Census Data.

### ***Method of Analysis***

In Part 1 of my analysis, I summarized appropriate measures of central tendency to describe the distribution of the active, completed and rejected BCP sites throughout the state by DEC region. I then descriptively analyzed the observed differences in program participation across the state. I did not use tests of statistical significance to assess the validity of these observed differences because of the relatively small sample size and uneven distribution of the program across the state. The uneven distribution does make such an analysis more valuable, and I plan to conduct additional research as program participation increases and more data becomes available.

In the next three stages of the analysis, I use means testing to assess the differences in the characteristics of areas where sites have and are participating in the BCP program. I conducted three different comparisons of means tests to assess the differences in population and housing characteristics among census tracts and counties where there are sites participating in the BCP and the state as a whole.

In Part 2, I conducted a two tailed t-tests to compare the mean variable values at the census and county level variables with the variable values for New York State as a whole.

Then, in Part 3, I used paired samples t-tests to compare population and housing conditions of the BCP site census tracts to the surrounding county. This analysis provides a strong indication of un-evenness between the site's local context (census tract) and the next larger spatial extent for which this type of data is available (county). These tests

Finally, in Part 4 independent samples t-tests were used to compare the full set of participating sites with the most comprehensive sample available of sites that were rejected by the DEC for lack of conformity to the statutory definition of brownfields for the three sets of target variables.

## **Results #1: Program Participation**

### ***All Participating Sites***

Table 4-5 shows the distribution of BCP sites by DEC Region. From the perspective of DEC Regional equity, the sites are disproportionately located downstate, with 52% of the sites in the program located in Regions 1, 2, and 3, which are comprised of New York City and its surrounding commuter areas, including several of the other

largest cities in the state. The remaining sites are not evenly distributed among the other DEC Regions. Region 9, where the cities of Buffalo (population approximately 260,000) and Niagara Falls (population approximately 50,000) are located, has 65 sites, or 20% of the state total. Region 8, where Rochester is located (population 210,000), also has a substantial share, with 41 total sites. There are 25 sites in Region 7, which is anchored by the city of Syracuse (population 145,170); Region 6, whose largest city is Utica (population 62,000) has another 10 sites; Region 4, which contains the state capital (Albany, population 97,856), as well as the smaller, historically industrial cities of Troy (population 50,129) and Schenectady (population 66,135), has 9 sites in the program; Region 5, has four sites in the program.

**Table 4-5: Total BCP sites by DEC region**

<b>Region</b>	<b>All BCP Sites Completed or In Progress by Region</b>	<b>All BCP Sites in Region as a Percentage of total BCP Sites Statewide</b>
<b>1</b>	13	4.0%
<b>2</b>	96	29.6%
<b>3</b>	61	18.8%
<b>4</b>	9	2.8%
<b>5</b>	4	1.2%
<b>6</b>	10	3.1%
<b>7</b>	25	7.7%
<b>8</b>	41	12.7%
<b>9</b>	65	20.1%
<b>All</b>	324	100.0%

The spatial distribution of that population appears to be related to the number of BCP sites founds there. While Regions 7, 8 and 9 have similar proportions of the population, they each have a different share of the BCP sites, and all have more BCP sites than is proportionate to their populations. With the second largest city in the state, Buffalo, and a

second city of over 50,000, Region 9 has the second highest proportion of the BCP sites after New York City. Rochester and Syracuse are the second and third largest cities, and more than twice the size of the next largest place other than the state capital, and this seems to be reflected in the proportion of sites located there. Region 5 has the least amount of program activity measured in number of sites, and it is the only region without a single city or town with a population of over 50,000.

Regions 3, 7, 8 and 9 have a much larger proportion of BCP activity than they do population. This makes sense based on the history of these areas and the types of cities that are located there. Regions 1 and 2 are actually underrepresented from a population perspective. This is probably the result of a combination of factors. In New York City, development pressures and the retention of some manufacturing may have contributed to less brownfields being created and more being cleaned up voluntarily and quickly. It has been suggested that on Long Island sites are not being remediated under Superfund, but by virtue of their classification in the program cannot participate in the BCP (Sustainable Long Island, 2008).

### ***Completed Sites***

As of May 2103, DEC had issued COCs to participants at 115 sites, just over a third of the 324 that had entered the program (Table 10). The remediation completion rate and average time to remediation completion of sites in the program for the period January 2003 to May 2013 are also presented. Remediation completion here refers to the point at which the COC has been signed by the DEC. This indicates that the site has been

remediated according to the BCA and that the participant is eligible to claim the brownfields tax credits once the site has been put into active use.

**Table 4-6: Completed BCP Sites and Time to Completion by DEC Region**

<b>Region</b>	<b>Completed BCP Sites</b>	<b>Completed BCP Sites as % of State Completions</b>	<b>Average Years to Completion</b>	<b>Completed BCP Sites as % of Regional Completions</b>
<b>1</b>	2	1.7%	4.72	15.4%
<b>2</b>	34	29.6%	4.1	35.4%
<b>3</b>	19	16.5%	4	31.1%
<b>4</b>	3	2.6%	4.46	33.3%
<b>5</b>	0	0.0%	NA	0.0%
<b>6</b>	2	1.7%	1.34	20.0%
<b>7</b>	13	11.3%	3.8	52.0%
<b>8</b>	14	12.2%	4.74	34.1%
<b>9</b>	28	24.4%	2.45	43.1%
<b>All</b>	115	100.0%	3.7	35.5%

Completion is an important factor in determining the actual impact of the program and the quality of the development that it promotes. A first step to assessing the quality of development is whether or not that development is accomplished in a timely manner. Delays in development projects, especially after physical disruption of the site has begun, prolong the inconveniences that are imposed on the surrounding community, and may present additional health risks. Lack of progress and abandonment of projects may also be an indicator that projects are not well planned for the existing economic conditions, or are being otherwise poorly managed. If sites are allowed into the program in a way that proportionately represents each region, but sites in some regions are not actually completing cleanups, the program benefits are not accruing to that area, regardless of participation rates.

While just over half of the total participating sites are downstate, just under half of the completed sites are there. In other words, in aggregate upstate sites are completed at an equal and even slightly higher rate than downstate sites. This is despite the stronger downstate real estate markets, which might suggest that development projects would be more likely to move quickly there.

Long Island and other counties outside of New York City are responsible for the slightly lower percentage of the completed sites that are attributable to downstate. Only two out of the 13 total BCP sites in Long Island and 19 out of the 61 counties in Region 3 were completed as of May 2013. Overall, the disparity in completion rates does not seem to indicate any kind of systemic bias in the design of the program that prevents participants from completing remediation. The distribution of the sites on a regional level indicates that participation in the program is proceeding in a way that reflects expected need and does not overtly favor one area over another except to the degree that larger and older urban areas would expect to be favored through the process.



*Ineligible Sites***Table 4-7: BCP Denials by DEC Region**

<b>DEC Region</b>	<b>BCP Denials</b>	<b>Percentage of BCP Denials Statewide</b>
<b>Region 1</b>	9	12.0%
<b>Region 2</b>	30	40.0
<b>Region 3</b>	12	16.0
<b>Region 4</b>	1	1.33
<b>Region 5</b>	1	1.33
<b>Region 6</b>	2	2.67
<b>Region 7</b>	6	8.0
<b>Region 8</b>	4	5.33
<b>Region 9</b>	10	13.33
<b>All</b>	75	100.00

As discussed in the previous chapter the exclusion of some applicants from the program has been an important issue in the implementation of the BCP. Whether or not the DEC has been or should be able to exclude sites based on a lack of need (or a “but for” test) is a question that is central to selecting an appropriate design for the program. Though the courts ultimately ruled that the DEC could not legally deny an applicant entry to the BCP based on a project’s need for the subsidy that BCP tax credits provides, nor the level of distress surrounding the BCP site, for a time the DEC was claiming to do just that. How effective the agency was at making this judgment has implications for policy going forward by guiding whether the method they used previously was effective and should be made legal.

Table 4-7 summarizes the number of sites deemed ineligible for participation in the program because the DEC determined that they did not meet the statutory definition

of a brownfield site. In comparison to the sites accepted into the BCP, greater proportions of the sites rejected from the program were located in DEC Regions 1 and 2, Long Island and New York City. In contrast, a smaller proportion of the rejected sites were from Regions 8 and 9, in Western New York where Buffalo and Rochester are located. This is the expected outcome if a “but for” test were being applied appropriately at a regional level. If contamination levels were equal, the absence of a complicating factor would be more likely to occur in Long Island and New York City than it is in Buffalo, Rochester or Troy. Additionally, the contamination levels in cities such as Buffalo where heavy industry has a strong history is likely to be high enough that a site would be included even if there were a financially viable project proposed for it.

