More than one river: local, place-based knowledge and the political ecology of restoration and remediation along the lower Neponset River, Massachusetts

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MORE THAN ONE RIVER: LOCAL, PLACE-BASED KNOWLEDGE AND THE POLITICAL ECOLOGY OF RESTORATION AND REMEDIATION ALONG THE LOWER NEPONSET RIVER, MASSACHUSETTS

A Dissertation Presented

by

SIMONA LEE PERRY

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Wildlife and Fisheries Conservation
MORE THAN ONE RIVER: LOCAL, PLACE-BASED KNOWLEDGE AND THE POLITICAL ECOLOGY OF RESTORATION AND REMEDIATION ALONG THE LOWER NEPONSET RIVER, MASSACHUSETTS

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SIMONA LEE PERRY

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DEDICATION

To dad and mom who have never given up on me or my dreams,

and

The residents of Port Norfolk, Cedar Grove, Lower Mills, Mattapan, Hyde Park, and Readville who showed me where to find Boston’s hidden river, and the many ways of knowing her.

“Never doubt that a small group of thoughtful committed citizens can change the world. Indeed it’s the only thing that ever has.”
-Margaret Mead

“Happily he looked into the flowing river. Never had a river attracted him as much as this one. Never had he found the voice and appearance of flowing water so beautiful. It seemed to him as if the river had something special to tell him, something which he did not know, something which still awaited him.”
-Herman Hess
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I’d also like to thank everyone who helped me with the logistics of doing field work in a major metropolitan area where rent is not cheap and getting around can be treacherous if not downright life-threatening, especially Paula Cantor and Magic for giving me the space I needed when I needed it and the comfort and friendship I needed most of all, and to Libby Hopkins for connecting me up with a temporary living situation in Boston in a pinch. And, to the Sarah Pautzke-Christopher Hawkins-Utu-Mikhala household, Margo Shea, Kristin McClendon, Martha Mather, and Linda Deegan and Chris Neill who gratiously offered me accommodations when I was out in Western Massachusetts.

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To all the teachers and intellectual guides who have assisted me in large and small ways over the past five years. Of these guides, I would especially like to thank Jack Finn for providing encouragement and advice about the usefulness of my research to ecological and natural resource management applications, and Julie Graham and my fellow students in her “Rethinking Economy” seminar, for
introducing me to feminist modes of inquiry and encouraging me to rethink my own research project and providing me with courage to push beyond disciplinary bounds. And, to each of my committee members – Martha E. Mather, for hours of conversations over coffee and dinner, Krista M. Harper, for inspirational and helpful readings and so much more, Charles M. Schweik, for his technical acumen and never forgetting to ask the really tough questions, Rodney R. Zwick, for making me feel like a colleague and showing me new ways of thinking – who all contributed something very unique and different to this project, and whose critical questioning of my ideas and methodology greatly improved this project and its usefulness. And, last but certainly not least, to my chair, Robert M. Muth, whose willingness to take a chance on me and support my unconventional ideas (within limits, of course!) helped me see this project to completion.
ABSTRACT

MORE THAN ONE RIVER: LOCAL, PLACE-BASED KNOWLEDGE AND THE POLITICAL ECOLOGY OF RESTORATION AND REMEDIATION ALONG THE LOWER NEPONSET RIVER, MASSACHUSETTS

SEPTEMBER 2009

SIMONA LEE PERRY, B.S., UNIVERSITY OF MASSACHUSETTS AMHERST

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Ph.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Robert M. Muth

This research is an exploration of the local, place-based knowledge surrounding a degraded urban river, the Lower Neponset River and Estuary in southern Boston Harbor, Massachusetts, and its environmental restoration. Through a mixed-methods approach to sociological inquiry that included 18-months of ethnographic interviews and participant observations, Geographic Information System (GIS) mapping, archival document research, and critical environmental history, it explores the different ways local citizens interpret the river as a place of historical importance, personal nostalgia, social and family networks, neighborhood legacies, aesthetics, economic security, danger, psychological refuge, ecology, and political power. Using an interpretive analysis of the narrative, visual, and spatial data related to those meanings, it then explores how such different local, place-based interpretations can be used to inform the theory, practice and politics of urban river restoration. The research shows that recognition of the socio-cultural diversity in local citizen interpretations of the Lower Neponset River’s restoration is important for environmental managers, planners, and local decision-makers to recognize alongside ecological and economic development “best-practices” (e.g., holistic watershed management, anadromous fish re-introduction, flow and function, ecosystem services, affordable housing quotas, “Smart” growth, etc.). The research recommends that environmental managers, planners, and local politicians and decision-makers give equal consideration to the socio-cultural, political, economic, and ecological factors surrounding urban rivers, and the diversity of meanings that their “restoration” conjures, in order to make strides towards ethical environmental restoration and management practices that are socially, as well as environmentally, sustainable.
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CHAPTER I

INTRODUCTION TO THE RESEARCH PROBLEM

Contemporary environmental conflicts can be viewed as complex and continuous struggles over rival interpretations of the environment. Therefore, understanding how people interpret and attribute meaning to environmental concepts and places, how those interpretations differ, and how varying interpretations interact with dynamic environmental and socio-political systems, are all important steps in diagnosing and mitigating conflicts over natural resources. As previous studies in sociology, anthropology, political science, economics, and psychology of the environment have demonstrated, different and conflicting beliefs, values, and attitudes often exist regarding a single environmental concept or place. Along with his or her respective knowledge and cultural norms, an individual person’s beliefs, values, and attitudes coalesce as an interpretation of a particular concept or place that may or may not correspond with another person’s interpretation. Understanding these interpretations can be critical because they often manifest themselves in political action and advocacy for specific policy preferences. Thus, failure to account for these interpretive differences throughout policy and management processes is one of the primary causes of intractable conflicts and subsequent failure of environmental policies and management actions (Himes 2003; Peterson et al. 2002; Peuhkuri 2002; Norton and Steinemann 2001; Harrison and Burgess 2000; McGinnis et al. 1999; Griggs 1996; Burgess et al. 1988).

In the last 50 years there have been increasing legal, political, and economic incentives for re-development and restoration of degraded lands and waters in urban areas across the United States. As a result, federal, state, and local policies to reverse or mitigate ecological degradation have become central features to regional and national urban sustainability planning processes. Many times such planning involves some type of measure to restore the structure or function of ecosystems, including considerable attention to restoration of watersheds and the services that fresh water ecosystems provide. However, ecological restoration is a multi-faceted concept among scientists, managers and the general public, and this often makes it difficult to reach consensus about how a specific ecological restoration project should be done. If we are to move forward in sustainable urban planning that involves the restoration of natural ecosystems, it is incumbent upon scientists, managers, policymakers and advocacy organizations to
understand the diversity of ways that restoration is interpreted by different individuals and communities. The central question posed by this research attempts to explore this problem by asking: What are the various local, everyday interpretations of an urban river and its restoration, and how can the interactions between these local interpretations be used to inform the theory and practice of urban river restoration?

Urban watersheds and rivers serve as ideal study sites for evaluating the socio-cultural and political dynamics of ecological restoration and the conflicts that can emerge over different interpretations of an environmental concept or place. The social construction of nature is the process by which people develop and project these different interpretations onto an otherwise value-neutral “environment.” People’s speech and actions often convey these interpretations in public and private social settings, and, when that speech and action conflict with those of other people or groups the result can be a roadblock to constructive action. For example, conflicts over river restoration can be seen as conflicts between different interpretations of a river. Thus, when diagnosing an environmental conflict over a concept such as river restoration, it is also important to understand how people come together in “communities of interpretation” and organize themselves around shared sentiments, experiences, attitudes, and values that construct and impute different interpretations to “one river,” thus effectively creating “more than one river.” Both the understanding of different interpretations of the environment and the formation of “communities of interpretation” are social phenomena that fall under the purview of the social sciences, and it is hoped that the application of social science concepts and methods to the study of individual restoration case studies of urban rivers can help identify principles, themes, barriers, solutions, and strategies that will facilitate sustainable natural resource planning, including ecological restoration projects.

More than One River: Restoration of the Lower Neponset River

The interrelationship between humans and rivers is important on both cultural and bio-physical grounds. Rivers have key biological, chemical, and geological roles within marine, freshwater, and terrestrial ecosystems (Naiman and Bilby 1998). Rivers are also important social, political, and economic focal points and connectors, and have been since the beginning of recorded human history (Postel and Richter 2003). Early complex agricultural societies placed their centers of power along waterways (Butzer 1976). Rivers across the globe have served for thousands of years as political boundaries, transportation
routes, energy sources, food providers, drinking water sources, waste conduits, spiritual inspiration, physical healers, and recreational places. As centers of economic and political power, geopolitical boundary markers and sources of key ecosystem resources and services, rivers are ecological spaces laden with cultural and political meaning. This long, intimate relationship between human history and rivers has been a boon for the human agenda in agriculture, energy, industry and technology, the arts and sciences, and commerce and trade.

However, the consequences for most river ecosystems have been grave, from severe contamination to partial or complete modifications of form and function. To better understand the role human society and its political and economic systems have played in degrading rivers in urban, densely populated settings and in order to reach forward towards more inclusive, equitable and ecologically sustainable plans for managing and perhaps restoring urban rivers (Postel and Richter 2003), this research explores the political ecology of one urban river’s degradation and potential for restoration – the Lower Neponset River in metropolitan Boston, Massachusetts.

The Neponset River is 30 miles long, beginning in the town of Foxboro, Massachusetts and flowing through 14 cities and towns and into Dorchester Bay and Boston Harbor. It is a sub-watershed of the Boston Harbor watershed and drains approximately 130 square miles, in which an estimated 300,000 people live (Appendix A.1.). Along the approximately nine linear miles of the Lower Neponset River, as it courses through the city of Boston and the towns of Quincy, Milton and Dedham – from upriver at Paul’s Bridge and Fowl Meadow in the Boston neighborhood of Readville and the Town of Milton, downriver to Neponset Circle and the Neponset Salt Marsh Estuary in Boston’s Port Norfolk and Squantum Point in the Town of Quincy (Appendix A.2.) – I undertook an 18-month exploration to identify, describe, and analyze the different interpretations of a river and its restoration as told to me by local citizens.

The Neponset River was selected for this study because of its complex history of human habitation, including industrial development and local citizen activism similar to other coastal rivers in New England (Black 2004; Neponset River Watershed Association and Executive Office of Environmental Affairs 1997). The Neponset served as an important site of economic trade between Europeans and Native Americans throughout the 17th and 18th centuries. From the early 19th to the mid-20th century, it was an important site of industrial production by private and government-owned factories that manufactured
commodities such as leather goods, chocolate confections, gunpowder, naval vessels, electronic parts, cameras, toys, and paper. Current obstacles to the sustainable environmental management of the Neponset, such as declines in water quality and quantity, biodiversity and native species loss, PCB and heavy metal contamination, as well as increased urbanization and re-development of post-industrial sites, represent many of the same issues facing rivers throughout Massachusetts and the United States. In the late 20th century to the present day, the Neponset River’s post-industrial landscape of abandoned factories and dams, railyards, military installations, and contaminated lands have become sites for remediation, reclamation, and redevelopment by residential and commercial developers as well as privately financed and government financed open space and park advocates.

Centuries of damming and channeling, riparian development, and pollution from both point and non-point sources, have led to a river ecosystem that is devoid of much of its native fish species, notably anadromous American shad and herring (alewives), has been invaded by non-native plant species, and is contaminated with human sewage, polychlorinated biphenyls (PCBs), lead, arsenic, and various other industrial pollutants. In addition, the long history of activism by local citizens and non-governmental organizations over the Lower Neponset River’s protection, management, and clean-up make this an ideal study site to begin exploring the political ecology of urban river restoration in the United States (Michaels 1999; Cohen 1993; Boston Daily Globe 1887c).

Despite the efforts by local citizens and environmental organizations to clean up and ecologically restore the Neponset River, it has proved difficult for a variety of reasons. One is the different local meanings of the river, which is the subject of this research. Another, highly interrelated reason has to do with the demographic and socioeconomic cleavages that characterize residents of the watershed based on where they live along the river. For example, traveling east along the northern edge of the Neponset River from Mattapan Square, US Census Bureau data from 2000 show a population composed of 98.89%, 95.54% and 76.94% non-whites for three census blocks abutting the river (US Census Bureau 2000). In 2003, the estimated median household income in this area of Mattapan was $36,073, and in 1999, 22.3% of the population had incomes below the poverty level, while 67.5% of households were of low to moderate income (City of Boston 2006). The population density of Mattapan in 2000 was approximately 13,338 persons per square mile (City of Boston 2006), compared to the entire area of Boston’s estimated 12,606
persons per square mile (US Census Bureau 2000). In contrast, directly across the water from this part of Mattapan, along the southern edge of the river in Milton, the population density in 2000 was approximately 1,999 persons per square mile, with a racial composition of 12.9% non-whites (US Census Bureau 2000). In 1999, Milton residents reported a median household income of $78,985 (US Census Bureau 2000; EOHED 2009).

This research illuminates the role of local citizens in tuning out, engaging in, fighting for, and shaping public policies related to the restoration of the Lower Neponset River. The central focus of this project was to document the different interpretations that local, non-expert citizens (as opposed to restoration professionals and technical-scientific experts) convey through their speech, action, and social relations with regards to the Lower Neponset River and its restoration. Through a narrative and place-based, geographic analysis of these different local interpretations, a collage of the languages and cartographies of the river has been created which can be used to understand and visualize the confluence of interpretations around one urban river and its restoration. This collage of local interpretations looking at place-based conflicts and areas of agreement can be used as a blueprint for understanding local, non-technical environmental knowledge and integrating local citizens more fully into the planning, implementation, and monitoring stages of restoration projects, while also anticipating, identifying, and mediating conflicts when they arise. Different interpretations of the same river may lead to different interpretations of that river’s problems, and, therefore, to different solutions. This research explores the different interpretations of one urban river, the Lower Neponset River, and how those interpretations have influenced, and continue to influence, Neponset River management and restoration.

In 1998, 111 years after the last alewife was recorded in the Neponset River, the Massachusetts’s Executive Office of Environmental Affairs (EOEA) formed a Neponset Fish Passage and Habitat Restoration Task Force to look at restoring two species of anadromous fish, American shad and alewives, to the Neponset River. The EOA’s Department of Fisheries, Wildlife and Environmental Law Enforcement’s (DFWELE) River Restore program, now called Massachusetts Riverways, was responsible for implementing Task Force recommendations and developing a restoration plan. A year later, the US Army Corps of Engineers completed a preliminary Lower Neponset River restoration plan for DFWELE/Massachusetts Riverways. Over the next several years, and with the technical assistance of the
US Army Corps of Engineers and two professional environmental restoration consulting firms, The Bioengineering Group, and Milone and MacBroom, Inc, DFWELE/Massachusetts Riverways convened several advisory committee meetings with twenty-six public and private organizations, as well as community stakeholder meetings, in which various river restoration scenarios were presented. All of the restoration scenarios presented by Massachusetts Riverways, the US Army Corps of Engineers and the consultants involved the removal or partial removal of the Walter Baker dam and its associated mill pond as well as the Tilestone and Hollingsworth dam. Restoration plans were developed primarily by scientists, engineers, and professional planners. Local citizens were not surveyed to find out what “restoration” meant to them before the Task Force and Massachusetts Riverways decided that dam removal and fish reintroduction were what was needed to restore the Neponset River.

Opposition to this plan was first manifested by people who had worked to preserve the industrial and built history of the Neponset River’s mills for the past 30 years, including lobbying for the creation of a Lower Mills Heritage State Park modeled after a similar heritage park in Lowell, Massachusetts. To these historic preservation advocates, this plan represented “destruction,” not “restoration,” and it was the Walter Baker dam and mill pond, not the Neponset River that happened to run through them, that should be the focus of protection, preservation, and restoration. The advocates of preserving the historic Walter Baker mill complex could not see the value in restoring the river for a fish species like the alewife that had not been seen in the river for over 100 years, particularly if it involved the destruction of historic structures that serve as important historic artifacts of New England’s, and the United States’ industrial legacy.

To further complicate Massachusetts Riverways’ plans for restoration, in addition to historic restoration and preservation, other local interpretations of the Neponset River existed, including those associated with outdoor recreation and economic development. These various interpretations complemented and conflicted with each other, and with the technical experts’ interpretation that restoration of the Neponset River necessarily meant removing the dams and reintroducing anadromous fish. According to conversations I had with local citizens, as well as with non-governmental and governmental staff, who participated in this study, and based on my own observations at public meetings\(^1\), these differences, and the lack of appreciation by the scientists, engineers, and planners for the variety of

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interpretations regarding the river and its restoration, and the intensity with which these interpretations were held, may have contributed to a lack of trust in and support for Riverways planning processes by otherwise interested local citizens.

In 2002, the Massachusetts Riverways’ plans for restoring the Lower Neponset River were further complicated by the discovery of elevated levels of PCBs in the river’s sediments, water column, and in the flesh of a common fish found in the river, the white sucker (Breault et al. 2004a). Previously, in 1994, elevated levels of PCBs were detected in another fish species found in the Neponset, the Brown bullhead, and this prompted a fish consumption advisory by the Massachusetts Department of Public Health (MA Department of Public Health 2007).