## **Results #2: Comparison of Tract and County to State**

Single comparison t-tests were used to compare the mean of the BCP tract and county values for each variable to the statewide measures. Table 4-8 displays the tract and county level mean values for all participating BCP sites alongside the statewide value. Statistical significance is indicated with superscripts as described in the table footer.

**Table 4-8: Comparison of BCP Site Counties and Tracts to State as a Whole**

Variable <sup>a</sup> (%)	BCP Site Tract <sup>b</sup> (Mean, N=317)	BCP Site County <sup>b</sup> (Mean, N=321)	New York State
<b>Socioeconomic Status</b>			
Bachelor's degree or higher	23.27*	27.59	27.40
Family poverty	17.28*	11.36	11.50
Individual Poverty	20.25*	14.32	14.60
Median household income (\$)	38,284*	43,727	43,393
Unemployment	9.163*	7.150	7.10
<b>Race/Ethnicity</b>			
Black or African American population	18.51**	14.75***	15.74
Hispanic or Latino population, any race	17.73**	12.78*	15.10
Linguistically isolated households	11.77***	10.62*	13.00
<b>Housing</b>			
Different residence than 1995	4.57	3.52*	4.10
Median value of owner occupied housing units (\$)	137,668	220,958*	148,700
Renter occupancy	57.28*	44.50**	46.79
***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup> All data is from 2000 US Decennial Census. <sup>b</sup> Significance tested using one-sample t-test.			

This analysis shows that in comparison to the state as a whole, the BCP sites are not concentrated in counties that have lower socioeconomic status populations. The BCP site counties show no statistically significant difference in unemployment rate, median household income, percentage of family or individuals living under the poverty line, and percentage of population with 25 and over with a bachelor's degree or higher at the county level than the state as a whole.

The mean proportion of Latino and African American populations for BCP site counties is lower than the State as a whole. There is also a statistically significantly lower

proportion of linguistically isolated population. Renters and individuals who have moved in the last five years are found in smaller proportions in BCP site counties than in the state as a whole. The contrast in the median values of owner occupied housing units is especially large: \$148,700 statewide, versus \$220,958 at the county level. It is not possible to conclude why these differences exist, but one aspect of the explanation is likely the unevenness of racially and ethnically diverse populations throughout the state: Upstate New York is less diverse than Downstate. Within county patterns of segregation also are not captured at this level of analysis. Housing costs are also generally higher in the Downstate and particularly New York City, which provides one possible explanation for the observed differences.

When comparing the tracts to the state as a whole, there are statistically significant differences in all variables tested other than median value of owner occupied housing and the percentage of renters that have moved in the last five years. The direction of the difference shows that the BCP is located in census tracts that have lower income populations, a higher proportion of minority residents and residents without higher education, and greater levels of linguistic isolation than the state as a whole. These tracts are also disproportionately comprised of renters. While 46.79% of all housing units statewide are renter occupied, the average percentage of renter occupied housing in the tracts where BCP sites are located is 57.28%. Moreover, while there was no difference in median household income between the state and the county scale, the average census tract median household income is \$38,284, more than \$5,000 lower than the state median.

These results suggest that at the county level, the BCP is not redistributive based on socioeconomic status, nor does it favor counties with wealthier populations. On

average at the county level, the BCP participation is redistributive away from racial and ethnic minority populations as I have measured them here, a phenomenon that may be a function of patterns of racial and ethnic segregation that are not captured at the county level of analysis. BCP sites are more likely to be located in counties with above average housing values, which again, may be explained by unevenness in housing values within the counties as well as among different regions of the state.

At the neighborhood level, the program does seem to have targeted lower socioeconomic status and minority populations, as they have been measured here at the unit of the census tract. Referring back to the structure of the tax credits discussed in the third chapter, this outcome seems in line with the design of the policy. There is an added incentive in the BTC for doing a project within an En-Zone, and the En-Zone designation relies on data from the census tract level (though unemployment is the main variable used to make the En-Zone determination). However, as I will discuss later in this chapter and in the conclusion, this alone does not fulfill any standard of redistributive justice.

### **Results #3: Comparison of Tract to County**

The next step of the analysis compared tract level values associated with each BCP site for the target variables to respective county level values using matched pairs t-tests. These tests were run on the entire set of participating sites, as well as subsets selected for size, completion status, and regional location. This provides important additional insight about the way that the program has worked. If the differences observed at the tract level as compared to the state as a whole reflected the influence of the sites only in certain areas of the state, which could suggest a need to modify the design of the

program depending on the area of the state in which a participating site is located. If the relationships remain similar across the state, it does not necessarily suggest that the program is successful in achieving redistribution, but it does provide important empirical information about the relationship of policy design and tool selection to this particular program.

### *All Sites*

The results for the analysis of all participating sites are shown in Table 4-9. Mean differences between tract and county values were statistically significant at the .05 (95%) confidence level for all the variables tested for the entire set of BCP sites. The direction of the difference indicates that as a whole in the census tracts where BCP sites are located the population demonstrates higher levels of economic distress, lower levels of affluence and education. The tracts are populated by groups that have historically had less political power and been subject to greater discrimination than the population of the counties in which they are located. While the population of site counties' is on average 14.70% African American, at the tract level African Americans are on average 18.51% of the population. At the county level, the population where the sites are located is average 12.75% Hispanic or Latino, while within the site census tracts an average of 18% of the population is Hispanic or Latino.

**Table 4-9: Comparison of site tracts to site counties, all sites (N=324)**

Variable <sup>a</sup> (%)	Tract Mean	County Mean	Mean of Paired Differences <sup>b</sup>
Socioeconomic			
Bachelor's degree or higher	23.27	27.66	-4.38***
Family poverty	17.28	11.33	5.96***
Individual Poverty	20.25	14.28	5.96***
Median household income (\$)	38,767	43,827	-5,060***
Unemployment	9.16	7.12	2.04***
Race/Ethnicity			
Black or African American population	18.51	14.70	3.81**
Hispanic or Latino population, any race	17.73	12.75	4.98***
Linguistically isolated households	11.77	10.64	1.13*
Housing			
Different residence than 1995	4.57	3.53	1.04***
Median value of owner occupied housing units (\$)	139,405	222,287	-82,881***
Renter occupancy	57.28	44.48	12.80***
***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup> All data is from 2000 US Decennial Census. <sup>b</sup> Significance tested using matched pairs t-test.			

Importantly from a community development perspective, there is a much lower rate of home ownership in the areas where the BCP sites are located. The percentage of renters at the tract level (M=57.3, SD=26.82) was significantly higher than at the county level (M=44.8, SD=19.70);  $t(316)=9.775$ ,  $p = .000$ . Housing values are much lower at the tract level as well.

### ***Large Sites***

Because of the structure of the tax credits, larger sites, which in general cost more for cleanup and development, will tend to get more incentives. In addition to larger sites being more expensive to develop overall, the incentives are weighted towards site

preparation and cleanup costs, which are likely even more closely tied to size of site than the actual development costs are. Therefore, matched pair t-tests were conducted on the subset of sites that are in the top 25% for size to see if the sites that are likely the most expensive have different characteristics in the three areas of interest.

For the large sites, the difference in renters, household income, poverty, education, and median value of owner occupied units remain statistically significant (Table 4-10). However, the overall percentage of renter occupied housing is much lower for the larger sites than the sites as a whole at both scales. The site tract mean percentage of renter occupied units for the entire set of sites is 57%, while for the large sites it is 44.7% and at the county level the mean for all sites is 44.48%, while for the large sites it is only 34.28%. This could actually be seen as a good thing, as large projects can have particularly harsh effects on vulnerable populations. But it is also alarming to consider that the most expensive projects in the program may be systematically different from the majority of the program in a way that makes them less consistent with policy goals.



**Table 4-10: Comparison of BCP site tracts to BCP site counties, top 25% of sites by size (n=79)**

Variable <sup>a</sup> (%)	Tract Mean	County Mean	Mean of Paired Differences <sup>b</sup>
Socioeconomic			
Bachelor's degree or higher	19.69	25.20	-5.51***
Family poverty	11.92	8.39	3.52**
Individual Poverty	16.19	11.53	4.66***
Median household income (\$)	38,237	43,521	-5,285***
Unemployment	6.96	6.19	0.77
Race/Ethnicity			
Black or African American population	12.57	9.47	3.11
Hispanic or Latino population, any race	8.19	6.32	1.88
Linguistically isolated households	6.77	5.80	0.97
Housing			
Different residence than 1995	2.43	2.17	0.26
Median value of owner occupied housing units (\$)	94,930	125,261	-30,330***
Renter occupancy	44.71	34.28	10.43***
***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup> All data is from 2000 US Decennial Census. <sup>b</sup> Significance tested with matched pairs t-test.			