After the discovery of the elevated PCB levels in 2002, restoration professionals at Riverways and the US Army Corps of Engineers partially shifted their efforts away from dam removal to monitoring the level of PCB contamination in the river and estuary, finding the source of this contamination, and deciding what course of action to take to remove the contamination (Breault et al. 2004a; Breault et al. 2004b; Breault and Cooke 2006). However, no signs were posted along the river to warn local residents about the potential health dangers posed by consuming fish caught in the Neponset or by swimming in the river, and it wasn’t until 2005, almost three years after the discovery of PCBs in the river, that public meetings were organized by Massachusetts Riverways, the Department of Environmental Protection, the Department of Conservation and Recreation, and the Neponset River Watershed Association to inform local citizens about the dangers of fishing and swimming in the Lower Neponset River and estuary. No public fish consumption advisory for white suckers caught in the river was published until 2007, four years after the PCB discovery (MA Department of Public Health 2007). Such a delay in disseminating public information to the users of the river has only exacerbated previous conflicts and further eroded trust in the plans of restoration professionals for restoring the Lower Neponset River.

The result was policy gridlock. Instead of being a “State model” for how ecological restoration of an urban river should be done (Michaels 1999), a failure to recognize and understand the different interpretations and relationships local citizens have with the Neponset has alienated local citizens, compounded existing conflicts, and hindered local participation in the State’s continuing efforts to manage and restore the Neponset River.
Environmental conflicts are a product of and perpetuated by citizen (not just scientist and practitioner) negotiations over the framing and meaning of environmental problems. Consequently, non-technical, local interpretations of environmental problems, concepts and places are all essential to mitigating and preventing conflicts and finding ecologically and socially viable solutions (Fischer 2003). To anticipate environmental conflicts, to plan and manage debates over ecological restoration, and to resolve these issues most effectively, river restoration professionals need to understand what degradation and restoration of an urban river means outside of the scientific and technical rationality of expert “toolboxes” and management “best practices” (Adams and Balfour 2005). Developing a greater understanding of the root causes of why conflicts happen and persist may lead to new ways of communicating with and involving local citizens who possess valuable knowledge about how they and their neighbors interact with a river, or other ecosystem, in their everyday lives (Geertz 1999; Escobar 1999; de Certeau 1998).

In addition to a scientific and technical understanding of the natural environment, when designing and implementing urban river restoration projects, it is important to acknowledge the equally important roles played by history, language, culture, psychology, and the “sense of place” associated with the local bio-physical environment in how people interpret the natural world (Escobar 1999; Hajer 1995; Wilson 1999). As the example of historic preservation versus anadromous fish restoration in the Neponset River illustrates, failure by restoration experts to fully recognize different local, and sometimes conflicting, interpretations of river restoration, may not only discourage effective public participation and consensus building, it may also increase or exaggerate environmental conflicts.

The central question to be explored in this research project is: To what extent do various local, everyday interpretations of the Lower Neponset River and its restoration exist, and can these interpretations be apprehended? A corollary question is: How can an understanding of the similarities, differences, and interactions between these interpretations be used to inform the theory and practice of urban river restoration? By using a set of qualitative methodologies including ethnographic interviews and participant
observations, I consolidated local interpretations of the Neponset River and its restoration as told to me by local citizens into “storylines.” These “storylines” were analytically grouped into “interpretive environmental communities” of citizens who share, disseminate and modify each storyline depending on the social or political setting they find themselves in. These local “storylines” are separate from, and often in opposition to, the bureaucratic, scientific, and technical scripts of river restoration used by various experts and government and non-government organizations. Among the different local, non-expert storylines captured during two and a half years of interviews and observations, six were shared among different participants in this study. These six storylines were considered to comprise separate, but not always mutually exclusive, “interpretive environmental communities” with distinct interpretations of the Lower Neponset River and its restoration. I have labeled these six interpretive environmental communities: Esplanade Visions, History Uncompromised, “Smart” Development, Personal Connections, Putting Up a Fight, and Wildland Dreams.
CHAPTER II

EXPLORING THE POLITICAL ECOLOGY OF URBAN RIVER RESTORATION: STORYLINES AND INTERPRETIVE ENVIRONMENTAL COMMUNITIES

The Practice of Ecological Restoration

Ecological restoration of degraded and polluted rivers is an area of environmental policy and natural resource management where broad public consensus has not been reached. Even within the scientific discipline of restoration ecology, there is continuing debate over how river “restoration” should be defined and interpreted. For example, is it returning a river system to a pristine state before all human impact, or is it returning river systems to a function or form that recognizes the continuing presence of humans and their impacts?

Ecological restoration has been defined in practice by numerous restoration ecologists, engineers, natural scientists, and environmental managers in purely bio-physical terms (Stanford et al. 1996; Higgs 1997; Poff et al. 1997; Naiman and Bilby 1998; Frissell and Ralph 1998; Middleton 1999; Alcoze et al. 2000; Palmer et al. 2005; Wohl et al. 2005). Specifically, for river and watershed restorations, Frissell and Ralph (1998) define restoration as “the process of returning the river or watershed to a condition that relaxes human constraints on the development of natural patterns of diversity.”

“Natural patterns of diversity” refers not only to the diversity of biological organisms but also the diversity of geological and hydrological processes that maintain a watershed’s functions. Such processes may include flood pulsing (Junk et al. 1989; Naiman and Bilby 1998), sediment transport (Benda et al. 2002), and the cycling of organic matter and nutrient uptake and release (Newbold et al. 1983; Elwood et al. 1983; Naiman and Bilby 1998; Deegan and Garritt 1997). Frissell and Ralph’s definition emphasizes that restoration does not create a single, stable state (i.e., pristine) but rather enables the watershed to return to its natural disturbance regime and exhibit its full range of biological and physical characteristics (Alcoze et al. 2000). This dynamic, co-evolutionary view of a watershed as both biological and physical system also takes into account the temporal and spatial dimensions that may constrain restoration efforts within human-designated and monitored time frames and spatial scales.

The US National Research Council (1992, p.18) names three distinct processes that natural resource restorations require: “reconstruction of antecedent physical, hydrologic and morphologic
conditions; chemical cleanup or adjustment of the environment; and biological manipulation, including re-
vegetation and the reintroduction of absent or currently nonviable native species.” However, on more
conceptual grounds, restoration ecologists and others have argued that to guard against becoming blinded
by techno-fixes and an increasing tendency for contemporary society to “virtualize” nature (Higgs 1997;
Alcoze et al. 2000), there must be a recognition of the role human society and its values and beliefs toward
nature have had in determining the fate of many ecosystems.

Cairns (1995) proposed a type of “ecosocietal restoration” that encourages restoration practitioners
to reexamine the human relationship with ecological systems in order to account for societal values and
behaviors. From this eco-social perspective, Cairns defines the practice of restoration ecology as: “the full
or partial placement of structural or functional characteristics that have been extinguished or diminished
and the substitution of alternative qualities or characteristics than the ones originally present with the
proviso they have more social, economic or ecological value than existed in the disturbed or displaced site”
(Cairns 1988).

As Higgs (1997) observes, wrestling with this connection between restoration as scientific and
engineering practice and the values that human society places on the natural world characterizes both the
reasons for and the various obstacles to ecological restoration. This struggle to balance technical practice
with societal value has defined the on-going debates over how restoration should best be conceptualized
and practiced.

**Philosophical and Ethical Conceptualizations of Ecological Restoration**

restoration and its practice “lets us off the hook” for the damage that humans cause to ecosystems, and lures
us into the belief that we can always undo anthropogenic harm to the environment. Katz attributes this to
the human urge for “omnipotence in the manipulation and management of nature” (Katz 2002, p.142).
Both philosophers view restoration ecology as a type of fetishism for recreating what has been lost, and
they do not believe that it is ever possible to truly duplicate the value nature holds once it is lost. To Elliot
(1997), nature, like a great art masterpiece, once destroyed can never be replaced, only re-created – and in
many cases, this re-creation is poorly done.
In contrast, Andrew Light (2000a, 2000b, 2002, 2003a, 2003b, 2004, 2005) develops the concept of ecological restoration as a way for re-connecting humans with the natural world, what he calls “the moral potential of restoration ecology” (Light 2004, p.28). He sees the human relationship to nature as one based on norms, so his emphasis is more on how humans value nature than on how nature is valued against some “ideal” state determined by science (Light 2004, p.20). And, as he points out, these “normative ecological relationships” do not take place in isolation and are found within an historical, ethical, and social matrix as complex as ecology itself.

Light draws upon a satisfaction survey conducted in several restoration projects to make his case for a more pragmatic and humanistic conceptualization of ecological restoration (Miles et al. 2000). The survey of 306 volunteers who participated in restoration projects in and around Chicago, Illinois, found that the highest sources of satisfaction were reported in terms of how much people felt that they were “making life better for coming generations” or “doing the right thing,” and in terms of “learning how nature works.” In other words, volunteers working on restoration projects were most satisfied with their experiences if they felt they had participated in “meaningful action” or they had developed a “fascination with nature.” Thus, Light proposes that restoration ecologists approach the practice of restoration as an ethical and moral practice that attempts to involve public participation in every phase of ecological restoration projects (Light 2000a; 2002; 2005). He asserts that such public participation will create a lasting bond between humans and nature that will encourage greater stewardship ethics, and if done appropriately may also encourage a greater awareness of how humans come to harm the environment in the first place so as to avoid such mistakes in the future (Light 2004).

Light also sees endless possibilities to use ecological restoration projects to enhance not only the human connection to nature, but also to encourage human-to-human connections and improve psychological well-being (Light 2002; Light 2003a; Light 2005). He argues that for this to happen, participation in restoration projects should be broadened beyond the engineers, scientific experts, and other technical roles to include citizens near the project, school groups, and civic organizations (Light 2000a). He says, “What can be restored in a restoration is our connection to places and to each other” (Light 2004, 28). For example, Gottlieb (2007) shares his experience of overhearing long-term residents of the Los Angeles River speaking with a sense of “nostalgia,” what he defines as a descriptive longing for things to
be like they were, from fishing along the banks of the river to going for a leisurely swim in the river’s waters. In this way, such nostalgic remembrances concerning connections to specific natural places implies a relationship with a place, a river for instance, akin to that between persons and their family or old friends—a sense that nature plays a role in people’s lives that is akin to a character in the stories of their lives. Light would refer to this as a “moral obligation” between people and the natural world or a natural place (Light 2004), and thus restoring that natural world or place restores us.

While the broader debates continue over the philosophical and scientific conceptualizations of what ecological restoration means, various “toolboxes” and “best practices” for planning and implementing river restoration projects have already been developed, disseminated, and are being deployed by academic institutions, government agencies, environmental and engineering consultants, community groups, and private citizens. These institutionalized “toolboxes” and “best practices” employed throughout the United States are based on how environmental experts and scientists currently interpret the environmental problem of polluted urban rivers and ecological river restoration. However, what little monitoring evidence from urban river restoration projects we have indicates that the success of such efforts over the long term—particularly in urbanized, densely populated areas—appears to be very low (Leigh 2004; Bernhardt et al. 2005). While much of these urban environmental restoration failures have been blamed on lack of education, “myths” about complex ecological interactions and change processes, inadequate financial resources, and lack of long-term implementation planning, there is also reason to believe that local cultural, historical, political, economic and psychological processes play a large role in whether restoration projects succeed or fail (Hilderbrand et al. 2005; Palmer et al. 2004; Leigh 2004; Rendziak 2002; Bernhardt et al. 2005).

While institutionalized river restoration practices tell us a great deal about how practitioners and developers of such tools interpret the environmental problem of degraded and polluted urban rivers and their clean-up, they do not tell us much about how river restoration is interpreted by local citizens who live, work, and recreate in and along urban rivers. In order to create more urban river restoration success stories—and to get closer to Cairn’s call for a practice of “eco-social” restoration and Light’s optimistic

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conceptualization of ecological restoration as a type of “natural social capital”– it is essential that natural resource managers and environmental decision-makers begin to recognize local citizens as not only “stakeholders” representing a “special interest,” but as equal partners with specialized knowledge and interpretations about the local environment (Rendziak 2002).

Particularly in the dense human populations of urban settings, advocates for a more eco-societal restoration approach would argue that local citizens should be involved in river restoration projects from the earliest stages of planning, and through implementation and long-term monitoring. Rethinking not only the relationship between experts and citizens, but also the relationship of urban citizens to their natural environments, is critical to creating more sustainable restoration projects, moving beyond current institutionalized river restoration practices that privilege expert, scientific knowledge, and fully taking into account the role that humans have played and will continue to play in ecosystems. Local cultural, historical, political, economic, and psychological factors must play an equal role in determining when restoration projects should be undertaken and how they should be implemented and monitored (Fischer 2000).

**The Social Construction of Nature**

In sociology, the social construction of reality is a theoretical stance, or paradigm, for studying human society that is concerned with understanding how people assign meaning to the social and physical world around them (Best 1989; Searle 1995). Berger and Luckmann laid the groundwork for this paradigm in their book *The Social Construction of Reality: A Treatise on the Sociology of Knowledge*, first published in 1966. They argue for a broader intellectual recognition and use of the sociology of knowledge, an intellectual pursuit that, up until the 1960’s had primarily been the bailiwick of philosophers and social intellectuals more concerned with how different claims to ways of knowing, or epistemologies, within intellectual circles and academics developed, were adopted, legitimated, and discarded (Berger and Luckmann, p.13).

Berger and Luckmann instead argued that of even greater importance to the sociologist interested in studying social processes and society in general is to recognize how common sense, everyday knowledge emerges from and is maintained by the cultural and social context that the person holding that knowledge
lives within. They describe society as encompassing both objective and subjective notions of “real”
everyday knowledge, or “reality.” These realities are created, institutionalized, legitimized, internalized
and maintained through interaction based on cultural symbols, language, personal and group identities, as
well as social institutions.

Since the 1960’s, this social construction of reality paradigm has led to a diversity of analytic
approaches that attempt to describe social problems and their solutions in terms of how the socio-cultural
processes of definition, negotiation, and legitimation operate to create different types of everyday
knowledge in both private and public settings (Hannigan 1995). This constructionist approach to studying
social problems has much in common with the anthropological approach to analyzing social-environmental
relationships through a political ecology lens (Escobar 1999).

The theoretical framework provided by the social construction of reality is directly applicable to
the environmental arena. The concept of “nature” and environmental problems as socially constructed was
first explored throughout the late 1970’s and 1980’s by social geographers, historians, philosophers of
science, and cultural theorists of all disciplines concerned with the concepts of “space and place,” with
environmental degradation, and the potential of new technologies to both improve and annihilate human

Hannigan (1995) was the first to explicitly and comprehensively argue for adopting a social
construction of reality approach, as well as a set of analytic tools, in the sociological study of
environmental problems. Hannigan sees the constructionism approach as a useful way of theoretically and
practically recognizing the extent to which dynamic social processes such as definition, negotiation, and
legitimation create and perpetuate human knowledge and interpretation of environmental problems, as well
as possible solutions (Hannigan, p.31). He adopts from Best (1989) the concept of “claims-makers” to
describe socio-political actors that have a specific complaint about some particular social condition to
explore how an environmental problem such as acid rain is constructed.

Greider and Garkovich (1994) used an exploration of the concept of “landscape” to further
develop the idea of the social construction of nature in the field of environmental management. Through
application of a constructionism epistemology within a symbolic interaction analytic framework, they
define landscapes as “symbolic environments created by human acts of conferring meaning to nature and
the environment, of giving the environment definition and form from a particular angle of vision and through a special filter of values and beliefs” (Greider and Garkovich 1994, p. 1). In their definition of social construction, “every river is more than one river” and any bio-physical place is meaningless except as reflections of cultural identities of human beings. Put another way, “landscape,” “river,” “forest,” “mountain,” and any other feature of nature is a culturally embedded concept and thus environmental management would be well-advised to account for this in practice.

When studying human relationships to nature through the lens of social constructionism, the primary emphasis is not to refute that the bio-physical features of “nature” exist outside of human reality. Instead, most social constructionism projects are designed to focus attention on how humans “invest” bio-physical features of the natural world with social and cultural meanings that are filtered through social processes and institutions, and to describe the variety of meanings humans ascribe to “nature” (Herda-Rapp and Goedeke 2005). Scholars have studied the processes by which different groups socially construct and project different meanings and interpretations onto nature, the result of which is to transform an objective bio-physical reality into a variety of, often conflicting, subjective realities. From the Ganges River in India among tourists, spiritual pilgrims, water managers and environmentalists (Alley 2002), to the Upper Hudson River Valley in New York among hydropower companies, fishermen and Wall Street executives (Cronin and Kennedy 1999), to Yucca Mountain in Nevada among the defense and nuclear energy industry and the Shoshone native people (Kuletz 1998), and many other natural places and resources (Proctor 1998; Harrison and Burgess 1994; Freudenberg et al. 1995; Fine and Christoforides 1991; Fine 1997; Peuhkuri 1993; Dizard 1999; Scarce 2000), the struggle between different social constructions of the same “nature” has resulted in environmental conflicts difficult to resolve and even to understand without first recognizing the socio-cultural context within which these different “versions” of nature have been defined and maintained.

One vivid example of how the social constructions of the natural world can vary widely is in the different interpretations of the Ganges River in India, which Kelly D. Alley explores in her 2002 book On the Banks of the Ganga: When Wastewater Meets a Sacred River. This river is described by non-Indians, and particularly Western tourists, as filthy and smelly and a human health hazard. Human and animal wastes and industrial contaminants flow freely into the river at many locations. Most alarming to non-
Indians is the sight of dead bodies piled in the river, a result of several factors: the economic reality that it is much cheaper to pay someone to dispose of a dead relative than for a ritual burial, the cultural-religious reality that some ritual Hindu burials require the sinking of bodies in the Ganges, and the bio-physical reality that water levels are below their average flow for the river system due to anthropogenic impacts and climate change.

In contrast to the non-Indian interpretations, the river is described by Indian Hindus as “the sacred mother.” In Hindu teachings the Ganges gives all life and is forever pure. It is seen by Hindu pilgrims as a sacred place of purification, for both the living and the dead. Despite the pollution and the stench, it remains a pilgrimage destination for thousands of Hindu worshipers. These are clearly very different socio-cultural constructions of the same river. In this scenario, each reality clearly expresses a different set of attitudes and behaviors towards the river. Consequently, these socially constructed meanings of the Ganges say more about how people identify themselves with others and the natural world than they do about the bio-physical attributes of objects and spaces. However, if these realities, and the attitudes and behaviors which they provoke, are constructed from social and cultural processes that transform the value-neutral “objective” environment into a variety of meaningful “subjective” environments, then all of these river “realities,” despite their contrasting meanings, are valid, at least to the groups that hold them. But it raised the question: How can these “multiple realities” exist together? That is where environmental conflicts emerge.

Disputes over the restoration and clean up of degraded river ecosystems in the United States offer abundant case studies in how conflict emerges around the different and contrasting social constructions of the natural world. The Hudson River illustrates one such well-documented example of what occurs when changes – such as the closing of a fishery, construction of a hydro-power facility, or the discovery of PCB contamination – directly challenge people’s different interpretations of a particular place and their personal and group identities associated with that place.

Under these change scenarios, processes of self-reflection, self-defense, or self realignment and redefinition are begun that either reinforce existing social constructions of the natural world or call for a discovery and renegotiation of what nature means both privately and publicly (Greider and Garkovitch 1994). In the Hudson River case, residents who have a positive concept and identity with the Hudson
regardless of the exact meaning), be they fishermen, summer residents, or New York Stock Exchange executives escaping to the rural countryside for a weekend, have been engaged in myriad conflicts with others who have entirely different interpretations of the Hudson River. Previous research has shown that people in conflict differ substantially in how they experience, or cognitively "frame," the actual conflict (Best 1989; Schreiber et al. 2003). These frames in turn influence the negotiation processes and outcomes (Pinkley and Northcraft 1994). In the case of most Hudson River conflicts, the majority of issues have two sets of competing types of social actors – powerful industry and government institutions and leaders against local residents, be they fishermen or Wall Street brokers – that frame the conflict and play it out in the US legal system through lawsuits and court documents (Cronin and Kennedy 1999). In essence, what this does is turn the negotiation of the meanings of the Hudson River over to an outside authority of “power” (the US legal system of courts) placing the defense of the river’s current definition or re-definition of the river into the hands of those with specialized expert knowledge (legal, scientific, economic), but not necessarily personal emotion, values, beliefs, or the everyday lived experience of the river. This intervention through the legal system changes who constructs and re-constructs the meanings of the river, what the river means, and how the river is symbolically represented.

Critical De-Construction of the “Social Construction of Nature”

While the social-construction-of-nature framework is useful for diagnosing conflicts and studying environmental problems at local, regional, national, and global scales, the influence of this theory on the “decline of the modern ideology of naturalism” has been met with harsh criticism from some biological scientists and environmentalists for being both nihilistic and relativistic (Soulé and Lease 1995). Part of this criticism stems from debates in the 1970's over the social construction of science itself which emerged in response to academic research focusing on the risks and analysis of nuclear power (Latour and Woolgar 1979; Scoones 1999; Mallon 2007). Criticism of constructionism has been most evident in debates over the role of social science in understanding environmental risks and crises, such as pollution, biodiversity loss, and emerging nanotechnologies (Demeritt 1998).

Some critics of the use of social constructionism approaches to studying environmental problems, as well as other social problems, call the practice “ontological gerrymandering” (Woolgar and Pawluck
They assert that there is an internal inconsistency in how researchers who use a social construction approach identify problems that are worthy of study as objectively real and constant through time, while within their studies these researchers portray definitions and social interpretations of the study problem as relative and changeable. At least part of this criticism stems from the use of social constructionist approaches in an ahistorical context (Rafter 1992).

There is also a criticism by anti-essentialist social scientists that purely constructionist arguments related specifically to how people conceptualize and interpret “nature” may overestimate the power of human behavior and actions to create, transform, or otherwise control environmental forces, thus being overly anthropocentric, and underestimate the transformative power of the bio-physical environment (Stonich 1999). This criticism may be due to the social construction researcher’s focus on the analysis of speech, writing, and human artifacts over the analysis of the materiality of the bio-physical environment. Or it could, as Demeritt (2002) describes be an epistemological and semantic struggle between the concept “construction” – a clearly anthropocentric idea of building something from the ground up – and the concept “nature” – a term associated not only with the natural world, but with human nature and human agency and being.

To move beyond this epistemological debate, Escobar (1999) has recommended we consider “nature” as a product of the all-encompassing and changing articulations of human history, social networks, and biology (i.e., evolution), rather than simply social construction, history, or biology alone. Thus, “every river is more than one river” is transformed from a statement defining the social construction of nature as a purely cultural phenomenon based first on human agency, to a description encompassing the inter-relationship between cultural, historical, psychological, economic and bio-physical phenomena where humans and the natural world are mutual actors on the same stage.

The framework for my research was inspired by this interrelated approach to understanding how human beings interpret “nature.” The result has been a blurring of disciplinary lines and the development of hybrid and iterative conceptual frameworks and research processes. In the fields of cultural anthropology, geography, and policy analysis, epistemological transformations over the past fifteen years toward post-structuralist, feminist, critical, discursive, and interpretive approaches for observing and explaining the complex relationships between humans and nature and how these relationships are
manifested through policy making and institutional forms have also played a pivotal role in informing my research (Crumley 2001; Biersack 1999; Yanow 2000; Haraway 1991; Kilvington et al. 2000; Hajer 1995; Fischer and Forester 1993; Fischer and Hajer 1999). These transformations have been seen most radically in the deployment of GIS technologies for exploring human-nature relationships in a broad range of specific disciplines, from public health and psychology to history and political science to cultural geography and economics (Kwan 2002; Pavlovskaya 2002; McLafferty 2002; Matthews et al. 2005; Mohan 2000). However, in the fields of environmental science and sociology, perhaps because of a relative abundance of large datasets of bio-physical, geochemical, and demographic data that lend themselves fairly easily to visual and cartographic representation, these “alternate” geographies have yet to be systematically explored.

This research applies these more critical and interpretive modes of research, in which researchers seek to capture “everyday life” by scaling down to household and neighborhood levels and utilizing primarily ethnographic field work – characterized by qualitative and reflexive orientations towards data collection – in order to gain important insights into human-ecosystem relationships that cannot be captured with satellite data at bioregional levels or solely with the use of quantitative methods (Pavlovskaya 2002; Liverman et al. 1998; Fox et al. 2003). A critical, ethnographically-oriented approach to the use of sociological inquiry and GIS in the investigation of human-ecosystem relationships holds promise for promoting sustainability, justice and equality in environmental decision making for three reasons. First, by representing historical, socio-cultural, or psychological information in a GIS alongside bio-physical, economic, demographic, or epidemiological information, the observer of such research – whether she is an environmental advocate, scientist, developer, college student or State representative – is invited to explore the interconnections between the natural and human environment that may lead to novel approaches to conserving, protecting, or restoring natural resources. The second reason is that by focusing research on everyday lived experiences through ethnographic analysis, participant observation, oral histories, and a myriad of other qualitative and interpretive tools, conflicting socio-cultural meanings around environmental problems can be mapped to reveal spatial patterns of difference and to provide a visual tool to facilitate environmental conflict resolution. And, third, feminist, participatory, and critical field methods lend themselves to spatially documenting social exclusion or inequalities (Mohan 2000) and unmasking social
power differentials among individuals, communities, and organizations (Elwood and Leitner 2003) in environmental decision-making that may be exacerbating existing conflicts, hindering public participation, and even endangering public health.

While there are exceptions (Herder-Rapp and Goedke 2005), many social science research projects looking at contemporary environmental conflicts in the purely social constructionism vein have tended to focus more on the role of public opinion, individual values and behaviors, economics, law, scientific expertise, legislation, and used a positivist analytic framework (Scoones 1999). In contrast, my research uses an interpretive and reflexive analytic framework, and symbolic and discursive analyses, that place greater emphasis on how environmental problems and conflicts are socially constructed and organized through “storylines,” or shared narratives (Hajer 1995; Berkowitz and TerKeurst 1999), by local, non-technical socio-political actors, akin to Best’s (1989) “claims-makers.” The underlying premise is that these social constructions, or interpretations, have emerged as a product of: 1) a changing bio-physical environment, and 2) ongoing socio-political direct and indirect interactions within and between local and extra-local actors and institutions holding different and sometimes contradictory storylines of the environment, environmental concepts, places, and problems.

The Political Ecology of River Restoration

The interpretive, political ecology research framework used in this project is based on the work of Escobar (1999), Hajer (1995), Kuletz (1998), Alley (2002), Harper (2006) and others (Bryant and Bailey 1997; Rosin 1993; Zimmerer 1993; Willems-Braun 1997; Davis and Wagner 2003; Robbins 2000; Robbins et al. 2001), who have emphasized the important roles that history, language, culture, psychology, economy and the bio-physical environment all play in how people interpret the natural world (Figure 1). This framework opens up the social construction of nature paradigm and allows for the exploration of how the construction of normative configurations of government, legal institutions, and civil society have historically shaped and continue to shape people’s interpretations of the environment and environmental conflicts through local discourses and practices (Brosius 1999; Escobar 1999; Paulson et al. 2005; Peet and Watts 1996; Hajer 1995). At root, the political ecology orientation used throughout this research views the bio-physical and the social as equal, mutually inclusive, underlying structures influencing how knowledge
is formed, expressed, and acted out. Similar to other political ecology projects (Harper 2005; Escobar 1997), this research has sought a balance between the concept of nature as socially and politically constructed and the concept of actors and their social relationships (or social networks) as constituted by the bio-physical environment in which they reside.

In order to integrate the analysis of different interpretations of ecological reality into a useful social and policy analysis of river restoration, I used a narrative-social interaction approach to my analysis based on Maarten A. Hajer’s (1995) social-interactive, argumentative approach to exploring acid rain policy in the UK and Holland.

The underlying epistemology of Hajer’s research is that environmental knowledge, explanations of natural phenomena, definitions of environmental problems (e.g., acid rain, water pollution, species extinctions, etc.), and environmental conflicts are organized by “claims-makers” into “storylines” that have emerged over time and as a result of direct and indirect interactions between different socio-political actors and their different interpretations of the bio-physical environment, the environmental problem area, or an environmental conflict (Hajer 1995; Forester and Fischer 1993; Rein and Schön 1986; Forsyth 2003).

Storylines are shared narratives that reflect social reality by combining different elements of a complex problem or conflict (Davies and Harré 1990). They play an important role in providing social/political actors with a set of symbolic or metaphoric references that suggest a common understanding.

Figure 1. Political Ecology Research Framework.
of an environmental problem, thus rationalizing particular solutions, ritualizing conflicts, expanding understanding of citizens and local knowledge, and giving both experts and non-experts a sense of where they fit (an identity) within the jigsaw puzzle of natural resource management (Hajer 1995; Odell et al. 2005).

Actors that share certain storylines belong to the same “interpretive environmental community” (Fish 1980; Hajer refers to them as discourse-coalitions, 1995-p.65), the storyline being the glue that holds an interpretive community together. As interactions take place and new storylines are shared, these interpretive communities shift and combine, old communities disintegrate, and new communities emerge (Giddens 1984).

The Concept of Community

An interpretive environmental community is a special type of community, different than the “community” concept defined by studies in sociology and geography in the United States during the 1970’s that theorized community based solely on territorial, geopolitical unit or psychological construct (Poplin 1979; Sutton and Munson 1976; Bernard 1973; Suttles 1972). The concept of community used in this research is instead a product of different cultural contexts and types of knowledge that are constantly fluctuating. Interpretive communities are expressed through language and discourse or narrative within a particular socio-political setting through shared symbolism and individual commitments to a particular interpretation that reinforces a particular cultural context and knowledge base, makes explicit socio-cultural boundaries, and may be used to maintain those boundaries.

Like the social historian Thomas Bender, who sought to define a type of community that can accommodate historical change, the concept of community used in this research recognizes interpretive communities as part of constantly changing social and narrative networks with no geopolitical character (Bender 1978). The concept of community used in this research also looks to political anthropologist Andrew Cohen’s concept of community which defined community as socially constructed, enacted, and embodied. Cohen’s research showed how different cultural contexts produce different types of community that are then expressed through symbolic acts and images that reinforce community, make explicit community boundaries, and maintain those boundaries (Cohen 1985a, 1985b). What sets the concept of
interpretive community, as used in this research, apart from Bender’s and Cohen’s conceptualization of “community,” is that an interpretive community is identified by narratives that may or may not be composed of social networks that exhibit emotional bonds or maintain a socio-cultural boundary (Fish 1980; Hajer 1995).

Therefore, while this research recognizes that a combination of individual commitment, social ties, and cultural context and symbolism are essential in enabling a “community” of any type to identify itself, organize, stay cohesive, handle internal diversity, and to obtain, effectively use, and share information, interpretive environmental communities, as conceptualized by this research, do not have to exhibit all of these characteristics at once to be an interpretive “community.” For example, interpretive environmental communities in this research are composed of individuals with a shared commitment to specific interpretations of the Lower Neponset River and its restoration that they express through similar storylines composed of certain shared metaphors, symbols, and place-based attachments. These storylines are then used by local citizens in a variety of different ways, including, identifying and reinforcing direct and indirect social and political ties, differentiating their interpretations from those of others, sharing their local knowledge about the Neponset River and its surroundings, negotiating proposed changes to the river, re-interpreting bio-physical features of the river environment, and representing themselves within scientific, technical, and bureaucratic planning processes and to political decision makers.

“Sense of Place”

The conceptualization of an interpretive environmental community used in this research also draws from research in social psychology, cultural geography, and sociology in analyzing how different aggregations of people vary in the degree and type of attachments and interpretations they ascribe to particular environmental places. Referred to in the social science literature as “a sense of place,” this phenomenon describes how individuals and groups of individuals ascribe social meaning, or interpretations, to places, negotiate those interpretations, and even choose to modify bio-physical features based on their interpretations (Davenport and Anderson 2005; Tuan 1977).

Williams and Patterson (1996) have argued that, in the field of ecosystem management, sense-of-place interpretations must be understood as a fundamental part of environmental public participation,
planning, and policymaking. However, the processes by which individuals and groups develop and invest in their interpretations of place are still poorly understood. In addition, there is still little understanding of the relationship between symbolic interpretations, socio-cultural identities, and political (or civic) identities.

Survey and interview research by Parisi et al. (2004), Johnson (1998), and Williams et al. (1992) suggest that structural socio-demographic characteristics play an important role in influencing the formulation of place attachments and interpretations, as well as the level of civic participation on environmental issues. However, Vorkinn and Riese (2001) found that residents’ attachments and interpretations of natural areas affected by hydropower development were a better predictor of attitudes toward hydropower development than their socio-demographic characteristics.

Storylines and Interpretive Environmental Communities: Expert versus Local Knowledge

Based on previous research looking at the language, knowledge, and interpretations of scientists and professionals in the field of environmental management (Hajer 1995; Robbins 2000; Hukkinen 1998; Berkes 1999; Bernstein 1983), techno-bureaucratic professionals, or “experts,” organize themselves into interpretive communities that have fairly unified storylines regarding environmental problems and solutions due in part to professional indoctrination within specific disciplines and assigned roles within institutional boundaries based on laws, regulations, policies and organizational history.

Such official storylines have a tendency to constrain the imaginations of environmental experts in experimenting and applying more democratic and sustainable practices (Robbins 2000; Hajer 1995). Experts tend to be less concerned with the specific non-technical characteristics of a place or the socio-cultural values and affect of an environmental problem or place, than with maintaining high professional standards, prestige among peers and higher-ups, remaining within institutional boundaries, and securing further funding (Hukkinen 1998; Hajer 1995). Therefore, environmental experts typically subscribe to storylines that are based on scientific interpretations and technical-rational norms and values of some agreed-upon model (i.e., an undeveloped, pristine coastal river system or flow regimes), management scenario (i.e., dam removal or watershed management) or law, regulation and policy (e.g., Endangered
Species Act, Clean Water Act, CERCLA, etc.) that has been vetted through a process of peer review or
delegated to them through political and social processes (Fischer 2003).

Expert storylines, in general, change very gradually in how they define environmental problems
from year to year and place to place, because they tend to not use local, place-specific values, beliefs, and
attitudes in diagnosing and solving environmental problems (Hajer 1995). The environmental expert tends
to characterize local, non-expert, everyday interpretations of the natural world in terms of “barstool
biologists” and “hysterical housewives” (Seager 1996; Robbins 2000), implying that local knowledge is
less objective and more political than their expert interpretations (Berkes 1999). In fact, these expert
storylines are dictated by professional norms, institutional cultures, and a paradigm of positivist-
reductionist Western science that seeks to control and even eliminate non-positivist-reductionist ways of
knowing (Bernstein 1983; Berkes 1999).