***Completed Sites***

Completed sites demonstrated statistically significant differences on all variables except for linguistic isolation in the same direction as the sites as a whole (Table 4-11).

The sites that were completed had a higher percentage of Hispanic and African American populations in the BCP tracts than the sites as a whole (county values were similar).

There were also greater differences in poverty levels and median value of owner-occupied units.

**Table 4-11: Comparison of tracts and counties completed sites (N=113)**

Variable <sup>a</sup> (%)	Tract Mean	County Mean	Mean of Paired Differences <sup>b</sup>
<b>Socioeconomic</b>			
Bachelor's degree or higher	22.62	27.67	-5.05***
Family poverty	18.15	11.59	6.55***
Individual Poverty	21.50	14.58	6.93***
Median household income (\$)	38,041	42,849	-4,808*
Unemployment	9.48	7.31	2.18***
<b>Race/Ethnicity</b>			
Black or African American population	20.07	14.29	5.78**
Hispanic or Latino population, any race	17.95	12.98	4.98***
Linguistically isolated households	11.03	10.00	1.03
<b>Housing</b>			
Different residence than 1995	4.19	3.37	0.82*
Median value of owner occupied housing units (\$)	116,941	227,576	-110,635***
Renter occupancy	58.73	44.96	13.77***
***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup> All data is from 2000 US Decennial Census. <sup>b</sup> Significance tested using matched pairs t-test.			

### ***Regional Differences***

As mentioned earlier, the BCP sites are very unevenly distributed throughout the state. The above map shows the concentration of BCP sites by county. Downstate and New York City and several Western counties have much higher concentrations of BCP sites than elsewhere in the state. The following section presents the results of running the matched pairs tests on three subsets of cases that capture the three main areas in which the BCP sites are located.

*New York City***Table 4-12: Comparison of BCP site tracts to BCP site counties, New York City sites only (n=95)**

Variable <sup>a</sup> (%)	Tract Mean	County Mean	Mean of Paired Differences <sup>b</sup>
<b>Socioeconomic</b>			
Bachelor's degree or higher	29.69	28.00	1.69
Family poverty	22.28	19.85	2.43
Individual Poverty	24.77	22.58	2.19
Median household income (\$)	40,101	37,598	2,503
Unemployment	11.879	10.216	1.66
<b>Race/Ethnicity</b>			
Black or African American population	22.14	27.24	-5.10*
Hispanic or Latino population, any race	33.78	28.94	4.84*
Linguistically isolated households	21.31	23.64	-2.33
<b>Housing</b>			
Different residence than 1995	7.19	7.00	0.19
Median value of owner occupied housing units (\$)	202,052	418,219	-216,168***
Renter occupancy	75.48	72.48	3.00
***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup> All data is from 2000 US Decennial Census. <sup>b</sup> Significance tested using matched pairs t-test.			

In New York City, the only significant differences between the tract and county values were observed for the race and ethnicity variables and the median value of owner occupied units (Table 4-12). The BCP tract sites had a higher level of Latino population and a smaller proportion of the population was African American. The housing values were substantially lower in the BCP tracts, with the median value of owner occupied units at less than half of the county mean. The difference in linguistic isolation was statistically significant at the 10% confidence level.

Manhattan projects have been at the center of much of the debate surrounding the BCP. The analysis conducted here does not do much to refute the claim that Manhattan BCP sites would not qualify for the program if eligibility were determined based on need. Of the 25 projects in Manhattan, more than half are located in tracts where the median annual household income is above the county median of \$47,030. More than two thirds of the Manhattan sites are in areas of the city with smaller than average size Latino population and more than half are in neighborhood with a below average numbers of African American residents.

One neighborhood in Manhattan with multiple BCP sites illustrate the additional difficulty of assessing BCP need in New York City. The circumstances of these sites also highlight the insufficiency of considering only the need for investment without further considering the type of development that is needed, and the policy actions necessary to effect such development. Tract 117 occupies several blocks in Midtown Manhattan, in the area just to the West of Times Square. It contains two BCP sites. In 2000, the family poverty rate for this census tract was 100%, because the main residence in the tract is a public housing project. The presence of non-market rate housing is notably they key to the presence of lower income populations in the New York City tracts. Notably, both projects are large. River Place is 3.75 acres and the West 41<sup>st</sup> Street site is 2.3 acres.

The Bronx is home to some of the most serious environmental justice struggles in the state, and that fact is reflected in the makeup of the population around the BCP sites located there. Two thirds of the 21 sites there are located in tracts where more than half of the population is Hispanic or Latino or African American. Of the 21 projects in the

Bronx, 14 were located in tracts with a higher percentage of renters than the county as a whole (80.4%). Only one project was located in a site with less than 50% renters.

More than half of the projects were located in tracts where the poverty rate exceeded the already high borough rate of 28%. The worst poverty surrounding a site is found in the tract where the Courtlandt Crescent project is located. There, 64% of the families and individuals were living below the poverty level in 1999.

Brooklyn has 28 sites, only 2 less than the entire City of Buffalo. 12 are located in sites with at or above the borough rates for family and individual poverty. Seven of the projects are located in areas with median housing values above the borough average. All but five of the Brooklyn sites are located in tracts that have lower proportions of African American residents than the borough as a whole.

Brooklyn is subject to development pressure in rapidly gentrifying neighborhoods, so it is interesting to note that twenty three of the projects are located in tracts rental populations in excess of the borough average of 72.9%. Significantly, Brooklyn is also home to several very large sites — 13 between 1 and 3 acres, and a 6 acre and a 48 acre site.

While Queens has less development pressure that yields concerns about gentrification than Brooklyn does, the transformation of neighborhoods in ways that harm existing residents is still a concern in neighborhoods there. Tract 1 in Long Island City which has 3 sites has a median income that is more than twice the county median and a lower percentage of renters than the county as a whole (less than 20% compared to 57.2% for the county). It also has more than twice as large a proportion of the population who have Bachelor's degrees or higher (over half compared to less than 25% borough wide).

In a nearby tract that is also in the Long Island City neighborhood, 73.6% of the population is African American compared to only 20% of the borough as a whole. All of the residents are renters. This tract was home to a six acre project, the largest in the county.

Staten Island has two projects. The Coral Island Shopping Center has a COC. It is a 3.9 acres site in census tract 291.03, a tract with a median income of \$61,954 compared to the county median of 55,039, and a small minority population as compared to both Staten Island and the city as a whole. The Sun Chemical Corporation site, which is still in progress, is 5.2 acres and is located in tract 8, which shows need compared to the county as a whole, though it does not exhibit the same level of distress as some of the sites in the other boroughs.

#### *Non-NYC Downstate*

Table 4-13 displays the results of the matched-pairs tests for the Non-NYC Downstate counties. These performed comparably to the sites all together. The percentage of renters was lower than all sites together, but the difference between tract and county was greater in this subset of sites. The difference in the percentage of minority residents, residents with a bachelor's degree or higher level of education, and residents experiencing linguistic isolation was also more pronounced among these sites. This more pronounced difference between tract and county levels indicates a higher level of inequality and segregation despite this area of the state having overall lower poverty levels and higher income levels.

**Table 4-13: Comparison of BCP site tracts to BCP site counties, non-NYC downstate sites only (Tracts 1 & 3)**

Variable <sup>a</sup> (%)	Tract Mean	County Mean	Mean of Paired Differences <sup>b</sup>
<b>Socioeconomic</b>			
Bachelor's degree or higher	29.56	38.61	-9.05***
Family poverty	10.97	5.73	5.24***
Individual Poverty	13.47	8.11	5.36***
Median household income (\$)	57,782	65,862	-8,080
Unemployment	7.02	4.69	2.34***
<b>Race/Ethnicity</b>			
Black or African American population	20.05	12.33	7.72**
Hispanic or Latino population, any race	24.54	13.48	11.06***
Linguistically isolated households	17.01	11.40	5.61***
<b>Housing</b>			
Different residence than 1995	5.82	3.82	2.01***
Median value of owner occupied housing units (\$)	239,551	289,727	-50176*
Renter occupancy	51.27	33.25	18.01***
***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup> All data is from 2000 US Decennial Census. <sup>b</sup> Significance tested using matched pairs t-test.			