Written documents and negotiations from government and scientific sources were used by Hajer
(1995) to explore the storylines held by technical, bureaucratic, and extra-local environmental professionals
involved in European acid rain negotiations. There is no such analysis of the storylines employed by river
restoration experts and managers in their efforts to plan for, implement, and monitor restoration projects.
Such analysis is greatly needed (Robbins 2004); however, this particular study does not provide such an
analysis of expert storylines. What my research does do is use expert documents and public presentations
to provide a better understanding of the language used by scientific and natural resource management
experts to describe restoration of one urban river (Chapter VI), which in turn could be used to inform the
technical and policy aspects of the Lower Neponset River’s restoration. However, this research does not
attempt to conduct an analysis of the expert storylines told about the Lower Neponset River. Instead the
primary focus for this project has been to show the diversity of ways local, non-expert citizens interpret the
Lower Neponset River, whether in response to their own notions of what the Neponset River and
restoration means or in response to what the river and restoration means to others.

In contrast to storylines that originate from environmental experts, the storylines developed by
local citizens about a specific environmental concept, problem area, or conflict involve a diversity of
individual beliefs, values, attitudes, local knowledge, personal histories, cultural norms, and relationships
with the bio-physical and cultural characteristics of a place (Peterson et al. 2002; Campbell 2002; Alken 2004).

This research expands on the social science studies of the social construction of nature, community, and place discussed above by defining interpretive environmental communities not as demographically or geopolitically similar groups of individuals, but as narrative networks of individuals who may share similar “sense of place” interpretations regarding bio-physical features, as well as human-designed and constructed elements, of the Lower Neponset River, and then asking how those various interpretations converge and diverge around the environmental problem of urban river restoration (Escobar 2001).
CHAPTER III

METHODS

Social Science Methods of Inquiry and Analysis

The research design and methods used to explore the research problem were exploratory, iterative, descriptive, and grounded in interpretive policy analysis (Yanow 2000), phenomenology, symbolic interactionism, and participatory inquiry (Fischer 2003) (Figure 2). This hybrid methodological approach allows for the identification and analysis of local, symbolic, metaphoric, reciprocal, historic, and cultural human-human and human-environment relationships. In addition, the use of this interpretive and participatory methodology and phenomenological analytic approach allowed for recognition of the affective and expressive, or humanistic, dimensions of environmental policy processes and planning, thus recognizing that environmental issues surrounding an urban river’s restoration are not exclusively instrumental and goal-oriented processes, but also hold socio-cultural, emotional, and psychological meanings for people (Yanow 2000, p. 79). These were important considerations that corresponded well with the political ecology research framework being employed to unravel the intertwined cultural, historical, psychological, economic, and bio-physical characteristics of the Lower Neponset River.
Several social science research methods were used to collect data for this project. Specific methods included, ethnographic interviews, participant observations, photo-documentation, supplemental archival research methods, and Geographic Information System (GIS) mapping. These methods were all used to explore and describe the variety of local knowledge, and the diversity of cultural, historical, and bio-physical features of the neighborhoods and towns surrounding the Lower Neponset River. They were also used to identify and describe interpretive environmental communities related to the river’s restoration, remediation, and management.
Research Questions

To identify and describe local storylines and interpretive environmental communities, and explore the role they play in defining the Lower Neponset River as a place and frame the debates over its restoration, I decided to break down the central, and very broad, research problem and question into several discrete parts. The overarching question remained: What are the various local, everyday interpretations of an urban river and its restoration, and how can the interactions between these local interpretations be used to inform the theory and practice of urban river restoration? But, I felt that this question could be most effectively addressed and more clearly articulated into interview and observational queries and the final interpretive and GIS analysis if it could be reduced to three more specific research questions explicitly related to the Lower Neponset River study site.

The first research question is: What are the differences and similarities between local storylines of the Lower Neponset River and its restoration? Through ethnographic interviews, long-term participant observation, and archival research, I uncovered as many local interpretations of the Neponset River’s restoration as time, access, and budget allowed. These interpretations were identified and documented in multiple individual narratives that were thematically sorted and woven into composite storylines about the Lower Neponset River and its restoration.

The second question this research asks: How do these storylines about the Lower Neponset River and its restoration diverge or converge with each other to create local interpretive environmental communities? Hajer (1995) and others (Davies and Harré 1990; Fischer 2000) assert that citizens who share storylines (i.e., interpretations) about environmental problems and conflicts are in similar discourse-coalitions, or interpretive environmental communities, that can be defined as: 1) a set of storylines; 2) the social/political actors who speak those storylines; and 3) the practices and individual psychological commitments within which those storylines are based. Therefore, the storyline of a particular interpretive environmental community is considered to be a result of shared symbols, metaphors, direct and indirect social interactions, psychological commitments, and in some cases (but not necessarily) social/political settings that bind a particular community together in a certain cause. In this research the “cause” is the Lower Neponset River and its restoration. The Lower Neponset River’s interpretive environmental communities were identified and described by looking at all of the converging and diverging interpretive
themes and related stories told to me (or overheard) and descriptions of the various social settings observed in relation to one another.

The third question is: How do these local interpretive environmental communities relate to each other at specific places of conflict related to the restoration, clean-up, and management of the Lower Neponset River? To address this question, I used GIS technology to generate cartographic representations of the local storylines and their associated interpretive environmental communities at specific geographic locations of conflict, referred to in this project as “policy hot-spots,” along the Lower Neponset. In order to analyze the descriptive geographic and spatial differences in how interpretive environmental communities relate with one another over the river’s restoration, the following policy hot-spots were mapped along the Lower Neponset River: Shaffer Paper Co., Walter Baker Dam, Bay State Paper Co., Tilestone-Hollingsworth Dam, Lewis Chemical Co., James G. Grant Co., Stop & Shop warehouse, and the proposed Neponset River Greenway Trail from Central Avenue to Paul’s Bridge. These hot-spots arose out of my observations, interviews, and archival research as places of persistent conflicts between local interpretations of the Lower Neponset River’s restoration. Many of the conflicts surrounding these locations were a reaction to specific policy statements or proposals made by elected politicians or government officials. This final analysis synthesizes the narrative data, places the interpretive environmental communities within a more specific geographic and policy context, and, with these narrative and spatial representations, explores the connections and the disconnections between the social, political, economic, and ecological complexities surrounding the restoration of the Lower Neponset River.

**Identifying Participants and Neponset River Restoration Themes: Preliminary Observations and Interviews**

Preliminary observations began in the spring of 2005 by attending meetings and events in Boston and Milton that related directly to the Neponset River. During the summer of 2005, 30 local participants from the Boston metropolitan area participated in preliminary interviews and focus groups that explored how Neponset River experts and users interpreted the concepts of river restoration, river health, and the future of the Neponset River in the context of the States’ plans to remove dams and remediate PCBs on the Lower River.
Research Methods: Carrying Out the Research

The Field Journal & Researcher Diary

02-17-07 4:20pm Milton Landing

Three ice fishermen in the river just off the beach past the Milton Yacht Club parking lot. They had three holes they were manning. At first it wasn't clear whether they were together or not because they were all at different holes. Then, one moved to join another. The third remained alone at a hole more upriver. This was all pretty exciting. No one had mentioned ice fishing as a possible activity and it had not crossed my mind. Immediately I wanted to know things—what were they fishing for? Where were they from? Who were they? (Excerpt from Neponset Field Journal, S.L. Perry)

The Field Journal was the most important tool used in collecting ethnographic data and in the later analysis and interpretation phases of the study. My Neponset Field Journal is composed of notes from over 500 hours of participant observations and informal conversations, along with descriptions of people, locations, and events, beginning during the preliminary field work in the spring through fall of 2005, opportunistically during the spring of 2006 and then daily or weekly during full-time immersion in the field from September 2006 until February 2008. I used the Journal to identify potential study participants, develop typologies of river interpretations and thematic areas for exploration while in the field, during analysis or in subsequent research. I also found it useful for describing present-day conflicts and areas of agreement surrounding the Lower Neponset River and estuary, confirm the locations of policy hot-spots, and identify and describe the events, organizations, and individual experts and managers involved in the river’s restoration, remediation, and development.

In addition, the Journal includes a Researcher Diary and calendar that was useful in keeping track of the people I met and the places I visited, processing and assessing the differing opinions I was hearing, describing my own personal reflections and biases from interviews and meetings with participants, and developing my own understandings of the people, places, institutions, and events related to the Lower Neponset River and its restoration and management (Haraway 1991).

Participant Observations

Participant observations at meetings and river-related events were systematically begun in September 2006 and concluded in February 2008. The purpose of the participant observations was to document the social and bio-physical settings and events that relate to the Lower Neponset River and its restoration through participative inquiry that involves fluctuating between observer and participant. In the
observer-only mode, during the event or situation I was observing, I took detailed notes in which I documented the characteristics of people and their interactions, how places looked, smelled, felt, and other discernible aspects of a specific context. In the participant-only mode I took less detailed or no notes during the actual event or situation and participated directly in specific activities, including volunteering at public events, canoeing or hiking, participating in group discussions during meetings, and other participant behaviors. In day-long or multi-day situations, or in meetings that met frequently, I would switch between observer and participant, but in shorter duration situations or events I would stick with an observer-only or participant-only mode. The decision to be in the observer-only or participant-only modes was based on the situation. In some cases, simply observing an event or an interaction allowed me to gather contextual, descriptive information without interjecting myself obtrusively into the situation. In other cases, the need to gather interpretive data from participants or more specific facts required involving myself directly in the experience through active participation.

I lived full-time in the Boston neighborhoods of Roslindale and Mattapan which greatly facilitated the logistics of both observation and participation in meetings, events, and other situations in the area of the Lower Neponset River. I became a regular participant and observer of the locations and events in Boston neighborhoods and the towns of Milton and Quincy bordering the Lower Neponset River. Participant observations were recorded from a variety of situations and types of locations. An example of some of the types of events and locations where participant observations were conducted appear in Table 1.
Table 1. Examples of events and situations where participant observations were made.

<table>
<thead>
<tr>
<th>Event/Situations</th>
<th>Type</th>
<th>Location</th>
<th>Season/frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood and civic association meetings</td>
<td>neighborhood, civic</td>
<td>Various</td>
<td>spring, fall, winter/monthly</td>
</tr>
<tr>
<td>Neponset Greenway Council meetings</td>
<td>non-government, civic</td>
<td>Various</td>
<td>all year/monthly</td>
</tr>
<tr>
<td>Town meeting</td>
<td>civic, government</td>
<td>Milton High School</td>
<td>spring/annual</td>
</tr>
<tr>
<td>Canoeing</td>
<td>recreation</td>
<td>Various</td>
<td>summer/monthly</td>
</tr>
<tr>
<td>Kite festival</td>
<td>Recreation</td>
<td>Pope John Paul II Park</td>
<td>summer/annual</td>
</tr>
<tr>
<td>Harvest festival</td>
<td>Recreation</td>
<td>Kennedy Playground</td>
<td>fall/annual</td>
</tr>
<tr>
<td>River clean-up</td>
<td>civic</td>
<td>Kennedy Playground</td>
<td>summer/one time</td>
</tr>
<tr>
<td>Sailing</td>
<td>recreation</td>
<td>Dorchester Bay and Boston Harbor (Deer Island)</td>
<td>Summer/one time</td>
</tr>
<tr>
<td>Hiking</td>
<td>Recreation</td>
<td>various</td>
<td>all year/weekly</td>
</tr>
<tr>
<td>MA Park Commissioner Tour</td>
<td>government, civic</td>
<td>Neponset Greenway Trail</td>
<td>spring/one time</td>
</tr>
<tr>
<td>State and regional planning meetings</td>
<td>government, public, private</td>
<td>various</td>
<td>all year/annual</td>
</tr>
<tr>
<td>City planning meetings</td>
<td>government, public</td>
<td>Milton Town Hall, downtown Boston</td>
<td>all year/annual</td>
</tr>
<tr>
<td>ACE (Alternatives for Community and Environment) “EJ in the Hood” Annual Event</td>
<td>civic</td>
<td>Harriet Tubman House, West Roxbury, Boston</td>
<td>summer/one time</td>
</tr>
<tr>
<td>Neponset River Watershed Annual Meeting</td>
<td>non-government, fundraiser</td>
<td>Reebok Headquarters, Canton</td>
<td>summer/one time</td>
</tr>
</tbody>
</table>

I also traveled – both alone and with participants – up and down the Neponset Greenway Trail, which runs along the Lower Neponset River from just under the MBTA (Massachusetts Bay Transity Authority) rail bridge in Port Norfolk to Central Avenue in Milton. These travels were made on foot and on the water, and also included some time spent sitting and watching activity in the parks and public areas abutting the river, including Ryan Playground, Martini Shell, Pope John Paul II Park, Neponset II Park, Neponset Estuary ACEC (Area of Critical Environmental Concern), Mother Brook, Little Blue Hill, Fowl Meadow ACEC, Ponkapoag Pond and Bog, Squantum Point, Sachem Point, Milton Lower Mills, Fairmount Avenue and Kennedy Playground.

These participant observations were documented in a chronological log of observations and conversations in the Field Journal either during the observational event or as soon afterwards as possible. Photographs were taken to supplement the narrative descriptions resulting in a complementary database of over 1,000 original digital photographs of places, people, situations, and events significant to the Neponset River, its different meanings, and its restoration and management.
Archival Data Collection: Local Newspapers and Historical Resources

A survey of local newspaper articles published throughout the study period (2005-2008) and in the historical archives of the *Boston Daily Globe* (1872-1922, a predecessor to The Boston Globe) was conducted as part of the archival research and was used to understand the history of the Neponset watershed and contextualize the participant observations and interview data. Before, during, and after full-time immersion in the field (from September 2006 until February 2008) organizational (e.g., monthly newsletters of the Neponset River Watershed Association, Massachusetts Riverways, Friends of the Neponset Estuary, Friends of the Blue Hills, Boston Natural Areas Network, etc.) and other archival documents (including photographs and maps) related to the history and management of the river were also collected and reviewed.

Beginning in March of 2006 through September 2008, local newspapers were systematically surveyed on-line on a weekly basis for items relevant to the Lower Neponset River and its restoration using the key word phrases “Neponset River” and “river restoration.” Ten local newspapers served as sources: The Boston Globe, The Boston Herald, The Patriot Ledger, Milton Times, Canton Citizen, Dorchester Reporter, Mattapan Reporter, Hyde Park Tribune, Hyde Park Bulletin, and Dedham Times. These sources were selected not only because of their comprehensive and long-term coverage of the neighborhoods and towns surrounding the Lower Neponset River, but also because they were mentioned by study participants as sources of information about everything from history, politics, real estate, crime, education, and the environment to specific issues related to the Neponset River, the Charles River, Dorchester Bay, and Boston Harbor.

Information derived from newspaper sources was used to supplement information collected through other methods. That means that the local newspapers were called into analytic service only when they were referred to in the course of participant observations or during interviews, or as a source of background or historical information to a particular event, location, or person. The newspaper data are used extensively in Chapter IV to place local events and people within an historical context, and occasionally in Chapter VI, VII, and VIII to further contextualize the narrative and spatial analysis.
During many meetings and phone calls with interviewees I was either presented with a clipped news article or asked if I’d seen a specific news article from one or more of these newspaper sources. These participants encouraged me to read the article because they believed it to be important to my developing a better understanding of the Lower Neponset River, its people and its history.

As purely supplementary information, the local newspapers played an important role in my understanding of how and where information about the Neponset River is disseminated, how public knowledge about the Neponset River has evolved, and how that knowledge and information is incorporated or not incorporated into the “storylines” told by interpretive environmental communities.

Additional documents provided by interviewees or during organizational meetings were used to cross-check factual information and describe as accurately as possible the historical context of the Lower Neponset River and its current restoration and clean-up on both ecological and social dimensions. Archival research in neighborhood branches of the Boston Public Libraries, Massachusetts State Archives, Dorchester Historical Society, and on the internet was also conducted to answer questions raised during observations and interviews. This process included reading, analyzing, and interpreting public documents related to the industrial, natural, and cultural history (1600s to early 1900s) of the Neponset River and estuary as well as government documents (plans, environmental impact assessments, research reports, regulations, etc.) related to contemporary (1950 to present day) Neponset River planning, management and restoration.

These government documents, in addition to the local newspaper sources, were used as supplemental materials to identify and describe some of the local, as well as scientific/expert, storylines related to the Lower Neponset River and its restoration. This was done through a keyword search and interpretive analysis of how government documents symbolically frame such concepts as “restoration,” “remediation,” “clean-up,” “Smart growth,” “history,” and “development” in contrast to how local, non-expert storylines frame similar concepts.

Ethnographic Interviews

An ethnographic, open-ended approach (Spradley 1979; Schensul et al. 1999) was used in interviewing 27 focal study participants from September 2006 through February 2008. The ethnographic
approach helped to build researcher-participant rapport quickly and got interviewees to talk openly about a wide range of issues related to the Neponset River and the processes taking place related to its degradation, restoration, remediation, development, and present and future use.

The primary research purpose of the ethnographic interviews, alongside the preliminary interviews and focus groups, was to:

1. Describe, verify and revise/expand the four thematic domains identified in the summer 2005 research (i.e., history, recreation, economic development, and ecological resources and services), and how they could relate to local storylines of the Lower Neponset River and its restoration.

2. Identify and document other thematic interpretations of the Lower Neponset River, document storylines, and describe how interpretive environmental communities relate to certain storylines, and not to others, through uncovering shared language, practices, and metaphors or symbols.

3. Verify individual commitments to specific storylines about the river and its restoration and loosely identify associations between participants.