This can be seen in Westchester County, where 22 of the 31 total BCP sites are located in tracts with higher individual and family poverty rates than the county as a whole. All but 5 are in tracts with housing values that are below the county average. 12 of the Westchester sites are located in the City of Yonkers, a historically industrial city located just north of the Bronx. While the county has overall had just less than 40% renter occupancy, 11 of the 12 Yonkers sites are located in tracts with a renter occupancy ranging from 78 to 96% and unemployment rates of between two and three times the county average. Median household income for the tracts in which these 11 Yonkers sites are located are less than half the county median and all of the tracts are disproportionately

minority. Four of the projects are located in tracts where more than 50% of the population is Hispanic or Latino, and three are in a tract where 63% of the population is African American.

Another 4 are located in the city of White Plains in tracts that are disproportionately made up of low income, minority, and renting populations. In these tracts, 20-30% of the population has a bachelor's degree, as compared to over 40% for the rest of the county. While county level unemployment was 2.8% in 2000, in the tracts where these four sites are located, unemployment ranged from 4.5% to 12.4%. There are two smaller but still substantial clusters of sites further north: seven in the City of Poughkeepsie and five in the City of Kingston.

There are also sites located in tracts with better conditions than their respective counties. Two projects are in tracts with median housing values of over \$500,000, and one is located in a tract where the median housing value is over \$1 million in the town of Scarsdale.

### *Upstate*

As shown in Table 4-14, Upstate demonstrated a more pronounced difference in proportion of renters and black population between the tracts and counties. The tracts have lower levels of home ownership and a larger proportion of minority residents than the counties do. There is a greater disparity between income at the tract and county level than for the sites as a whole, though the difference is not quite as great as that found in the non-NYC downstate counties. Compared to the downstate non-NYC counties, poverty levels are also higher at both the tract and county level, and the disparity in poverty levels is greater between tracts and counties for the "Rest of State" sites than they are in the



dataset as a whole, or in the Non NYC Downstate or NYC subset of sites. In other words, the level of economic distress is highest in the regions and neighborhoods in which the upstate BCP sites are located.

This is illustrated in the data on the tracts containing the 30 BCP sites in the City of Buffalo. For all of these tracts the median household income falls below the county median of \$38,567. In a single tract in Buffalo where there are four BCP sites, the median household income is \$12,081 a year and over 45% of families and individuals lived below the poverty line in 1999. The unemployment rate in 2000 was 10%, more than twice that of the county as a whole. 88% of the residents are renters, and those owner occupied homes have a median housing value of 62,300, compared to the median value of \$90,800 for the county as a whole. While the county population is just under 13% African American and just over 3% Latino, the population of census tract 7102 is one third Latino and over 45% of the population is African American. Another tract with 3 BCP sites had no owner occupied housing in 2000, and in 1999 69.2% of families there lived below the poverty line.

**Table 4-14: Comparison of tracts to counties for rest of state (n=171)**

Variable <sup>a</sup> (%)	Tract Mean	County Mean	Mean of Paired Differences <sup>b</sup>
<b>Socioeconomic</b>			
Bachelor's degree or higher	17.84	24.20	-6.37***
Family poverty	16.39	8.26	8.13***
Individual Poverty	19.76	11.52	8.24***
Median household income (\$)	32,356	40,716	-8,360***
Unemployment	8.48	6.34	2.14***
<b>Race/Ethnicity</b>			
Black or African American population	16.03	8.44	7.60***
Hispanic or Latino population, any race	6.78	3.54	3.24***
Linguistically isolated households	4.90	3.19	1.71***
<b>Housing</b>			
Different residence than 1995	2.75	1.53	1.22**
Median value of owner occupied housing units (\$)	74,733	93,321	-18,588***
Renter occupancy	48.96	32.28	16.68***
***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup> All data is from 2000 US Decennial Census. <sup>b</sup> Significance tested using matched pairs t-test.			

**Results #4: Comparison of Participating and Ineligible*****All Sites***

To assess whether the DEC's rejection of site applications to the program was consistent with the goals of the policy, tract and county characteristics of the rejected sites were compared to those of the accepted sites using an independent samples t-test. At the county level, rejected sites were disproportionately located in counties with a more affluent, mobile and educated population and greater median housing values (Table 4-15). These differences could be indicators of counties that are experiencing economic growth. However, in this case they are more likely a reflection of the higher proportion of

the rejected sites that are located in New York City, due to the DEC's systematic rejection of sites in that area.

**Table 4-15: Comparison of counties containing sites denied entry to the BCP to counties containing sites accepted to and entering the BCP for New York State**

Variable <sup>b</sup> (%)	Denial Site Counties (Mean) (N = 74)	Accepted Site Counties (Mean) <sup>c</sup> (N= 321)
Socioeconomic		
Bachelor's degree or higher	31.06	27.59**
Family poverty	11.78	11.36
Individual Poverty	14.50	14.32
Median household income (\$)	46,627	43,727.28*
Unemployment	7.02	7.15
Race/Ethnicity		
Black or African American population	14.70	14.75
Hispanic or Latino population, any race	15.81	12.78
Linguistically isolated households	12.72	10.62
Housing		
Different residence than 1995	4.17	3.52*
Median value of owner occupied housing units (\$)	346,442	220,958***
Renter occupancy	48.55	44.50
***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup> Rejected sites include all sites that could be identified as having rejected applications to the BCP from January 2003-December 2011. Accepted sites include all sites accepted to and entering the BCP from January 2003-May 2013. <sup>b</sup> All data is from 2000 US Decennial Census. <sup>c</sup> Significance tested using independent samples t-test.		

At the tract level, there were no statistically significant differences between the rejected sites and the accepted sites (Table 4-16). This indicates that the sites that were deemed ineligible for the program demonstrate the same level of need at the neighborhood scale as the sites that were accepted into the program, as that need is captured by the variables used in this analysis.

**Table 4-16: Comparison of tracts containing sites denied entry to the BCP to tracts containing sites accepted to and entering the BCP for New York State**

Variable <sup>b</sup> (%)	Denial Site Tracts (Mean) (N = 74)	Accepted Site Tracts (Mean) <sup>c</sup> (N= 321)
Socioeconomic		
Bachelor's degree or higher	25.54	23.27
Family poverty	18.57	17.28
Individual Poverty	19.57	20.25
Median household income (\$)	42,980	38,767
Unemployment	9.18	9.16
Race/Ethnicity		
Black or African American population	19.92	18.51
Hispanic or Latino population, any race	16.92	17.73
Linguistically isolated households	12.02	11.77
Housing		
Different residence than 1995	5.81	4.57
Median value of owner occupied housing units (\$)	185,592	137,668
Renter occupancy	60.84	57.28
<p>***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup>Rejected sites include all sites that could be identified as having rejected applications to the BCP from January 2003-December 2011. Accepted sites include all sites accepted to and entering the BCP from January 2003-May 2013. <sup>b</sup>All data is from 2000 US Decennial Census. <sup>c</sup>Significance tested using independent samples t-test.</p>		

***Non-NYC Sites Only***

In order to assess the DEC's effectiveness at determining site eligibility through mechanisms other than the exclusion of NYC sites, the same tests were conducted on the rejected and accepted site data, for only those sites located outside of New York City. When non-NYC sites are examined separately, the only statistically significant difference between the sites at the county level is a small one: the average county level

unemployment rate for sites denied entry to the BCP was 5.38% as compared to a 5.82% mean for the accepted sites county mean (Table 4-17).

**Table 4-17: Comparison of counties containing sites denied entry to the BCP to those containing sites accepted to and entering the BCP for NYS Excluding NYC**

Variable <sup>b</sup> (%)	Denial Site Counties (Mean) (N = 43)	Accepted Site Counties (Mean) <sup>c</sup> (N= 225)
Socioeconomic		
Bachelor's degree or higher	27.76	27.47
Family poverty	7.22	7.70
Individual Poverty	10.04	10.75
Median household income (\$)	49,983	46,387
Unemployment	5.38	5.82*
Race/Ethnicity		
Black or African American population	9.20	9.38
Hispanic or Latino population, any race	6.98	5.79
Linguistically isolated households	5.78	5.05
Housing		
Different residence than 1995	2.11	2.05
Median value of owner occupied housing units (\$)	151,023	137,806
Renter occupancy	30.75	32.53
<p>***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup>Rejected sites include all sites that could be identified as having rejected applications to the BCP from January 2003-December 2011. Accepted sites include all sites accepted to and entering the BCP from January 2003-May 2013. <sup>b</sup>All data is from 2000 US Decennial Census. <sup>c</sup>Significance tested using independent samples t-test.</p>		

The tract level analysis produced similar results (Table 4-18). The only statistically significant difference at the tract level is that the denial site tracts had a 7.66% linguistically isolated population, just slightly under the 7.69% observed in the accepted site tracts. Absent differences in other variables, and considering the small magnitude of the differences that were observed, it can be concluded that when New

York City is excluded from the analysis, both the tracts and counties within which the denied sites are located were similar to those containing the accepted sites in terms of housing, socioeconomic status and race and ethnicity of the population.