These interviews were conducted as on-going conversations about the river’s history, present state, and future, during which each participant’s knowledge and interpretations were of primary importance. I showed participants a satellite map of the Lower Neponset to elicit spatial knowledge and place-based interpretations. I also went on walks with participants in the vicinity of the Lower Neponset and took photographs and notes as they told me about specific geographic locations of individual or social importance, and shared their personal interpretations of the river’s restoration, clean-up, history, development and changes they had seen along the river (Capriano 2009). The interviews themselves, and related observations of and interactions with participants in social settings, were designed to gather data that could be used in identifying, constructing, and analyzing interpretive communities. Specifically, these interviews were designed to capture: a) each participant’s unique relationship to the river in the past and the present, b) the participant’s relationship to other people and various governmental and non-governmental organizations related to the river, c) what each participant knows about and how they are (or have been) involved in processes related to the river’s restoration and management, d) how the participant gathers information about the river and shares that information with others, and e) how the participant speaks, acts,
and otherwise symbolizes their knowledge, interpretations, and relationships related to the Lower Neponset River and its restoration (Appendix B).

Interviews involved a minimum of two meetings per participant and were digitally recorded after the University-mandated “Informed Consent” form was read and agreed to (Appendix C, University of Massachusetts Informed Consent Form). Three participants were not comfortable with digital recording of the interviews. Interviews with those participants were recorded by hand during the interview and as soon after the interview as possible typed into the computer.

After transcription, all of the interviews and the participant observation notes were read and analyzed using a free, open-source qualitative software package (WEFT-QDA, http://www.pressure.to/qda/) to assist in coding the text for interpretive themes and sub-themes or keyword categories related to the meaning of the river and its restoration (Table 2).
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<thead>
<tr>
<th>Main Interpretive Themes</th>
<th>Sub-Themes</th>
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<td>ecological services</td>
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<td>recreation</td>
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<td>activities: canoeing, hiking, biking, kite flying, sailing, motor boating, fishing, bird watching, etc.</td>
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<td>illegal/non-sanctioned activities: camping, hanging out, drinking/doing drugs, bonfires, swimming, fun</td>
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<td>creative expression/art</td>
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<td>ecological resources</td>
<td>natural history</td>
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<td>invasive or non-native species: phragmites, purple loosestrife, carp, oysters, wildlife corridor/habitat</td>
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<td>rare marsh birds</td>
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<td>Emerald Necklace</td>
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<td>Charles River Esplanade parks</td>
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<td>open space</td>
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Selection of Participants

Selection of people to interview (study participants) was based on the phenomenological and interpretive mode of research being undertaken and used a purposive, opportunistic strategy. It was felt that this was an appropriate sampling approach in light of the fact that the focus of data collection was on describing and exploring the range of interpretations and storylines associated with the Lower Neponset River and its restoration rather than on obtaining a representative sample of all interpretations or all populations living, working, and recreating along the Lower Neponset River (Schensul et al. 1999; Trotter and Schensul 1998). Two general criteria were used in selecting participants for interviewing. First, participants targeted for ethnographic interviewing were people who played an active role (either at the present time or in the recent past) in trying to turn their visions or stories of the Neponset River's restoration or development into a reality, either by working independently or through local organizations. Second, people were selected based on their active engagement in activities along the Neponset River related to recreation, conservation, development, or restoration, but who had not been as actively involved in river-specific planning processes or organizations. Interview participants were identified through participant observations at neighborhood and civic association meetings, Neponset-specific public meetings and organization meetings, and through referral from other interview participants.

In order to ensure that participants were selected who would provide information most relevant to the Lower Neponset River and its restoration and that my focus remained on the local, as opposed to expert and technical, interpretations of the Neponset River’s restoration and management, I entered the field using the following additional criteria for selecting participants:

1. Paid employees of any government agency or non-government organization involved in the river’s maintenance, management, use, restoration, or clean-up were not included;

2. People attending public meetings related to the Lower Neponset area or river-related events (e.g., Neponset Greenway Festival, canoe rides, etc.) who adhere to one or more of the four interpretative themes and possible storylines identified in preliminary interviews and focus groups (i.e, history, recreation, economic development, and ecological resources and services) OR other storylines relevant to the Neponset River’s restoration;
3. People referred by other interviewees or Neponset River contacts; and,
4. People willing to participate and able to meet with me for two or more times.

Sixteen potential research participants for ethnographic interview were identified in the winter of 2006 based on an expected minimum of three participants and maximum of five participants in each of the four preliminary interpretive thematic areas. But, after entering the field full-time in September 2006, I discovered that the social and political setting was more complicated than expected, with individuals expressing different interpretations under different organizational settings. It also became evident that additional thematic areas, beyond the four identified in the 2005 research, were beginning to emerge. Six of the participants originally identified could not be contacted or could not participate because they moved out of the state, lacked the time to meet with me, did not fully trust me or the purpose of the project, or lacked an interest in participating in the study.

I found it easier to get people to sit down and talk with me multiple times if they lived near the river and had lived in the areas around the river (within the watershed) for an extended period of time. Thus, none of my participants had resided in the watershed for less than seven years, and one participant had lived along the river for 85 years. This bias towards longer residency times was possibly due to the fact that short-term residents, who tended to be younger in age, had less time to meet with me due to work obligations or child care and adult care responsibilities. This was the case with one couple who had three young children and worked multiple jobs who I attempted to meet with over a six month period to no avail. In addition, short-term and younger residents may not attend neighborhood or public meetings or local events on a regular basis due to family or work obligations and responsibilities and so I did not come in contact with them in the first place. This observation that younger and shorter-term residents do not regularly attend public meetings was also expressed to me by several of the study participants who consistently attended every neighborhood meeting. In addition, this project may have less salience for shorter-term residents than it did for those who had lived in the watershed for a longer period.

In seeking to compile a diverse, exploratory sample of the various interpretations of the Lower Neponset River’s restoration, and given the limited access I had to different cultural settings within my research project’s time and budget constraints, I broadened my selection criteria for participants to include not only river-related events, but other events throughout the Lower Neponset River watershed. I thought
that these events held the potential to bring me into contact with more people who lived, worked and recreated along the Lower Neponset who were of different ages and from a diversity of geographic, cultural, and economic backgrounds.

In the late fall/early winter of 2007 I began attending neighborhood and civic association and town meetings, including City of Boston and regional, Metro-wide planning meetings and political events, to conduct participant observations and look for additional research participants. Attending these ancillary meetings and events not only introduced me to new study participants it also gave me a better idea of how my current study participants fit within various other local interpretative communities unrelated to river restoration but interested in issues such as neighborhood development, affordable housing, regional growth, juvenile crime, education, environmental justice, and environmental sustainability. These participant observations also gave me a wider cultural and regional context for analyzing the management and restoration of the Lower Neponset River. However, this broader approach did not identify participants whose age and cultural and economic backgrounds were that different than my existing study participants. With the exception of youth-specific events, those attending these other meetings – while more geographically diverse and less Neponset River-focused – still tended to be predominately middle aged or older (50 to 80 years old), professionals, retired, of mixed-European, Italian, Caribbean or Irish descent, native English speakers, and appeared to be homeowners with lower-middle to upper-class incomes. I was able to easily recruit participants from this group, or what I refer to in my Field Journal as “the usual suspects” – older, long-term residents, retirees, and homeowners. I was also able to recruit several people from the business community, after I convinced them they did not have to be an “expert” or “advocate” for the Neponset River to participate in the study. However, as with the river-specific meetings, very few young adults (20 – 30 years), non-English speakers, short-term residents, renters and lower income residents attended these other types of meetings and so people with these generational, linguistic, and economic characteristics were under-represented among my participants.

In the case of referrals from other participants, referred participants tended to be similar in age, cultural heritage, length of residency, and economic status to the participant giving the referral. This clearly introduced sampling bias into my study, but Schensul et al. (1999) note that this type of sampling bias is perfectly acceptable when conducting exploratory and descriptive research. In summary, it is
important to note that the majority of people whom I interviewed are from a relatively homogenous socioeconomic and political stratum of the population that inhabits the Neponset River watershed. As such, the interpretive environmental communities that emerged in the data may be far from comprehensive in terms of the totality of interpretive environmental communities that exist within the broader human population of the Neponset River.

Eventually, a total of 52 local citizens living, working and recreating along the Lower Neponset River were interviewed as part of this study. Thirty participants were interviewed during the preliminary 2005 Mass Riverways-sponsored environmental literacy study and 22 new participants were interviewed during the 2006-2008 ethnographic study. Of the 52 total participants, 27 became focal participants for the ethnographic study, meaning they were interviewed more than one time. Ten of these focal participants – at least one from each neighborhood and town along the Lower Neponset River – served as key informants with whom I developed an on-going personal relationship that offered me greater access to personal, everyday knowledge of neighborhoods and other social contexts. These ten key informants became primary sources of information on specific issues related to the Lower Neponset, especially after I had left the field site.

The 27 focal participants and informants resided in the following Boston neighborhoods and surrounding towns: 22 participants in the City of Boston, including seven in Dorchester (two in Cedar Grove, one in Adams Corner, one in Lower Mills, three in Port Norfolk), nine in Hyde Park (two in Fairmount, one on Hyde Park Avenue, four on Fairmount Hill, two in Readville), three in Mattapan; two participants in Roslindale; three participants in the Town of Milton; one participant in Dedham; and one participant in Weymouth. The focal participants were interviewed from two to five times over a period of 18 months, from the fall of 2006 through January 2008. Twenty-four of these 27 currently live less than a mile from the Lower Neponset River in the City of Boston or the Town of Milton. As of 2008, these focal participants had lived for a total of over 875 years near the Neponset River, with the average time living along the Neponset being 46 years and ranging from seven to 85 years.

The final 27 participants represent a range of general socio-cultural interpretations, from those who see the river and its restoration as a focus and end-point in itself, to those who see the river and its restoration as ancillary to other social, political and economic endeavors. My process for selecting
interviewees was subject not only to my own criteria that people be engaged and willing to meet with me, but also to the inter-personal connection and trust that people felt with me. That was beyond my control in some cases. While I did all I could to be transparent and up-front about my project and its purposes, there were still those who were suspect of my intentions and refused to completely trust me.

GIS: Cartographic Representation and Spatial Analysis

Maps created with a geographic information system, or GIS, are used in this study as interpretive artifacts or objects for understanding the social construction of nature, place, and community, and the diversity of socio-cultural meanings that people attach to environmental concepts and places, (Agnew and Duncan 1989; Wood 1992; Basso 1996; Brody 1982). Maps used in this way are a symbolic reflection of their creators and the technology and types of information available to and selected by people at a particular time and under a particular set of circumstances (Wood and Fels 2008). In this way of thinking about maps, they can be read as literature, works of art, photography, and even cinema and they can be used not only to convey information about the bio-physical and cultural world of the past or the present, but also the social, cultural, and psychological state of their creators (Wood and Fels 2008).

In this project, I have been the “creator,” the map-maker, guided by my first-hand experiences living in the study site, my Field Journal notes, and spatial information conveyed to me through local citizens’ stories and our walks together near the Lower Neponset River. Decisions about how that information should be displayed cartographically were first filtered in terms of this citizen-derived information. However, to address my research questions, the final cartographic representations of the interpretive environmental communities and policy hot-spots are based on my judgments about how all of this information – the narrative and visual material and data – should be cognitively and spatially differentiated and presented.

From 2006 to 2008, satellite maps of the Lower Neponset River and the surrounding neighborhoods and towns were printed from MassGIS and Google Earth. They were used during ethnographic interviews to elicit place-based interpretations of the Lower Neponset River, its management and its restoration. Some focal participants found the maps helpful in describing the river’s history, personal meaning and future plans for restoration or re-development, in asking questions about parts of the
river that were unfamiliar to them, and it even prompted some participants to bring out their own maps and photographs of specific geographic locations. Other participants were less interested in using the maps, and other than viewing them, did not have anything to point out, add or ask, although they sometimes used the maps later in the interview when pointing out specific locations along the river that were of particular importance to them.

Much of the visual and cartographic information from interviews was used to “place” storylines about the river and its restoration and identify spatial characteristics associated with certain interpretive environmental communities. This was done by putting information into a spatial database following Matthew et al. (2005), both during collection of data and during interview transcription and subsequent coding of the interviews and participant observation notes. Specific geographic features important to describing and analyzing storylines and interpretive environmental communities in relation to the river’s restoration, as well as possible areas of agreement and conflict between interpretive communities over its restoration and management, were entered into the database. These geographic locations served as a guide in digitizing and developing GIS attribute tables for each interpretive environmental community and each of the policy hot-spots: Shaffer Paper Co., Walter Baker Dam, Bay State Paper Co., Tilestone-Hollingsworth Dam, Lewis Chemical Co., James G. Grant Co., Stop & Shop warehouse, and the proposed Neponset River Greenway Trail from Central Avenue to Paul’s Bridge. Map layers were then created in ArcGIS (ArcMap) that represented the Lower Neponset River’s human and natural environment, different interpretive environmental communities, and policy hot-spots.

The base map used for all layers is a 1:50,000 ortho-photograph of the Lower Neponset River similar to the one shown during ethnographic interviews. Publicly available data from MassGIS (http://www.mass.gov/mgis/) of the bio-physical (biology, hydrography, etc.), infrastructure (public transportation, water/sewer, roads/highways, etc.), land use (type, ownership, zoning, etc.), political (town boundaries, congressional districts, etc.), river and environmental management (waste permit sites, ecologically significant protected areas, etc.) and demographic (2000 US Census block data) features of the river landscape were downloaded into a personal geodatabase called “Neponset.”

The existing MassGIS features in the Neponset geodatabase were used to create descriptive maps for each interpretive environmental community. These maps contain the locations (represented by points,
lines, or polygon features) of significant places identified during interviews, observations, or archival research, and they provide a cartographic representation of each interpretive environmental community in Chapter VII. The point, line, and polygon features important to each interpretive community, but not available through MassGIS, were heads-up digitized and converted into a shape file for merging into the geodatabase as its own feature class or part of a larger feature dataset.

A map portraying each policy hot-spot was also created. This map identifies specific sites of conflict along the river and includes a cross-referenced index to photographs, general descriptions of the sites and their history, and other relevant information such as .pdf documents and conceptual design plans regarding clean-up, management, or development of the specific site.

To analyze and visually describe how the different interpretive environmental communities spatially interact over the Lower Neponset River’s restoration and management, each community was mapped in relationship to the other communities at relevant policy hot-spots by using overlay analysis function(s) in ArcGIS. Certain policy hot spots were more important to certain interpretive environmental communities than others, so not all communities are presented spatially for each policy hot spot. This analysis produced maps that show the complex, often multiple, relationships the interpretive environmental communities have to each other at each policy hot-spot location (6 maps, one for each policy hot-spot). The maps cartographically represent the complex socio-cultural, economic, and political dynamics between and among interpretive environmental communities and the Lower Neponset River’s restoration, remediation, and management.

Reliability and Trustworthiness of Data

One important methodological issue in conducting interviews revolves around the question: How do you know your informants are telling you the truth and what they are saying is reliable? Participants will lie to interviewers for a number of reasons, including a desire not to display their ignorance, reluctance to discuss sensitive subjects, a desire to tell the interviewer what he or she wants to hear, and a propensity toward strategic response bias, in which an informant will give untruthful information in the hopes that it will favorably influence policy or other outcomes that may be based on the research (Podsakoff et al. 2003). To help ensure that the ethnographic data were reliable and trustworthy, I incorporated four different validation techniques following Creswell 1998 (p.201-203) into the data collection and analysis:
1) multiple-methods of data collection and multiple sources (participant observations, ethnographic interviews, photo-documentation, local newspapers, government and organizational documents) which allowed me to cross-check the reliability of statements made by participants during interviews and during participant observations, and to evaluate participant statements for truthfulness as they corresponded or differed with other participants or with previous statements from the same participant, 2) prolonged engagement and persistent observation (17 months living within the Lower Neponset River watershed, attendance at monthly meetings, follow-up interviews, meetings and phone calls with participants, recreational activities with participants) which allowed me to build strong researcher-participant relationships with study participants, including different speech patterns and body language, and to check for truthfulness in a participant’s statements over time by going back to verify or clarify where there were apparent inconsistencies between interview statements or observations, 3) clarification of researcher bias (kept a researcher diary of my personal reflections and reactions) which assisted me in keeping track of my own interpretations of what I was hearing and seeing during field work and comparing my interpretations to the data I was collecting in order to ensure I stayed focused on collecting and analyzing my participant’s interpretations and not just my own, and 4) participant checking (review of and feedback on draft of analysis chapter sections by participants [Feld 1987]) which allowed me to confirm that my interpretations of the data accurately and truthfully represented what participants said and did in interviews and during observations.
CHAPTER IV

A CRITICAL ENVIRONMENTAL HISTORY OF THE LOWER NEPONSET RIVER AND ESTUARY

In response to the interview question, “What does ecological restoration mean to you?” many participants would ask: “Restoration to when?” Therefore, an exploration of the local interpretations of the Neponset River’s “restoration” necessarily entails a critical look at the river’s past in an effort to understand the “when” in ecological, as well as social, cultural, political and economic terms. Looking into the past critically means asking not only what happened along the Lower Neponset River to make it what it is today, but also asking “who” wrote the historic accounts of what happened and through what social and cultural filters did they interpret events. For example, the first written historical documents available on the Lower Neponset River offer a colonial and European accounting of history with clear religious, political, and economic objectives for colonizing the “New World” and offering intellectual and moral support for “taming the savages” and taking Native American lands (Coward 1999, p. 30-31).

Through critical review of those European sources for what is left out – namely the indigenous human impact on the Neponset River ecosystem – and evaluation of more recent Native American archeological and archival evidence, we are reminded that the human relationship with the Neponset River dates back at least 10,000 years and that humans began manipulating the river’s ecosystem and resources (even hybridizing native plants and introducing non-native plants) as far back as 3,000 years ago.