**Table 4-18: Comparison of census tracts containing sites denied entry to the BCP to census tracts containing sites accepted to and entering the BCP for New York State excluding New York City**

Variable <sup>b</sup> (%)	Denial Site Tracts (Mean) (N = 42)	Accepted Site Tracts (Mean) <sup>c</sup> (N= 222)
Socioeconomic		
Bachelor's degree or higher	19.75	20.53
Family poverty	16.20	15.14
Individual Poverty	17.73	18.31
Median household income (\$)	41,379	38,197
Unemployment	7.19	8.00
Race/Ethnicity		
Black or African American population	18.12	16.96
Hispanic or Latino population, any race	10.16	10.86
Linguistically isolated households	7.66	7.69*
Housing		
Different residence than 1995	4.35	3.45
Median value of owner occupied housing units (\$)	118,371	112,597
Renter occupancy	47.24	49.49
<p>***Significant at 99.9%. **Significant at 99.0%. *Significant at 95.0%. <sup>a</sup>Rejected sites include all sites that could be identified as having rejected applications to the BCP from January 2003-December 2011. Accepted sites include all sites accepted to and entering the BCP from January 2003-May 2013. <sup>b</sup>All data is from 2000 US Decennial Census. <sup>c</sup>Significance tested using independent samples t-test.</p>		

### Summary of Results & Preliminary Discussion of Implications

The results of this analysis reveal that overall, at the neighborhood level, the program is indeed supporting activity in lower socioeconomic status communities, communities of color, and communities with lower housing values, resident tenure, and

home ownership than surrounding areas. However, the relationship between the BCP site neighborhood and the surrounding area differs based on where in the state the BCP is located.

In New York City, the BCP sites are less different from their counties than elsewhere in the state. This could be an indication that, in New York City, the presence of brownfields does not necessarily depress the surrounding area as much as elsewhere in the state. This phenomenon would not be surprising in an area as densely populated as New York City where there is fierce competition for prized real estate, both residential and commercial, based on proximity to workforce, other businesses, and a desirable consumer audience. Density and other factors unique to New York City also complicate the measurement of “need” in this way for New York City.

In the more affluent downstate areas, the disparity between the tracts and the counties in which they are situated is more pronounced. This could be an indication that brownfields are an obstacle to development even in the stronger real estate markets and are disproportionately left as a burden on minority and low-income populations, which suggests that the BCP is fulfilling its intended purpose.

Completed sites were distributed through the state in a patterns similar to that of all participants, which is desirable outcome for the program as a whole, since unfinished real estate projects can present many of the same problems as a brownfield site does for the surrounding community.

Rejected site do not show many or large differences from the sites that were accepted into the program. The county level differences demonstrated between the rejected and accepted sites on income, education, mobility and housing values are not

evident once New York City sites are removed. This does not necessarily mean that DEC was using discretion improperly from a programmatic standpoint. The income, education, mobility, and housing values are higher in New York is related to its overall real estate market strength. DEC's decision to exclude sites based on some type of but-for test—while not upheld by the courts under the existing law – would probably have resulted in more site rejections in New York City. However, excluding New York City sites is not on its own a satisfactory way to target the program's resources. More research would be required to discern how accurate the DEC's use of discretion was in assessing the complication factor.

Taken together, the data shown on the participating sites justifies the conclusion that the BCP has reached some level of success in achieving at least two out of three of its policy goals to direct development towards areas with economic need and to correct environmental injustice by encouraging remediation in low income and minority communities; however, there are significant limitations to this analysis. The difficulty of controlling for the size and density within and among different jurisdictional scales makes it challenging to conduct more robust types of analysis on this data and the appealing alternative of a “but for” test – that is, but for the BCP, what would have happened on this site—is extremely difficult to conduct with any degree of confidence. Moreover, as discussed in the concluding chapter, it is not clear that a “but for” test would really answer the question of whether or not the program is effective in realizing its policy objectives, since the point is not only to incentivize development, but to incentivize it in particular locations, and to shape its character to varying degrees. There is evidence that the housing conditions and characteristics of the population in the



neighborhoods surrounding the BCP sites suggest that they are areas particularly vulnerable to gentrification pressures, which only underscores the importance of oversight not just for where public money is spent, but also for what types of development it subsidizes.

Despite these limitations, this exploration of the geography of the BCP participation does provide insight into the relationship of the BCP to uneven development. Overall, the BCP and the tax credits it yields reward development in areas that are disproportionately economically distressed and subject to environmental injustice and racism, relative to the state as a whole and to the regions in which they are located. How the development done at these sites impacts these conditions is an important question to consider in continuing refining this policy.

## **Chapter 5: Lessons from the New York State Brownfields Cleanup Program**

### **Summary and Discussion of Findings**

#### ***Purposes of the BCP***

The BCP has multiple purposes that traditionally belong to different policy fields. Environmental groups saw it as a way to clean up more polluted land. State-level economic development officials and agencies viewed it as a mechanism to open up more job creation and capital improvement project opportunities. Local economic development groups hoped that the program would make development projects more attractive within their neighborhoods. The environmental justice community thought it was a necessary step to correct the disproportionate environmental burdens borne by communities of color and lower socioeconomic status. They also saw it as a way to support the growth of necessary services, housing, and economic opportunities for environmental justice communities. Affordable housing developers needed the BCP to alleviate legal and financial obstacles to affordable housing development projects that would otherwise be well situated to serve low-income communities.

Some of the purposes for the BCP relied on beliefs about the intrinsic nature of brownfields redevelopment and were not explicitly developed within the policy design. For example, the fact that brownfield redevelopment can reduce pressure on greenfield sites is a commonly cited reason for states to have voluntary cleanup programs. This argument has been used to support the creation and continued existence of the BCP. However, the BCP is not designed to reward projects that could have been built on greenfield sites any more than it does projects that require an urban area to be viable.

Another related example of a disconnection between policy purpose and policy design in the creation of the BCP relates to the idea of smartgrowth. Brownfields redevelopment was promoted as a smartgrowth solution in the creation of the BCP. However, BCP sites need not conform to any specific smartgrowth criteria in order to be eligible for the program or to reap its full tax credit benefits. The smartgrowth benefits of the BCP only exist to the degree that brownfield redevelopment is intrinsically an element of smartgrowth.

The economic growth benefits of the BCP were also something of an abstraction in both the 2003 and 2008 policies. While manufacturing projects were considered likely to create beneficial job growth, and thus received additional financial benefits, other job creation and tax generation criteria were not included. Interestingly, bonuses for projects meeting certain priority economic development criteria were included in the proposal to reform and extend the BCP recently put forth by Governor Cuomo. The assumptions and logic that underlie these and other recently proposed changes are discussed in later sections of this chapter.

A final disconnect between purpose and design to consider is that between the general belief that brownfields sites can be made as or more attractive than greenfield sites—by eliminating “complicating” factors such as liability and additional costs of cleanup, development, financing, and insuring a brownfield site—and the specific benefits offered to reduce those complications. No specific justifications for the formulas used to calculate the tax credits were given. There was no public attempt made to reconcile the particulars of the benefits offered by the program with empirical evidence about the problem that the policy was intended to fix. The refundable nature of the credits

eliminated even the frequently criticized rationale used in the case of tax increment financing, wherein a tax burden must exist in order for any financial benefit in the form of a credit to be claimed against it.

### ***Purpose Conflicts***

The diversity of the policy goals above hints at the extent to which there are conflicts among the multiple purposes of this program. Those conflicts may exist among multiple goals that are held by an individual stakeholder. In other cases, conflicts arise among goals that are held separately by different stakeholders. Whichever situation becomes the basis for resolving tension among policy goals impacts how these goals are resolved.

When one stakeholder has two or more conflicting objectives, that stakeholder is likely to present a policy solution that balances these multiple objectives. These stakeholders can also act as important facilitators of conversation among those who do not share the same objectives for the program. This effect can be seen in the creation and passage of the BOA program under the leadership of the organization New Partners for Community Revitalization, whose agenda overlapped with real estate developers, affordable housing advocates and developers, environmental justice advocates, and traditional environmentalist groups.