The critical nature of this history also reveals the emergence of important precursors to 20th and 21st century local storylines and interpretive environmental communities along the Lower Neponset River in the early conflicts over the river’s uses, degradation, and even restoration. Above all, looking at the history of the Lower Neponset River through a historic lens places the analysis of contemporary interpretations into a multi-temporal and multi-placed context (Robbins 2007 p. 60-65), and sets the stage for more fully understanding the social construction and cultural embeddedness of current, local interpretations of the river’s restoration.
The Pleistocene Era and Early Human Inhabitants along the Neponset River

Some of the most radical and controversial interpretations of ecological restoration put forward by both scientists and non-experts equate restoration with a “return” to the Pleistocene or a pre-agricultural environment where humans have little or no influence on the ecosystem, and the mega-fauna from the Pleistocene are allowed to repopulate the North American continent (Donlan et al. 2006). A closer analysis of how ecological restoration is interpreted and applied to urban river restoration and management by local citizens must then begin with a glimpse into the Neponset River’s bio-physical environment before humans dominated the landscape.

Geologic History of the Neponset River Valley and Estuary

The current geomorphology and hydrology of southern New England’s landscape and the Neponset River Valley is the result of the “last great ice age” in North America, the Wisconsin Glaciation, occurring between 70,000 and 10,000 years before the present (ybp) (Pielou 1991). During this period, ice extended from the North Pole to 45 degrees north latitude, covering southern New England in an ice sheet approximately one mile thick. The ocean depth was 400 feet lower than today and much of the continental shelf from New York to Nova Scotia was exposed land. As the glaciers melted, icy water began to fill the ocean and slowly flood the continental shelf creating the present coastline (Oldale 1986). Coastal zone modifications between 20,000 ybp and 400 ybp were driven by the rising sea levels and fluvial erosion or deposition (Balco et al. 2002; Gontz et al. 2007).

The Wisconsin Glaciation left its geologic and hydrologic mark on the Neponset Valley landscape. Ponds and other ephemeral and permanent fresh water bodies in the Neponset Valley and the surrounding Blue Hills area such as Ponkapoag Pond and Bog and Houghton Pond are the result of glaciers cutting through the granite and then later filling with melting ice, rainwater and aquatic vegetation as the glacial sheet retreated. As the ice sheet progressed and then retreated, the Neponset River and its tributaries were dammed and diverted to new channels in an ever changing thousand-year dance. Approximately 14,000 ybp the Neponset River was a mile wide and flowed into a five by three-and-a-half mile glacial lake before continuing on its course towards present day Massachusetts Bay and Atlantic Ocean (The Trustees of Reservations 2005).
Paleolithic Flora and Fauna

Between 40,000 and 10,000 ybp, the Pleistocene is also known as the Paleolithic or Old Stone Age period. The prefix "paleo" comes from the Greek *palaioσ* meaning ancient. Since the Wisconsin Glaciation coincided with this time period, the flora and fauna in southern New England were dictated in large part by the ice sheet extent and what it left in its wake as it began to recede about half way through the Paleolithic (Pielou 1991).

As the climate warmed and the glaciers retreated, large herbivorous mammals such as the mammoths, mastodons, musk ox, large beaver, and caribou followed the retreating glaciers northward and eastward to feed upon the tundra habitat. Today, bones from these larger mammals have been found in the bottom of bogs or ponds and hauled up in the nets of fishing trawlers over the continental shelf (Cooke et al. 1993). By 11,000 ybp, the tundra vegetation was replaced by spruce/fir forests, then by pine and birch forests, and eventually by oaks and hickories (Davis 1983). Chestnut dominated southern New England forests from about 7,500 ybp to the early 20th century. Locally, vegetation patterns have been influenced not only by a changing climate, but also by wind (e.g., hurricanes), fire, and other natural disturbances (e.g., ice storms, insect pests, flooding). Over a period of tens of thousands of years, the shift in species composition went from plants and animals with the ability to withstand cold, dry tundra habitat conditions to those able to adapt to the much warmer and likely wetter habitat conditions of the post-glacial environment. The larger mammalian herbivores proliferated during this time. In turn, mammalian carnivores such as the saber tooth tiger moved northward and eastward in pursuit of their mammalian prey.

By 10,000 ybp most of the largest mammals had become extinct. Smaller mammals such as caribou, moose, bear, elk and white tail deer evolved and migrated with the changing landscape. Among the species that were able to adapt to the rising sea levels and climactic changes during the Paleolithic period included anadromous fish species such as shad, salmon, smelt, and river herring. Later arrivals from the south, including the timber rattlesnake, may have migrated up after the ice sheet had retreated.
Humans In and Around the Paleolithic Neponset River Valley

One of the only Paleolithic archeology sites in southern New England, referred to as “The Wamsutta Site,” was discovered in Canton, Massachusetts along the Neponset River in Fowl Meadow (Carty and Spiess 1992) (Appendix D.1). From this site, archeologists have recovered over 2,600 Clovis spear points and various tools, as well as caribou bones, and mammoth or mastodon tusks dating from approximately 10,000 to 12,000 ybp (Chandler 2001). This is the earliest evidence that humans inhabited the Neponset River Valley.

As trees, grasses and diverse vegetation gradually replaced the tundra and the larger animals left the area, human hunters began cultivation of plants and small animals as a more dependable food supply. By about 3,000 BC coastal rivers provided the basis for an expanded diet that included seed crops and native and tropical cultivars, suggesting that there was experimentation in horticulture. Archeological sites indicate a kind of seasonal sedentism focusing on the cultivation of plant food sources along with fishing and hunting (Demeritt 1991; Lavin 1988). Some other human inhabitants developed large permanent towns with satellite communities linked by the trade of exotic non-local raw materials and characterized by the production and trade of finished goods made from these materials. In eastern North America, the landscape of coastal pine forest, swamps, and lakes provided a diet of hickory nuts, freshwater mussels and gourds to supplement hunting. The use of gourds as fishnet floats may have led to their planting and cultivation (Lavin 1988). Selective breeding, or genetic manipulation, of wild plants such as sunflower, sumpweed, and chenopod plants produced ever-larger seeds (Demeritt 1991).

American Indians of the Neponset River Valley

The Massachuset People of the Neponset

Both the words Massachusetts and Neponset are derived from dialects within the Algonquian language family and are a reminder of the Native American people who resided in Massachusetts Bay and within the Neponset River Valley for thousands of years before the first Europeans recorded their expeditions to North America. The Massachusetts tribe’s name came from a description of the place in which they lived - “at the range of hills.” The “hills” are those of the present day Blue Hill Reservation in Milton.
that rises out of the Neponset River Valley to the south reaching 635 feet at its highest point atop Great Blue Hill.

Figure 3. View looking east from Great Blue Hill over the Lower Neponset River Valley towards Dorchester Bay.

The meaning of the Algonquin word “Neponset” is more difficult to assess. The Neponset River Watershed Association, Massachusetts Riverways and other contemporary organizations involved in the management of the river write on their websites and in public documents that the Algonquin word Neponset means “harvest river.” The meaning of Neponset as “harvest river” is a commonly disseminated translation of this Algonquin word, as it was also told to me by members of the Neponset Greenway Council and in preliminary interviews in the summer of 2005. However, this translation is questionable according to Wood (2002), who interprets the word Neponset to mean “a good fall” in the Algonquin dialect. Further complicating the meaning of “Neponset” is this from The History of Milton, Massachusetts: 1640 to 1887 (Anon 1887, Chapter XII: Industries of Milton, p. 357):

I have applied to our Indian interpreter, Dr. J. Hammond Trumbull, for signification of Indian word ‘Neponset.’ But though that eminent scholar was so felicitious in his interpretations of Unquity-quisset he informs me that thus far word ‘Neponset’ resists all analysis.

The Massachuset were a coastal people living in 20 villages along Massachusetts Bay between present day Salem to the north and Marshfield to the south. The tribe was comprised of six main sub-tribes each with an independent sachem, or chief. They practiced a seasonal economy. The basic social unit was a
village of a few hundred related people with living quarters grouped together. Villages were temporary and mobile. They moved to locations of greatest natural food supply, often breaking into smaller units (sub-tribes or family units) and then recombining as the seasons changed or other tribes moved into the area. The sub-tribes that most likely occupied and utilized the lower reaches of the Neponset River from Fowl Meadow to Dorchester Bay were at the time of European arrival those led by the sachems Kutchamakin and Chickataubut (Swanton 1953).

The writings of early European explorers in Massachusetts Bay noted tracts of treeless landscape that appeared to be in extensive agricultural cultivation – many areas in excess of 500 acres. As early as 1524 an Italian adventurer, Giovanni de Verrazano cruised the New England coast and reported that he found the country "as pleasant as it is possible to conceive" with "open plains as much as 20 or 30 leagues (48 - 75 miles) in length, entirely free from trees" and so fertile "that whatever is sown there will yield an excellent crop" (DeCosta et al. 1880; Russell 1980, p. 8 and 13). Samuel de Champlain in 1605 wrote of a similar scene: "All along the shore there is a great deal of land cleared up and planted with Indian corn. The country is very pleasant and agreeable; and there is not lack of fine trees" (Russell 1980, p. 10; Winship 1968). And, in 1616, writing about his explorations of Massachusetts Bay, John Smith wrote that the landscape "was all planted with corne; groves, mulberries, salvage gardens" and he identified the tree species observed on the islands of the Bay and along the coast including, "Firre, pyne, walnut, chestnut, birch, ash, elme, cypresse, ceder, mulberrie, plumtree, hazell, saxefrage, and many other sorts" (Barbour 1986, Table 1). The shoreline of Plymouth that greeted the Pilgrims in 1620 was almost entirely cleared, except for a few scattered trees among the dwellings with family gardens. Likewise, the land where Boston, Beacon Hill, Chelsea and Wollaston are today was open fields, and there was an extensive treeless plain, known as the “Massachusetts Fields,” that stretched throughout Squantum peninsula in Quincy (Dorchester Antiquarian and Historical Society 1859).

By the time Verrazano cruised the coastline, the Massachuset had practiced "slash and burn" farming for approximately 1,000 years. They cultivated many plant types including maize, beans, squash, Jerusalem artichokes, strawberries, cherries, mulberries, peas, grapes, and Chenopodium album (commonly called Lamb's Quarters, White Goosefoot, or Pigweed) (Wilbur 1978). This involved annually burning the land in autumn to create fields for planting (Perry 1996; Mrozowski 1994; Currie 1994). Hutchinson’s
Field (currently owned as public open space by the Trustees of Reservations), above the Neponset estuary in present-day Milton, along Adams Street, was one of these Massachuset planting fields originally used for planting corn by the Native Americans, but then converted to sheep grazing by the colonists from England.

In addition to working the land, the Massachuset utilized the fish, mammals, reptiles, and plants found along and in the marine, estuarine, and fresh water bays, marshes, rivers, streams, and glacial ponds of the New England coastline. Reeds found in the Neponset estuary were used to create mats and roof coverings and the softer plumes of some reeds may have been used medicinally to dress burns and cuts (Heath 1996). To harvest alewife, shad, and other seasonally abundant fish, they constructed fishing weirs along the width of the Lower Neponset River near the estuary.

![Figure 4. Old native fishing weir on Satucket River similar to the type most likely used by the Massachuset people on the Neponset River. Photo by cwohlers.](image)

One of the sites where the Massachuset prepared for and processed this harvest is a small piece of puddingstone-dotted land owned by the State of Massachusetts and known by today’s local residents as “the hummock,” “the Grove,” or “Sachem Point.” (Appendix D.2.) Along the Neponset River, Sachem Point is directly down-river of what the Massachuset called Unquity, meaning “lower falls” in the Algonquin dialect (Wood 2002). This is present-day Lower Mills, Dorchester, and Milton. Unquity would
have been a place abundant in fish and shellfish because of its tidal mixing and an ideal location for setting up a fish weir during high tides and for harvesting shellfish during low tides. When the Massachuset made their summer fishing camps near Unquity, and well into the early 19th century, Eastern white pine, *Pinus strobes*, would have been one of the dominate tree species along the northern edges of the Neponset River from the estuary to Dorchester Bay. Only one of these pine trees remains today near Unquity - dominating the skyline of Sachem Point.

**Early European Contact**

In 1600 there were an estimated 3,000 to 9,000 people in the Massachuset tribe (Mooney 1928). There is no estimate on the number of people in the Neponset sub-tribe, the Massachuset people living immediately along the Lower Neponset River and estuary.

John Cabot may have traveled into Massachusetts Bay and along its coastline as early as 1497. As mentioned above, Giovanni de Verrazano, passed close enough to the Massachusetts coast in 1524 to note the lack of trees on the land. There is also some speculation from Champlain’s nautical maps that in his voyages along the east coast of North America in 1604 he traveled through Massachusetts Bay on his way north towards the St. Lawrence River (Garver 2006). Clear evidence does exist that John Smith made forays into Massachusetts Bay and up the Charles River on his 1614 expedition from Virginia (Smith 1907). Around this time (1619), the Massachuset living in the estuary along the Lower Neponset River traded beaver, mink, otter, fisher, and wolf skins at an English trading post established on Thompson’s Island off the coast of Dorchester Bay in what was to later be known as Boston Harbor (Heath 1996) (Appendix D.3.).

On Smith’s expedition, he and his crew wrote accounts of the “savages” with whom they had traded furs. These accounts made it back to England where they were used in Protestant sermons and in slogans of the Massachusett Colony financiers to recruit new religious “separatists” as well as economic opportunists who sought to acquire property in the new land. The “savages,” as preached about and written in promotional literature for the “new England,” needed to be taught how to farm and most importantly to be taught the “word of God” (Bross 2004). In 1621, seven years after John Smith visited Massachusetts Bay, an expedition of Pilgrims traveled up the coast from Plymouth to the south shore of the Neponset
Shortly after John Smith’s visit to Massachusett Bay, between 1614 and 1619, three separate smallpox epidemics, spread by the English and most likely also French fishermen and explorers, swept through the Massachuset and reduced their population by 75% to between 750 to 1,000 people (Johnson 1995). During this same period, tribes from the south (Pequot) or north (Mohawk) attacked the Massachuset villages, further reducing the Massachuset population (Swanton 1953). Mooney (1928) estimates that by 1631 - as the Puritans began arriving in Massachusetts Bay to found their “New” Dorchester and “New” Boston - only 500 Massachuset survived in the area. Further to the south, when the Pilgrims had arrived they found most of the southern Massachuset villages already recently abandoned (Sultzman 2006). In 1633 another epidemic of smallpox struck the Massachuset tribes living in the Neponset Valley and north around the Bay. It is estimated that between 1616 and 1630 smallpox claimed three-quarters of the Massachuset population (Swanton 1953). With their population numbers greatly reduced, the newly arrived Europeans set about claiming ownership to the land and waterways and teaching the “savages” the “word of God.”
English Settlement and Control of Massachusetts Bay

A critical look at the colonial and industrial history of the Neponset River reveals significant environmental, technological, and social changes that precipitated shifts in how humans valued and related to the river and its natural resources. These shifting interpretations of the river did not occur instantaneously in time or homogenously in space, thus specific conflicts over allocation and use of river resources took place over a period of time and at specific critical locations where intersecting uses and interpretations of the river met. These angry, and sometimes violent, conflicts precipitated interventions by the state’s legislative and judicial systems through new laws and precedent-setting legal cases. In the 17th, 18th and 19th centuries, environmental and technological changes along the Lower Neponset River resulted in several, often longstanding, social conflicts. These conflicts arose from such changes, and the manner in which they were or were not resolved, are important to understanding the roots of interpretations of the Neponset River’s restoration and management in the 20th and 21st centuries.
Across the North Atlantic Ocean in Dorchester, England, Reverend John White had been teaching a new “Puritan” message of Christianity that disavowed the English Church and had attracted followers from Dorset, Somerset, and Devon. In spring of 1630, 140 of his followers set sail for North America aboard the Mary and John to start a plantation of Puritans who could sow their own land, teach the “true” word of God to the “savage” Massachuset people, and start a community of Christians. Once reaching Massachusetts Bay, they settled on a hill overlooking the Bay at a place called Mattapan by the Massachuset, meaning “resting place” or “end of portage” in the Algonquin dialect. The English named this new plantation “Dorchester” (Ackerman 1929).

During this same period, in the town of Boston in County Lincolnshire, England, along the Witham River, Reverend John Cotton, vicar of St. Botolph’s Church, began sermonizing on the “evils” of the English church (Thomas 1974). Boston, England, had been a leading port in the 13th century – serving as a primary port of the Hanseatic League. But as a result of 15th century siltation at the mouth of the Witham River leading to the North Sea and destructive floods, the port had fallen into decline and trading in England’s Boston had collapsed. Like Reverend White from the English West Country, Cotton began preaching a vigorous form of Puritanism. However unlike White’s followers, Cotton’s followers were subject to religious persecution by the English Church and jailed for their beliefs. In March of 1630 the first of these “dissenters,” led by John Winthrop from the nearby town of Suffolk, set sail in the Arbella to cross the North Atlantic and settle the Massachusetts Bay Colony alongside White’s followers. The Arbella passengers settled north of the Neponset River and called their new settlement “Boston.” Reverend Cotton followed his parishioners to North America in 1633 and became vicar of Boston, Massachusetts, for 19 years until his death in 1652 (Thomas 1974).

The mission to the new continent had been “sold” to the English settlers by means of sermons on religious piety, availability of land for harvest, and conversion of and ministry to the “savages.” However, upon arrival in the new land, much of what the English learned about surviving on the land in Massachusetts was learned from the “savages,” albeit reluctantly and selectively. While the earliest colonists observed and learned from the Massachuset use of seasonal and rotating slash and burn techniques for planting corn, squash, tobacco, and other crops and made note of the abundant fishing and
hunting lands surrounding the Neponset, full-scale adoption of the Massachusetts’ seasonal way of life was never widespread or condoned. Such an itinerant way of life was seen to go against both their religious and European legal traditions that dictated “improvement of the land” from a *vacuum domicilium*, or wilderness, in order that lands could be appropriated from those who “avoid labour” through living by hunting (Lewis 1997, p. 11). However, canoes, expertly crafted and steered by the Massachuset, were adopted by colonists as a primary means of navigation into smaller waterways such as the Neponset and Charles River (Bartlett 1984). A high number of settler drownings from canoes along the Charles River led to initiatives by local settlements as early as 1661 to license canoes: “because of the many drowning from the craft which the white man had not learned to manage, the town voted that no person in this town is to make or to have any canoe in any pond or river except allowed by the selectmen, under penalty of 10 shillings fine” (Perry 1996, p. 22).

While religious purity and escaping the persecution by the English Church appeared to be the primary motivator of the New England settlers who came to Massachusetts, the founding of the Massachusetts Bay Colony was above all an economic and business undertaking of financiers in England. And those financiers knew how they expected the revenue from this new land to be obtained. As John Cotton wrote in correspondence to John Winthrop, “attention to fishing” should be “the first means to an income” (Ellis 1888).

**English Control and Enclosure of Neponset Lands and Waters**

As colonial leadership sought more sources of revenue to send to investors in England there was a gradual shift in how the first English who initially settled Dorchester and Boston interpreted the Neponset River in their lives. Transatlantic trade and colonial self-sufficiency became the dominant portals through which the leaders of the new colony viewed, and began using, the environment and its natural resources. With their population numbers greatly reduced by disease and intermittent warfare with other tribes to the south, north and west, the Massachuset people living in the Neponset River Valley lost their ability to negotiate with the English settlers for the rights to the natural resources they depended upon for survival.
In the end the first peoples of the Blue Hills and Neponet Valley became subject to the European custom of land and natural resource ownership and privatization, or enclosure.

Before the English, the Massachuset believed all land and water to be held in common and sacred and that ownership rights were only valid for the animals and plants one harvested or produced from the land and water (Cronin 1983). In 1659 the Massachuset were displaced from all lands east of the Blue Hills. The lands west of the Blue Hills were placed into European ownership and became part of the town of Dorchester under what was called the “New Grant.” The “New Grant” split the lands on the northwest and southeast sides of the Neponset River for the use and maintenance of the “ministry” from Dorchester. This deal gave all lands west of the Blue Hills to the town of Dorchester and in exchange the Massachuset were granted 6,000 acres around Ponkapoag Pond (Appendix D.1.) (Anon. 1667; Anon. 1698). The Massachuset were placed under the “guardianship” of Dorchester and its colonial leaders and re-located to areas around Ponkapoag Pond where they were taught the English language and Puritan values and behaviors. After all, the Massachusetts Bay Company charter, signed by King Charles I in 1629, had as one of its principal objectives to "win the Natives of the country to the knowledge and obedience of the only God" (Morrison 1996).

Transforming the “Meaning” of a River

The country furnished springs, brooks, and water-power which they were not slow to utilize. The swarming myriads of fish were the chief motor in starting the round of exchange. The profit of early corn planting was large, especially when the crop was converted into beaver through trade with the Indians, beaver being in demand for use as currency in all transactions. (Hazard 1899)

Owing much to what they had learned from the Massachuset, the early English settlers valued and used the Neponset River as a direct source of food and revenue (alewives, striped bass, eels, tom-cod, mussels, waterfowl, furbearers) and of raw materials (fur pelts, wood, shells, fertilizer) for subsistence and trade. However, from oyster cultivation to feeding of their livestock to water-powered mills, the English settlers also brought their own sense of what the river meant and how its resources should be valued and used based on European aesthetics and traditions. Early settlers immediately set upon using the Neponset River and estuary to satisfy their survival needs, values and transatlantic trading interests.
One of the first uses that set the English apart from the Massachuset Indians was their use of the river’s salt marsh grasses and fresh water meadows as an abundant source of hay for feeding their domestic livestock.

The early settlers of Dorchester, as we know, evidently were attracted by the salt marshes, which offered food for their cattle, and by the Neponset River, which has been identified with the whole history of Dorchester down to the present day. (Hazard 1899)

The availability of such abundant hay for their cattle was one of the primary reasons given for the settlement of some of the English along the Neponset River and abandonment of plans to settle along the Charles River (Dorchester Antiquarian and Historical Society 1859, pp. 21 and 23).

Beginning in 1633, the English settlers further diverged from the Massachuset in their use of the Neponset River when Israel Stoughton was granted permission by the town of Dorchester to place one of the first water powered mills in the North American continent at the lower falls (Unquity, or current day Lower Mills, Milton) (Dorchester Town Record, Monday 3 November 1633; Dorchester Antiquarian and Historical Society 1859, p. 33-34). In January 1634, and shortly after construction of his mill, Stoughton was granted permission by the town to construct and operate a fishing weir adjoining his mill and crossing the Neponset River along the “horse bridge” that had been constructed across the falls in that same year (Anon. 1887; Dorchester Antiquarian and Historical Society 1859, p. 34).

In 1634 the General Court granted to Israel Stoughton a right to build a weir below his mill, upon condition that he was to sell the alewives at five shillings per thousand and as much less as he could afford. Of the quantity of alewives then taken we have no account, but from the price we should think them very plenty. In 1681 the town granted Ezra Clap and Thomas Swift liberty to catch fish at Neponset and to make a stage for the purpose. (Hazard 1899)
The town specified that “none shall crosse the river with a nett or other weare to the prejudice of the side weare,” granting exclusive harvest rights and essentially “privatizing” this portion of the river (Dorchester Town Records, January 1634). The Stoughton water mill, the first built in New England to grind corn, along with the Stoughton fishing weir that granted sole ownership to Israel Stoughton of fishing rights and income, began to slowly transform what the river meant to people and its place in their everyday lives. With subsequent mills (a gunpowder mill was built near the grist mill in 1665), the Neponset River was physically changed from a completely free-flowing and tidal river providing raw materials and subsistence for public consumption and revenue, into a primary power source for manufacturing of secondary materials and non-perishable goods under private rights to Israel Stoughton granted to him by the town of Dorchester.

Aliens and Natives: From Oysters to Fowl Meadow Grass

The first record of an intentional non-native species introduction to the Lower Neponset River is from the early 1700s, when Governor Hutchinson had a boat full of oysters sent from Virginia to try and propagate them in the river. The Governor had recently moved his residence to Milton Hill to be closer to the mills, and believed as he overlooked the Neponset estuary that it would be an ideal site for oyster
cultivation. Financially, the endeavor was a failure, but the presence of oysters in the vicinity of Gulliver’s Creek and adhering to rocks at the place where the Dorchester and Milton Branch railroad crossed the Neponset River was noted up until the 1850’s (Dorchester Antiquarian and Historical Society 1859).

Along the current Boston/Milton/Dedham line, including the Boston neighborhood of Readville and Fowl Meadow (Appendix D.1.), European settlers also valued the river and its environs as a pasture, waterfowl hunting ground, fresh water source, and even a place for natural history investigations. Early English settlers had set up farms and orchards on lands acquired through the “New Grant.” “Hubbard’s Bridge” was built below Fowl Meadow across the Neponset River between Milton and what at that time was Dedham. This bridge was for the benefit of farms on both sides of the Neponset (Milton to the south and Dedham to the north), including a large parcel inherited by Israel Stoughton’s son-in-law. In 1849 a new stone bridge was erected at the site of Hubbard’s Bridge and became known as “Paul’s Bridge” after the owner of the adjacent lands on the Dedham side of the river (Anon. 1887).

In addition to farming and the harvesting of alewives directly from the river during the spring run, the river meandered through an extensive freshwater meadow in this location, making it an ideal site for

Figure 7. Paul’s Bridge in 2007. (By gnasher17/flickr.)
hunting waterfowl, cultivating hay, and for the more privileged settlers, pursuing botanical and natural history studies.

In 1786, Reverend Mennasah Cutler was a prominent Dorchester resident and one of the first members of the United States legislature, wrote a letter to Dr. Jonathan Stokes, a renowned British botanist, about the importance of the Fowl Meadow to the early Europeans of Massachusetts and its unique botanical contribution. In his letter he spoke of the importance of “fowl meadow-grass” to the early emigrants from England:

*Fowl meadow-grass*… was certainly in the country when discovered by Europeans, for the first emigrants from Europe, who landed at Plymouth… found it, the second summer, in a very large meadow, in Dedham… It is said not to have been found growing native in any other meadow in this part of the country, but has since been cultivated through the N. England States. This meadow afforded the first settlers in that vicinity a great plenty of good hay, and still exceeds any other in the quantity it produces without the least cultivation. (Anon. 1888, p. 263-265)

In his letter, Cutler further notes that fowl meadow grass seeds, in addition to being cultivated throughout New England, had also been sent to Europe and that cultivation of the grass was underway in France.

By the early 1700s the Neponset River was serving as an engine of forward progress and a path towards self-sufficiency for the Massachusetts Bay colony. By the mid to late-1700’s the resources supplied by the river offered a means for English land owners to maintain private control of property and build economic and eventually political independence from Great Britain. In this way, the Neponset River played a pivotal role in creation of an industrial-manufacturing base for the new United States, while maintaining English and European values regarding private property ownership and appropriate uses of the land.

Water for Fish, Water for Factories: Early Conflicts Over River Resources

Accounts of the early fisheries are meager; but history says that the future of the country was assured by merchants and traders who came to Dorchester, trained in Dorset, Devon, or elsewhere, and were the first to set up the trade of fishing. In early times the Neponset River was full of fish of various kinds, which afforded a large revenue to the early settlers, and contributed in no small degree to the support of the inhabitants… (Hazard 1899)
New industry and manufacturing ventures along the Neponset River moved the Massachusetts Bay Colony forward economically and they emboldened a new sense of independence. Manufacturing, and the commerce based on it, eventually inspired a people to begin imagining a United States free of English rule. Despite this transition, however, many of the new Puritan immigrants continued to rely on supplemental fishing and hunting in the Bay, estuary and freshwaters of the Neponset, as well as in the forests of the Blue Hills, for feeding and clothing their families either on a subsistence basis or as a primary source of family income. One prominent 18th century English settler, Samuel Pierce, who had property along the Neponset estuary wrote in his diary:


The building of Stoughton mill dam, granting of exclusive fishing rights at the lower falls, and placement of even more dams along the lower river and its tributaries to harness water power for various types of manufacturing disrupted the up-river migration of anadromous fish species, such as alewives and American shad that relied on the upper river for spawning. Six dams were recorded in 1727 (Dorchester Antiquarian and Historical Society 1859), and by 1730 seven dams, most for paper making, were in operation from Lower Mills to Mattapan (Wallingford 1951) (Figure 8) (Appendix D.4.).

Figure 8. Paper mills along the Lower Neponset River, circa 1730 (Wallingford 1951).
Due to declining catches of alewives and a growing animosity between the owners of water-powered manufacturing mills and the family homesteaders and agriculturalists, by 1746 the up-river towns of Stoughton, Sharon, and Canton (Appendix D.1.) began petitioning the Massachusetts General Court to require the lower river towns, and mill owners, to build “fish-gates” through the mill dams. The residents of Milton objected on grounds that this would reduce the production of milled grain (Dorchester Antiquarian and Historical Society 1859). In 1760, the Court of the General Sessions of the Peace decreed that the decline in fish catches was so dire that a public committee was formed “to restore Alewives to the Neponset.” Thus began government involvement and local debate over the meaning and value of the Neponset River and its restoration that today enters its third century.

There are accounts from the 1760’s of damage to the foundation of mills and dams at the Lower Mills in Milton attributable to “evil-minded persons.” Given the conflict over different uses of the river between agriculturalists and manufacturers at the time and the blame placed on the factory proprietors for declining fish harvest, the damage to mill property may be attributed to disenfranchised and angry upriver resident farmers and their supporters (Dorchester Antiquarian and Historical Society 1859).

In 1789 a law was passed by the Massachusetts legislature that mandated the construction of fishways at all dams along the Lower Neponset. However, this law passed by the General Court was never executed because the proprietors of the mills named refused to pay for the fishway alterations. This prompted another petition by the upriver towns in 1791 against two other mill owners. This time the fishways were created, “eight feet wide and within eighteen inches of the mudsill”, and factory owners were instructed “to keep them open from the 20th of April to the 1st of June” (Dorchester Antiquarian and Historical Society 1859 p. 590).

However, in that same year (1789) a new mill and dam, known as Sumner Dam, was constructed along the river between Milton and today’s Boston neighborhoods of Mattapan and Hyde Park.
It had no fishway (Dorchester Antiquarian and Historical Society 1859). And, in 1799, after a hurricane destroyed most of the dams along the lower river, the owners of the lower-river factories that produced a wide variety of products by that time – including corn meal, gunpowder, paper, leather goods, milled timber, and chocolate from cocoa beans imported from the West Indies – rebuilt the lower dam without a fishway. These acts of non-compliance with the 1789 fishway law prompted the residents of the towns of Sharon and Canton to send a group of people into the lower-river area in Milton and Dorchester to open places in the dams. The mill proprietors and their workmen showed up to face the residents and protect the dams against destruction (Dorchester Antiquarian and Historical Society 1859, p. 590).

In 1805 the legislature was again brought in to defuse the conflict. The legislators appointed a special committee to investigate the case, make the necessary alterations to the dams that they thought necessary, and to assess the expenses to the upriver towns and the mill proprietors. One member of this committee decided it necessary to break through the Lower Mill dam owned by Edmund Baker and Daniel Vose. As previously agreed to by the commission, the upriver towns (Stoughton, Sharon, and Canton) and Baker and Vose were charged with the expense of creating this fishway. When Baker and Vose refused to
pay their part in the fishway creation, the towns (having paid their part of the costs for creating a fishway through the dam) filed a law suit (Stoughton et al. vs. Baker et al.) to compel the payment from Edmund Baker and Daniel Vose (Tyng and Rand 1865, pp. 521-530).

One of the arguments used by the defendants in Stoughton et al. vs. Baker et al. was that the dam was “ancient.” They argued that:

…having derived the title from one Israel Stoughton, who acquired his right thereto in the year 1633, by grants to him from the town of Dorchester, in which the land then was, of a mill privilege, of a wear adjoining his mill, and an exclusive right to take shad and alewives between the wear and the bridge, with a condition that he was to sell the alewives there taken to the plantation at five shillings the thousand, and other fish at reasonable rates. (Tyng and Rand 1865, p. 521-530)

The defendant went on to argue that this “ancient” title was granted to Israel Stoughton on the grounds that he “was not to transfer the mill to any one without the consent of the plantation first.” They also noted that:

…no fishway was ever made through the said dam until the year 1789, when the fishway was made… pursuant to a resolution of the General Court, passed February 17, 1789, at the expense of the said towns of Stoughton and Sharon, on whose petition that resolution passed…. (Tyng and Rand 1865, p. 521-530)

The towns lost the suit against the mill proprietors on the grounds that a single committee member had no individual authority to cause a fishway to be built without the rest of the committee. The Lower Mill dam was re-built without a fishway around 1808 (Tyng and Rand 1865; Dorchester Antiquarian and Historical Society 1859 p. 591).
During the time (1798) the Neponset River fishway controversy began, mill proprietors along Mill Creek (the present-day Mother Brook) and the Neponset River incorporated themselves as: “The proprietors of mills on Mill Creek and Neponset River, for the purpose of protecting, defending, and recovering their common rights” and to create a new system of valuation of water privileges, dams and other “improvements” to the waterways for the purpose of manufacturing (Dorchester Antiquarian and Historical Society 1859, pp. 640-641). In 1809 the final corporation was organized and Edmund Baker was chosen as the clerk and treasurer (Dorchester Antiquarian and Historical Society 1859).

In reviewing the historical record, there appears to have been a clear difference in how the river was interpreted between those who valued the Neponset River as a place of manufacturing, industry, and economic progress, and those who valued the Neponset as a source of fish and place of agricultural production and subsistence. Conflicting interpretive differences gave rise to disputes over the ownership and use of the Neponset River’s waters, resources, and adjacent lands. Specifically at issue were the land-use and ownership rights granted to mill owners by the state government, and what the implications of this
landownership and tenure pattern might mean for the ecological and agricultural productivity of the river and adjacent lands, as well as for residents without ownership rights. Eliph. Pond, surveyor for the Town of Dedham, wrote angrily of this conflict in his notes on the 1795 survey map of Dedham:

This town, with others adjacent, exhibits the desolating effects of an aristocracy established in the bosom of equality, by the first Planters from Europe, which has gradually grown up to defy the powers of Government, to carry into effect the most promising enterprises of agriculture, and dares to arrest the benevolence of the Creator that still would send a salutary change of food every Spring from the depths of the Ocean to the numerous towns watered by the Rivers Charles and Neponset on their various Ponds and sources… But as the lucky favorite of a Native often imperceptibly becomes their Tyrant, so now the despised unincorporated proprietors of those intervals and the settlers on those Rivers find their natural rights stolen from them, and their best property at the mercy of one or two Millers, still the lucky favorites, and likely to remain so long as the rage for Factories at every place, whether others sink or swim, continues the rage of Government. (Massachusetts State Archives, Volume 15, p. 1973)

In the 18th century, the two central debates concerning the value and meaning of the Neponset River were over: 1) the modification or removal of mill dams in order to “restore” anadromous fish for the use of up-river residents, and 2) the modification or removal of mill dams to ensure seasonal river flows for agricultural uses up-river. In the 21st century, debates over the dual values and meanings of the Lower Neponset River as both important anadromous fish habitat and as an industrial site have raged on. And, while the agricultural uses are no longer relevant in the highly urbanized and suburbanized Neponset River Valley, concerns remain over flooding and the dangers posed by hazardous chemicals and trash now found in the river’s sediment and water column.