Sometimes, however, these conflicts were only partially resolved, or not resolved at all, despite multiple attempts at consensus building. Stakeholders who supported the BCP for a particular purpose tended to focus on the aspect of the policy design that was most clearly related to that purpose. Consequently, some policy goal conflicts were not

even recognized, and were thus “resolved”: the policy passed, but did not actually deal with existing tensions. For instance, environmental groups focused on the definition of the cleanup tracks, rather than the way that those tracks were rewarded via the tax credit incentives. Affordable housing groups were more concerned with whether their projects would qualify for the program than whether the structure of the tax credits would also prove so lucrative that affordable housing would need to compete with market rate development for some sites, resulting in the entire program coming under attack for being too costly.

Expertise plays an important role in determining which conflicts are resolved and which even come to the table for resolution. For instance, in the case of the tax credits, even though they had an important impact on the policy outcome, they were not specifically an issue for debate prior to the passage of the bill. Some argue that this was about political corruption: not representing a policy sector interest but rather a particular private party interest. This may be true, but does not negate the conclusion about the role expertise plays in determining conflict resolution. If the credits had been at the center of debate, it would have been harder to pass a bill that included a biased tax credit structure, regardless of whom that structure rewarded and why.

### ***Relationship between purposes, purpose conflicts, and outcomes***

Sometimes, conflicts among the multiple purposes of the BCP were resolved through explicit compromise that yielded apparent and intentional policy results. This was true of the disagreements that arose in 2003 over public participation requirements for the BCP. Through the intentional consensus-building process that took place at

Pocantico, members of the development community actually changed their position on having a public participation requirement. In other cases, as with the original attempt to create a financial link between the BCP and the BOA program, stakeholders' attempts to push policy agendas forward were overtly rebuffed by policymakers and others involved in the process.

Additionally, conflicts were resolved through exertion of power by one group over another, and this was often achieved by deploying expertise across traditional policy field lines rather than an explicit denial of compromise. In some situations where conflicts were not explicitly resolved before the BCP went into effect, agency structure and other existing institutions and procedure dictated the outcomes. Policy ambiguity that required resolution through the legal system, such as that over BCP eligibility, is included in this category.

There are other situations in which conflicts may appear to have been resolved through some sort of tradeoff. This has additional consequences that counter any benefit to the stakeholder who has less power in the situation. An example of this phenomenon is the 2003 creation of BOA alongside a set of tax credits that provided no benefit for compliance with community plans, thereby potentially decreasing the competitive advantage of a site located in a BOA relative to another brownfield. The legislature took steps to correct this issue in the 2008 brownfields program reforms, but this change was costly for stakeholders such as environmental justice groups. This cost was demonstrated both in terms of resources to develop and advance a new agenda and in the use of bargaining power that might have been expended on other issues if a better compromise had been reached in the first version of the bill.

Additionally, the way that financial incentives are delivered through the program yields the greatest benefits for larger projects. In the original 2003 design in which tangible property benefits were not in any way limited by site preparation costs, it was most beneficial to developers of the least polluted sites. Access to the credits requires an upfront investment of time and expertise that is often beyond the internal capacity of the prospective participants with the fewest resources to spend on consultants, accountants, and attorneys to do the work for them.

The integrated nature of the BCP increased the frequency and complexity of these power struggles in the formation of the policy. It also produced a greater number of contexts for expert knowledge to be deployed than are present in a more traditional policy-making process. In effect, these power struggles can make a policy appear to be “not working” when in fact it is working too much, albeit in conflicting direction—or, as Holden (2012) puts it, working at “cross purposes.”

Beyond a policy being less than effective or working counter to its stated intended purposes, there is a price to be paid for moving forward a policy that has internally unresolved conflicts in the form of instability and uncertainty. This lack of durability has negative effects that are especially difficult to manage in the high cost and, at times, slow-moving world of urban development. When unresolved issues are glossed over or made invisible in the name of creating integrated policy, this may move a policy forward in important ways, but may also threaten the stability of a policy that has been passed. This is evident in the reaction to Governor Cuomo's 2014 proposal for brownfield reforms. At a brownfields forum held in Brooklyn on January 30, 2014 by New Partners for Community Revitalization, an active participant in the 2003 and 2008 processes,

affordable housing advocates, environmental and real estate attorneys, environmental justice leaders, and others who had firsthand experience in the BOA program and the BCP expressed concerns about the current proposal for reforming and extending the program. They anticipated another lengthy and complex negotiation to come, and had concerns about achieving a compromise that would support the long-term viability of the program.

### **Implications for Theory: Critical Perspectives on Policy Integration Cases**

The strength of the belief in integration as an ideal for the NYS BCP implies that, at least in New York State, these theories are important to think about if only because they are rhetorically significant and must be critically evaluated.

There are growing traditions for this type of problem-oriented research in other disciplines that could be used to connect to a broader social science movement. Future inquiry could be modeled on work conducted on American social policy. The use of tax incentives as a mechanism for delivering social welfare subsidies has been a rich area of study that has been used to question the arguments made for and against providing public funds for social welfare purposes. Mixed-methods research in this area has shown that the mechanisms by which a subsidy is delivered are related to normative claims about whether or not such subsidy is “deserved.” It has also shown that tax credits and certain types of insurance are perceived as “earned” while other types of social insurance payouts and means-tested cash or cash-equivalent programs are thought of as a response to need that is more akin to charity. Assessing these types of welfare together in relation to social policy leads to a different picture of public spending and returns on investment



(Abramowitz, 1996). A similar type of inquiry could be valuable in the planning field, where claims about the dynamics of the free market are often central to disagreements about the correct course for government action.

Another area of scholarship with interesting and useful implications for the area of brownfields redevelopment research is found in geographically oriented political economy research. The consequences of the political-economic context of urban redevelopment is an area of study that has been explored extensively, especially regarding the processes of deindustrialization and neighborhood change of which brownfields are an integral part. The impetus to examine simultaneously the politics of policy formation with the empirical outcomes of the policy can be found in the complex relationships that are teased out in these bodies of literature. Thus, they may be used to fill gaps in the literature on sustainable development relating to inter- and intra-generational needs by clarifying how the fulfillment of different individual and group needs impact one another across time and space.

Political economic explanations for the way that urban development is oriented primarily toward financial, rather than functional, returns have been applied at the neighborhood level. A particularly famous example is Smith's (1979) rent-gap theory of gentrification, in which the disinvestment and degradation of the physical environment of the city becomes a strategy for creating profits, as the depressed value of the property provides attractive opportunities for both individuals and commercial developers. Brownfields may be located in this framework (Curran, 2007; Bliek, et al, 2007), with the environmental degradation of the land and the potential for state-financed redevelopment only increasing the possibility to profit from the undervaluation of the space. Related

work also shows that while developers profit from the disinvestment of land under these conditions, local governments have taken on an entrepreneurial, rather than managerial, role in a post-industrial economy (Harvey, 1979). Therefore, they are increasingly dependent upon, complicit in, and drivers of these process of gentrification for the expansion of the tax base.

This political economic perspective also has been increasingly applied to larger geographical extents. Recent work on the global financialization of local development provides important context for any assessment of an urban redevelopment tax program.

### **Policy Recommendations**

Both in spite of and because of the limitations described above, the research presented in this dissertation has implications for policy process and design for New York State and for brownfields redevelopment policy more generally. I will focus on three here.

The first follows from one of the causes of this study's limitations. One of the most obvious recommendations of this research is the collection of further data on the characteristics of participating projects and the amount of financial incentives that are received. It is troubling that reporting requirements are eliminated in the current brownfields reform proposal.

Stability is important for this type of program because of timelines for brick-and-mortar development; therefore predictability must be built not only into the program created by the policy but the policy lifecycle itself. Tax incentives need targeting and budgeting. The absence of a need for appropriations to pass a tax credit incentive should

not be seen as license to allow greater financial rewards than are warranted. When the debate over public spending only happens after money has been committed, it produces an appearance of impropriety, a loss of focus on the purpose of the policy in the first place, and a sense of instability among program participants that is exactly the type of uncertainty that voluntary cleanup programs are purportedly designed to avoid.

A second recommendation relates to the design of the tax credits. The amount of tax credit that is necessary to incentivize development of the worst brownfields is unnecessary as a financial benefit for a developer of an already attractive site. Tying the amount of tax credits to the site cleanup costs addresses the difference in need based on contamination issues, but something else is required to control for the greater development context. The latter requires a consideration of the appropriate scale of incentive, which should be a part of future discussions. Tract-level incentives such as the En-zone tax credit increase may be effective for relocating development within a metro area, but cannot take the place of regional level development incentives. Because it is calculated as a percentage of the total project cost, the tangible property tax credit scales with the cost of the project and does not produce a proportionately larger benefit in economically weaker areas of the state where costs may be lower. A progressive benefit that provides a proportionately greater incentive in less costly areas could be appropriate at a regional scale, but only in combination with targeted incentives at the local scale.

A third recommendation is to consider more alternatives to tax credits as mechanisms for incentivizing and rewarding brownfields redevelopment. One of the findings of this dissertation is that the choice of a refundable tax credit to deliver the financial incentives for this program was one that emerged from a lack of integration in

the policy formation process. In other words, affordable housing advocates and environmentalists did not engage in the process of deciding upon this specific solution. For a variety of reasons, none of which were integral to the policy designs, it was left up to specialists within the Senate office.

While this had clear implications for the outcomes of the policy in terms of who benefited more from its implementation, there is not a clear alternative that would have been more effective. Some believe that a grant would be too difficult to administer and more costly and subject to bias. But the tax professionals that are required to take advantage of these credits also cost money. Some may argue that using tax credits does not actually require fewer resources but shifts the burden of the resources out of the department onto DOTF and onto the taxpayers themselves.

### **Limitations of the Study**

This study has several limitations. Some are related to particular aspects of the methodology that were noted in the description of the research design for each chapter. There are two more general issues that I will raise now. One is the ability of this study to provide quantitative policy design suggestions for New York or for other states. In this sense, the study is limited. The analysis presented in Chapter 4 is not appropriate for statistical generalization, and thus does not allow conclusions to be drawn about the geography of other similar types of policy based on the information about BCP site tracts and counties presented here. The use of a single case study eliminates the option to use

comparisons of different jurisdictions to build understandings of causal relationships between the policy design and outcomes.

For the purposes of this study, a single case was chosen nonetheless for two reasons. The primary reason is because it allowed for a more exploratory case study approach that was more conducive to the theory-building aspect of the research design. The second is that the case was of intrinsic research interest because of the significance of the BCP to the area of New York State brownfields redevelopment, and the amount of resources that have been dedicated to the program. The limited nature of the data available has been an obstacle to rigorous assessment of its outcomes by the agencies and organizations that typically undertake this type of research. The types of general conclusions that can be offered about the distribution of the program do not yield sufficiently strong or clear policy implications for the Office of the Comptroller to dedicate the necessary resources to conduct further studies.

Yet, when various interest groups have attempted to report on the programs outcomes, the assumptions made and conclusions drawn display problematic qualities of both bias and inaccuracy. These data limitations also impacted the range of options available here; however, the study still demonstrated that some of the doubts about the program that are prevalent in the policy discourse are not borne out by the facts. For instance, while it is true that the sites that have been covered in the media have received large subsidies and have been disproportionately located downstate, the geography of program participation overall shows that the current program attracts sites to other areas of the state in a more even, if not equitable, way. So, while some of the limitations of the research appear relatively straightforward, they are actually consequences of the policy

design and must be considered thus. The same individuals who might want a tax credit as financial incentive then demand that we measure return on investment on those tax credits. Even if those numbers are not empirically verifiable, they attain the authority of empiricism by virtue of appearance. This cannot be considered to be a question of research separate from the policy design.

### **Future Research**

There are two directions in which I plan to extend this research in the future. The first has to do with the scope and design of the research; the second has to do with expanding the interdisciplinary framework that is used to inform it.

### ***Comparative Case Study and Incorporation of New Data***

While New York State's voluntary cleanup program is certainly one of the most costly per site, there are many other programs of this type operating throughout the U.S. It is challenging to assess these programs because of the unavailability of data and because they are so diverse in their purposes, goals, and incentives. However, the New York State case shows that there is a high demand for information about whether and how these programs succeed and that policy missteps in this area can be costly. A larger scale comparison of the formation, purposes, design, and outcomes of voluntary cleanup programs is needed. Many of these programs have now been in place long enough that greater assessment is possible. The availability of the 2010 Census data provides greater possibilities not just for comparing variables of interest before and after these programs emerged, but for comparing rates of change for two different periods of time.

More investigation about the nature of different types of financial incentives for planning and policy is also needed. Generally, the form and structure of financial incentives must be more explicitly linked to program outcomes, whether those are the generation of local and regional economic activity, or the engagement of previously excluded segments of the population in determining a vision for future growth. The En-Zone relies on unemployment, and the new Priority Economic Development criteria for tangible property tax credits eligibility is based on capital investment producing job creation within the state, but not necessarily at these sites. Building real estate projects cannot be a long-term job creator without more awareness of what is actually happening on those sites. If a developer is not also a user of the site, tax credit value may not be passed along to site users, except to the extent that they enable the creation of the space. Brownfields redevelopment financial incentives should be examined to build upon the growing literature on the problematic uncertainty of returns produced by TIFs and other types of commonly used planning subsidies.

### ***Additional Geovisualization for Analysis and Communicating Results***

One important avenue for future research involves the robust use of geovisualization as a method of analysis and as a strategy for communicating results. While this was not built into my original research design, I made some preliminary efforts. I have included one in Appendix D to illustrate the value that such an approach will provide.

In the appendix map of participating BCP site locations, a pattern is visible in the data that was not captured in tables: it appears that the BCP sites follow main New York

waterways. This is not necessarily surprising, given the historic location of industrial sites in locations with good access to transportation. However, even if the question of waterway proximity had been raised, it would have been more labor intensive to accurately assess this proximity without the use of a geographic information management system *and* cartographic visualization together.

Moreover, in addition to analysis, this map also offers compelling evidence to make the case for policy relevant avenues of inquiry, such as how well the BCP is designed to work in waterfront areas. This is especially important in the context of ever increasing concerns about climate change and resiliency in the urban environment. Changing understandings of flood-planes and exposure pathways have direct import for assessing the public health adequacy of voluntary cleanup programs such as the BCP. Geovisualization is an important method of analysis and research communication for pursuing this and other important directions for future research.

### **Concluding Remarks**

This work presents an opportunity and responsibility and responsibility for those in the planning field, both as practitioners and as scholars. The combined difficulties of planning for very different goals and very different places all within one policy are large, and planners are necessary because of their understanding of diverse policy and geographies. As has been frequently noted, planners are in an important position to bring knowledge together and to talk across expertise. Normative perspectives on policy integration demonstrate that it is necessary for achieving visions of sustainability that are more than just rhetoric. With an eye on multiple systems at work in the urban space, and



an understanding of their interconnectedness, urban planners are in a particularly good place to advance this goal.

I will discuss three important implications for academics concerned with planning that go beyond suggestions for future research. The first has to do with the role of academic planners as teachers. As policy processes continue to become less silo-ed, so too must academic planners, not only in their research, but in their overall approach to the field. Curricula should continue to increase emphasis on connections between disciplines and subfields. Programs should offer skill-based courses related to statistics, design, and GIS, in iterations that build literacy for those whose only formal training is an introductory level class, as well as versions that are appropriate for those who would specialize in those areas. If only specialists are literate in these methods, the balance of power will be concentrated with specialists, even within and between professionalized fields.

Academics must also become more adept at collaborating, not just outside the planning but also outside of social science. Further research on these topics requires an interdisciplinary and multidisciplinary approach that uses natural science and legal scholarship perspectives to address important policy questions.

Finally, planning scholars must strike a balance between creating knowledge that can inform improved engagement under existing systems and providing direction for how to change systems to allow more equitable engagement of stakeholders. There is an important role for research that documents the existing policy landscape and thus provides direction for how to navigate it, but there is also a responsibility to engage in debates about how the landscape can and should be reshaped.

## Appendix A: Semi Structured Interview Schedule

Interview Questions (for semi-structured interview format):

- 1) When did you first become involved with New York's Brownfields Cleanup Program?
  - a) Prompt (if they don't specify): And what was your role in the program?
- 2) The BCP is a unique program in that it is meant to address economic development, environmental cleanup, and community development issues simultaneously. In your experience with the program, how and how well does it balance those issues?
  - a) Prompts (if they don't mention one of the three target issues):
    - i) And how does the [economic development/environmental/community development] issue factor into how the program [operates and/or was designed]?
    - ii) How does the way that the program balances these environmental, economic and community concerns reflect the different agendas of the stakeholders that were involved in the creation of the original 2003 program?
- 3) In your experience, how is the BCP's impact different depending on where a site is located in the state?
  - a) Prompts:
    - i) What are some of the significant differences that you see in the types of [cleanups/previous uses/end uses] happening in different places?
    - ii) Why do you think different areas of the state have utilized the program differently?
  - b) Prompt on: Presence of brownfields, characteristics of individual regional DEC offices/level of government technical assistance, real estate market issues.
- 4) Why do you think that the legislation surrounding the BCP developed to have such a broad set of inclusion criteria for the program? How do you think that broad inclusivity has affected the outcomes of the program?
  - a) Prompts:
    - i) What do you think were the most important political forces at work?
    - ii) Do you think that the court decisions [that limited the DEC's ability to exclude sites based on low levels of contamination or on the economic viability of a site] were consistent with the intent of the original policy makers?
      - (1) Prompt: Did the court's decisions uphold or favor certain stakeholder policy agendas that were present in the initial formation of the legislation?
- 5) What do you think the most important impacts of the 2008 reforms were in changing how the program addressed brownfield sites?
  - a) Prompts re: tax credits:
    - i) How important do you think that the changes regarding the amount of the tax credits were?
    - ii) What about the changes to the structure of the tax credits?
      - (1) Different caps for Industrial/manufacturing projects.

- (2) Inclusion of incentive to develop in accordance with a Brownfields Opportunity Area plan.
- (3) Linkage of total tax credit availability to cleanup costs.
- iii) How do you think the tax credit reforms will affect who participates in the programs?
- iv) What effect do you think the tax credit reforms might have on the nature or outcomes of the redevelopment projects themselves?
- b) Prompts regarding entry criteria:
  - i) What do you think that the continued use of an extremely open/inclusive participation criteria means for the overall impacts of the program?
  - c) Prompt: What do you see as the specific implications for the [environmental/economic/community development] impacts of the program?
- 6) What changes would you make to the program to make it more effective?
- 7) Who else do you think it would be helpful for me to talk to about the BCP [specifically, the relationship between the different goals of the program and the politics of the program's development]?

## Appendix B: Members of the Governor's Superfund Working Group

The Working Group consisted of seventeen members including State environmental, public health and economic experts; municipal interests; financial experts; environmentalists and business representatives. Working Group members possessed a broad range of expertise and diverse points of view. The Working Group met regularly to develop this report.

### Members appointed to the Working Group:

- John P. Cahill, Commissioner, State Department of Environmental Conservation (Chairman of the Working Group)
- H. Carl McCall, State Comptroller
- Eliot Spitzer, State Attorney General
- John H. Adams, President, Natural Resources Defense Council
- Paul J. Elston, Chair, New York League of Conservation Voters
- James Tripp, General Counsel, Environmental Defense Fund
- Mark Alesse, State Director, National Federation of Independent Businesses
- Francis B. McKenna, Managing Director, Merrill Lynch
- Dennis Whalen, Executive Deputy Commissioner, State Department of Health
- Charles Gargano, Chairman, Empire State Development Corporation
- David Bradley, Acting Director, Governor's Office of Regulatory Reform
- Robert Fischer, Member, New York State Superfund Management Board
- Kenneth Pokalsky, Director of Environmental and Regulatory Programs, The Business Council of New York State, Inc.
- Diana Hinchcliff, Executive Director, Alliance of Chemical Industries of New York State
- Robert R. Gregory, Executive Director, New York State Association of Counties
- Rhea Jezer, Chair, Sierra Club - Atlantic Chapter
- Jody Kass, New York City Partnership and Chamber of Commerce, Inc.

## Appendix C: Site Contact List

**1. Site Contact List.** The Requestor must prepare and submit with its BCP Application a site contact list consisting of, at a minimum:

- the chief executive officer and planning board chairperson of each county, city, town and village in which the site is located;

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### Brownfield Cleanup Program Citizen Participation Requirements

3-5

- residents, owners, and occupants of the site and properties adjacent to the site;
- the public water supplier which serves the area in which the site is located;
- any person who has requested to be placed on the site contact list;
- the administrator of any school or day care facility located on or near the site for the purposes of posting and/or dissemination at the facility; and
- the document repository selected for the brownfield project.

DER reviews the site contact list as part of the process of determining if the Application is complete. The site contact list facilitates the mailing of notices and fact sheets about the brownfield site throughout the investigation and remediation process. The site contact list becomes part of the site's CP Plan which must be developed within 20 days of the effective date of the Brownfield Cleanup Agreement. See discussion at **3.4.1. Citizen Participation Plan**.

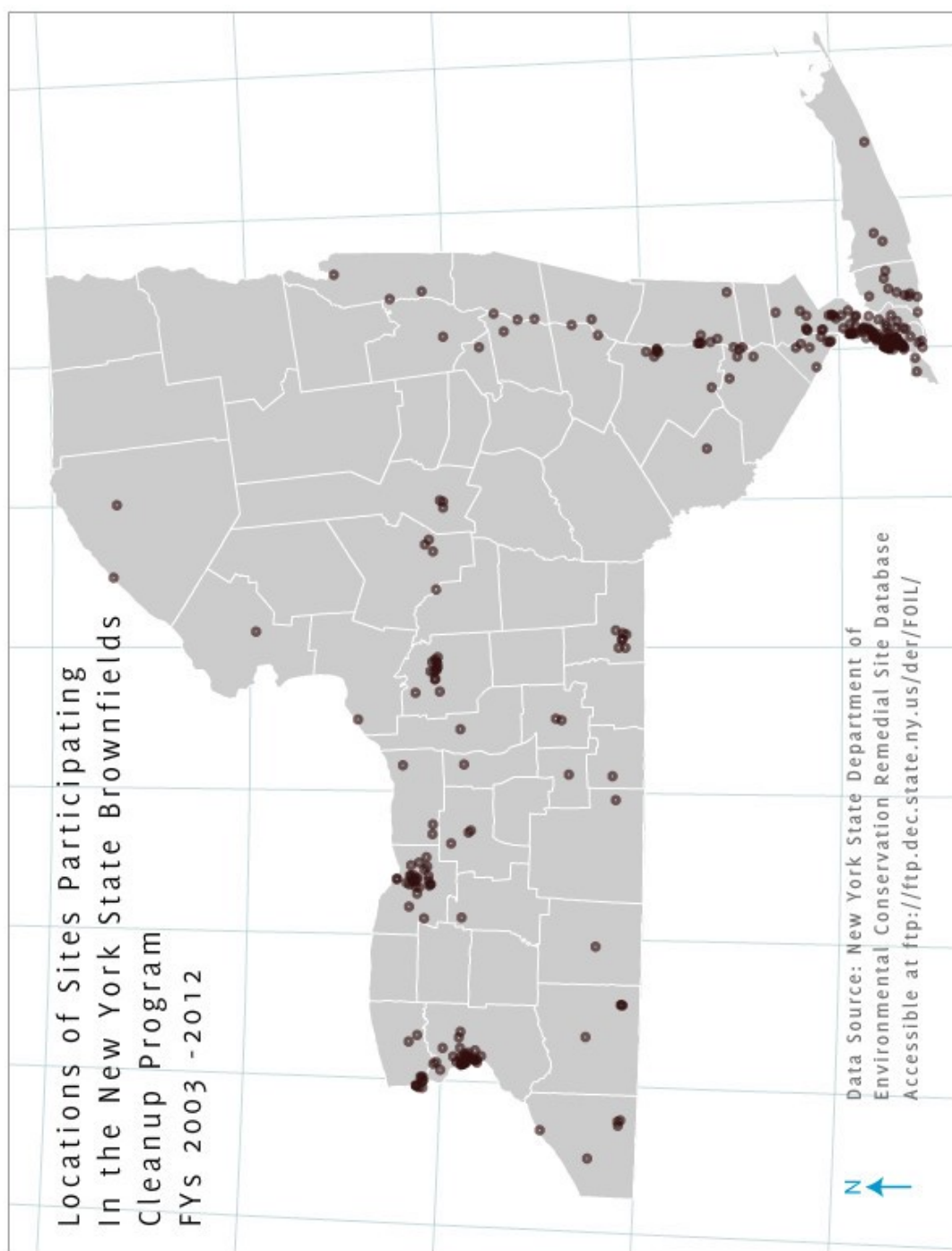
Distribution to the contact list should be evaluated periodically to help ensure that additional individuals, groups, and organizations are included. These stakeholders would include those who are affected or potentially affected by the site, who have expressed an interest in the investigation, remediation, or redevelopment of the site, who have attended a public meeting, and others as appropriate.

**Email addresses:** Email addresses should be solicited when developing a site contact list. Fact sheets, project updates and public meeting announcements about the investigation and remediation of sites can be distributed to the public by email.

DER maintains the confidentiality of the names and addresses of homeowners and residents included in site contact lists. In addition, email addresses included in site contact lists will not be shared or traded. DER excludes this information from CP Plans placed in document repositories and otherwise made available to the public. View resources on the DER web site about developing and updating a site contact list.

## Appendix D: Map of Sites Participating in the New York State Brownfields Cleanup Program

Fiscal Years 2003-2012



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