Engine of Progress: Mother Brook, Railroads, and the “Rage for Factories”

By the early 1800s the shift from the interpretation of the Neponset River, both in the lives and imaginations of local residents as well as in the committees and chambers of governments, from a source of direct sustenance and harvest to an engine of progress and source of power was well underway. Local disputes over water for fish and the irrigation of crops and livestock, and water for generating power for the numerous mills had become commonplace.

In 1639, settlers in Dedham, eager to tap into the mill trade, cut a one-mile long canal, “Mill Creek,” between the Charles River to East Brook, a small tributary of the Neponset River (Appendix D.5.). The entire man-made connection, today known as Mother Brook, is three and a half miles long and falls about 50 feet on its course from the Charles to the Neponset allowing for the necessary waterpower that created a manufacturing corridor along its path (Worthington 1900). This new input of water from the
Charles River into the Lower Neponset River not only changed the bio-physical characteristics and flow regime of the Neponset, it also clearly favored the “first Proprietors of mills” over the “unincorporated proprietors” who still valued the river as a source of fish, grain, and pasture:

The pretended grants to the first Proprietors of mills in this Country is construed into a monopoly of the common highways of nature, and in some instances, of the very fields that produce the grain for grinding which the Mills were first erected. The ardor of industry is dampened to a very grievous extent by drowning those intervals which before the obstruction by Mills afforded a rich supply of hay and pasture and with no extraordinary labor, or little different construction of dams, or even without labor or different construction, if the mill owners would be restricted from anticipating evil before they feel it, and not suffered to stop the water ’til a scarcity happened, or it had fallen a certain number of inches below the surface of the meadows, the biggest part of them might be restored to an inexhaustible source of wealth of arable [land], or fatten thousands of cattle annually instead of being the nurseries of vermin and reptiles. (Anon. 1795, p. 1973)

Hand in hand with this shift came innovation in the transport of raw materials and manufactured goods to and from the factories. The use of railroads for commercial transport became common; the first being the Granite Railway in 1826 (Appendix D.3.) (Humphrey 1992). The Granite Railway was built to carry granite from the granite quarry in the town of Quincy to a wharf in the Neponset River estuary where the granite was then loaded onto ships for transport to build the foundations of many of the buildings in Dorchester, most notably the Bunker Hill Monument. Increase in the granite business created the need for a more direct route across the Neponset River to Boston. So in 1837 the “Granite Bridge” across the estuary was built (Appendix D.3.).
By 1847 the rail lines not only ran across the river, but also ran parallel to the Neponset River into Lower Mills, where they were used by the Walter Baker Chocolate Company, and upriver into Mattapan (then called “Upper Mills”) (Anon. 1987). Routes along the Neponset were initially part of the Milton Branch of the Old Colony Division of the New Haven Railroad and carried freight and passenger rail cars. The largest railyard in the Northeast (Appendix D.5.), operated by the Boston and Providence Railroad, was located farther upriver in Readville, within the Fowl Meadow area of the Neponset River.

Like the dispute between mill operators and agricultural property owners over “ownership” of the river’s water and disruption of surrounding grasslands and wetlands, the controversy over granting of land and right of way along the river for railway use also brought out different interpretations of the Neponset River landscape, including the first documented concern over public safety adjacent to the river. In 1890 the Old Colony Railroad sought to extend the freight and passenger rail lines from its terminus at Mattapan Station to connect with the Boston and Providence Railroad in Hyde Park (Appendix D.5.). However,
because the railroad company’s petition was for a street-level crossing of Blue Hill Avenue, it was deemed a public safety hazard by the Mayor, and at his urging, the Suffolk County aldermen denied the petition, stating: “The convenience and safety of the public is an indefinite but very important consideration, upon which it is difficult to place a value” (Boston Daily Globe 1890b).

The water of the Neponset River continued to be used for transportation of goods and people, both below the several mills at Lower Mills and above the mill dams crossing the river in Mattapan and Hyde Park. The Godfrey Coal Company made regular trips from the coal yard in the Neponset estuary upriver to Lower Mills in Dorchester beginning in the late 1800’s. The last coal boats were piloted up the river to Lower Mills in the 1920’s and 1930’s3.

Further upriver, a small river steamboat for transporting people and goods, named Neponset was successfully launched on July 24, 1875, from wharves near the Fairmount Avenue Bridge in Hyde Park. The Neponset is recorded in the Hyde Park Library archives as one of the first steamboats ever built to run a river for transporting goods and possibly people (Norfolk County Gazette 1875).

Fishways Revisited

In 1873 the Commission of Inland Fisheries, set up to monitor and report to the governor and State legislature on the status of Massachusetts’ fisheries resources, noted in its seventh annual report that the statewide harvest of alewives and American shad had increased, and it attributed this to the increase in the number of fishways being constructed in alewife and shad rivers (Boston Daily Globe 1873). Given that fishways were seen as the leading reason for the increase in alewives and shad, the Commission’s 1873 report recommended more construction of fishways and included various methods of constructing fishways.

3 ID18Interview1-101807
But the reality on the Neponset River, both in terms of fish harvest statistics and the construction of fishways, told a quite different story. No alewives had been officially recorded harvested from the Neponset since the mid-1700’s. And, after the courts found in favor of Baker and the mill proprietors in the 1805 Stoughton et al. vs. Baker et al. case, no new fishways had been constructed along the Neponset River to allow for the return of anadromous species.

The mere presence of dams is not dangerous. Only when they are unequipped with fishways, or are not opened during the spring run, do they become a menace. Properly supplied with adequate passageways, dams would never have exerted a pernicious influence upon the alewife fishery. In nearly all instances the laws contained specific provisions for fishways in dams, but frequently these provisions were modified or repealed through the influence of the mill owners. (Belding 1920)

In fact, it appears the alewives (and shad) had ceased to “naturally” occur in the river sometime before the beginning of the 19th century. Around 1805, during Stoughton et al. vs. Baker et al., one of the arguments the defense made for the mill proprietors not having to pay for a fishway at the Lower Mill dam was that there had not been a wild, non-stocked alewife on the Neponset River for more than 50 years (circa 1750). The defense for the mill proprietors argued that the towns operated on “speculation for a good” since, “there had not been a fish of the species which these proceeding were intended to protect for more than half a century, except such as had been carried in tubs, &c.” (Tyng and Rand 1865, p. 526)

References to stocking rivers with alewives, shad, trout, and salmon are found throughout the Commission reports and State legislative sessions during the 1870’s (Boston Daily Globe 1877a). These
“artificial,” or stocked, fisheries replaced or enhanced many of the “natural” fishery runs in Massachusetts by the early 20th century (Belding 1920).

A 1920 report by the Massachusetts Department of Fish and Game recognized four factors which had led to the decline in alewives: 1) destruction of fresh water spawning grounds; 2) obstructions, such as dams, which prevent alewives from passing to the spawning grounds; 3) pollution of streams; and 4) overfishing resulting from unwise regulation (Belding 1920). This report concluded that there was no possibility of development, or commercial “restoration,” of the Neponset River alewife fishery due to both the obstructions along the river’s course and pollution.

Pollution

Dams for manufacturing purposes had continued to be built along the Neponset and waste from these manufacturers was continually being dumped into the river’s waters throughout the 19th century. In 1887, the *Boston Daily Globe* published several stories on a lawsuit known as the “Bird-Lewis Case” (*Boston Daily Globe* 1887b, 1887c, 1887d). Bird-Lewis was the first legal case in which a trial by jury was carried out to decide if manufacturers were responsible for the chemical pollution of the Neponset River. A jury of the Norfolk Superior Court of Dedham heard the case brought by F.W. Bird “and others” against E. Frank Lewis, woolen mill proprietor, for pollution of the Neponset River from 1881 until at least 1885. Farmers and a Boston chemist testified as witnesses for the prosecution. Testifying as witness for the defendant were other mill owners. The jury failed to reach a verdict on the case, but the *Boston Daily Globe* noted that: “This trial has been a novel one, the suit being for alleged pollution of the Neponset river, and the expert testimony has brought to light some facts unknown to science” (*Boston Daily Globe* 1887d).

Complaints about pollution and trash in the river appeared in letters to the editor of local periodicals beginning in the late 1800s. The following excerpt is from a letter to the editor of the *Norfolk County Gazette* written by a resident of Hyde Park in 1894:

Habitual use of the Neponset River as dumping place for much or all of refuse, covering its surface with paper and other floating debris (the writer has seen old mattresses float placidly down the stream, apparently seeking rest they had for generations perhaps furnished to tired humanity) it makes one who delights in beauties of nature and condemn any unnecessary disfigurement, eager to ask what can be done to prevent continuation of such practices. The river is the greatest of our many natural attractions of our town… (*Norfolk County Gazette* 1894)
This one concerned Hyde Park resident attributed the pollution to garbage from households and the factories and felt it was a disturbance to the “beauties of nature” that the Neponset River represented — an argument for cleaning the river not only on public health grounds, but also on aesthetic grounds.

Despite the public concern, there was no comprehensive action taken by the State authorities on curbing pollution until 1902, when it was noted in a local newspaper “that matters are well under way in legislature looking to stoppage of pollution of stream” (Hyde Park Gazette 1902a; Neponset River Watershed Association & Executive Office of Environmental Affairs 1997).

Public Health and Safety

Marshes and flooded fields throughout the Massachusetts Bay area were targeted for filling (known as “improvement”) as a danger to public health. Not only were the salt marshes and “flatlands” of stagnant water seen as a source of disease, but coupled with a lack of sewerage and no common waste water collection or treatment facilities, people disposed of human and animal wastes in the streets and smaller waterways where they ran off into larger waterways, such as the Neponset River.

In the 1890’s, an outbreak of malarial fever upriver of Mother Brook, and especially in Milton, Hyde Park, and Dedham near Fowl Meadow (Appendix D.5.), was interpreted by local residents as a sign that the Neponset River was a threat to public health and that something should be done by the Massachusetts and local Departments of Health to remedy the situation. Residents complained of “foul odors” emanating from the meadows and the blame was laid on sewage from Boston and decay of vegetation.

One of the people to speak before the Board of Health regarding the malaria cases and bad odors from the Neponset River was Mr. Charles Sumner. He said further evidence of the decline in the river in the past few years could be found in the decline of the fish populations in the river (Boston Daily Globe 1895). The General Court of Massachusetts directed that the state commissioner of health investigate these concerns and evaluate the Neponset River channel as a possible source of disease both in the Fowl Meadow area and from the dam at Mattapan Mills in Hyde Park (also known as the Tilestone-Hollingsworth Dam) downstream to the Walter Baker Dam (Secretary of the Commonwealth 1915, p. 436-438; Goodnough 1913).
As a result of these concerns that stagnating water in the Fowl Meadow and other areas above the Baker dam was causing health problems, the State authorized “improvements” to the Neponset River at Fowl Meadow beginning in 1911. These “improvements” included dredging the river’s channel to deepen it from the Town of Canton to Paul’s Bridge, ditching to allow drainage of the Meadows into the river, use of the dredged material to raise the elevation of the Meadow to further prevent flooding, and allowing for increased flow of water through the Mattapan Mills in Hyde Park (The Commonwealth of Massachusetts Department of Health 1916).

Accidental and suicide drownings in the Neponset River, both in the estuary and in the river upstream from Lower Mills, ranged from at least one a year from the 1600s (Hazard 1899) through the twentieth century (Boston Daily Globe 1882, 1878, 1903). In an attempt to reduce the number of people who drowned each year, in the 1930s State and Boston officials from Hyde Park responded to this public safety concern by erecting fences at strategic locations along the river where the banks were most steep and where railroad tracks ran adjacent to the river (The Boston 200 Corporation 1976).

Re-Creation and the Metropolitan Park System
Recreation of some sort every human being must have, if he would thrive. He claims it as Nature’s law. (Brooks 1855)

With the advent of increased industrialization and the move away from agricultural activities, more and more people began to acknowledge the importance of engaging in activities or experiences in which they could “re-create” themselves. Hence the term, “recreation,” arose to capture the essence of this process. These activities typically involve getting away from the daily toil and grind of life for relaxation and rest.

Water has always provided opportunities for recreation, and the Neponset River is no different. The more wealthy, powerful, and “aristocratic” residents with homes built along the southern banks of the Lower Neponset River in Quincy and Milton owned sailing boats which they launched into the river’s estuary for sailing among the coastal islands and bays beginning as early as the mid 1700s. By the late 1800s in Hyde Park, small sailing vessels, canoes, and tub boats were a constant presence on the Neponset River, especially during Fourth of July races and regattas (Norfolk County Gazette 1890).
Towards the middle of the 1800s, however, the river also began to serve as a place of public recreation to the burgeoning population of immigrants from Europe, as well as the southern United States, who came to Massachusetts seeking jobs in the growing number of mills and factories along the river:

Nothing appears to be better settled than the fact that a population living under urban conditions, amidst the incessant activity, the noise, the confusion and the excitement incident to city life, must, for the maintenance of its health and the perpetuation of desirable types of humanity, be afforded frequent opportunities for the relaxation of the strain which these conditions of life impose: and these opportunities are best found in the means of escape into more natural and agreeable surroundings. (*Boston Daily Globe* 1893)

During the winter months of the mid- and late-1800’s, in addition to ice skating on the river, near Lower Mills and in Fowl Meadow and the mill ponds of Mother Brook, Sunday horse sled races became a tradition along River Street in Mattapan and Dorchester Lower Mills (Mackin 1888a).

![Figure 13. Circa 1890 photograph of horse-drawn sleigh along River Street. (From Dorchester Historical Society.)](image)

Each Sunday, as long as the weather allowed, Boston’s wealthier residents would come to show off and compete in friendly sled-races with their most prized horses along River Street paralleling the Neponset River (Appendix D.4.). These activities were important social and political events. The *Boston
Daily Globe from the 1870’s to the 1890s faithfully listed who was in attendance at these races, both riders and spectators, and the characteristics of the horses being raced (Mackin 1888a, 1888b, 1890).

The Neponset River was also the site of annual amateur rowing races in the late 1880s until 1900, sponsored by the City of Boston and hosted by the Neponset Rowing Club. Crews in sculls, workboats, tubs, individual swimmers, and even dogs would race between the Neponset and Granite Bridges (Appendix D.3.) (Boston Daily Globe 1888, 1890a, 1891b, 1892a, 1892b).

In the 1890s in the current Boston neighborhood of Readville and town of Dedham, the site of a former Civil War encampment and smallpox hospital and, later, the Norfolk County agricultural fairgrounds, was transformed into one of the most notable harness race tracks of the late 19th and early 20th centuries. People of all social classes came via train to the Readville train station to walk to the crowded grandstand to watch their favorite horses and riders compete for money and fame (Appendix D.5.) (Boston Daily Globe 1899; Barrett 1966).

By 1893, the population in the metropolitan area of Boston, including the 12 cities and 24 towns “served by the system of local, suburban or accommodation trains on the railroads terminating in Boston” totaled nearly 900,000 people (Boston Daily Globe 1893). The natural abundance of waterfowl and fish in the Neponset River and estuary was under increasing development pressure. Thus, in 1893, under the leadership of Charles Eliot and Sylvester Baxter, a report was issued by the new Metropolitan Park Commission to designate a Metropolitan Parks District that would acquire and maintain tracts of undeveloped land within the Boston metropolitan area for the benefit of public health, recreation, and nature protection for current and future generations. The aquatic centerpieces of the Metropolitan Parks’ initiative were the Harbor Islands of Massachusetts Bay and the Charles River:

…for the Charles river basin has become a problem of health, which through an increasing death rate, will soon or late, force its own solution upon even the most unwilling community…Mr. Baxter devotes considerable of his report to the Charles river, and he insists that both public health and public good demands that it shall be taken and made into a recreation resort.

However, the Neponset River estuary also benefited from the Metropolitan Park Commission in 1893 when the salt marsh was acquired for the enjoyment of the public, and the State enacted legislation to protect it from future development.
At the beginning of the 20th century further upriver, a Mr. Frank T. Viles who lived in a house along the banks of the Neponset River in Hyde Park established a canoe service that would take people up and down the Neponset River from the paper mill to above Paul’s Bridge into Fowl Meadow. His advertisement from the September 12, 1902, *Hyde Park Gazette* read:

**Canoes to Let:** Canoeing on the Only River in Hyde Park, gliding along the sylvan shores and vine bordered banks of the winding Neponset, or guiding the graceful craft around the tortuous turns of Meandering Mother Brook is a healthful and delightful pastime.

![Figure 14. Canoe along Neponset River. Published in Dorchester Souvenir Calendar 1896.](image)

One of these canoe trips is described in detail in the Dorchester Beacon of November 8, 1902:

Sunday he took out a party of friends in two canoes clamped together catamaran-wise… Start was made from house (of Mr. Viles) and ride was first down river to the dam of the paper mill, mile or 1-1/2 and then up stream 4 or 5 miles above Paul’s Bridge to where the river begins to meander through meadows, traveling at least 5 miles in its course… Float down river Sunday was made while sun was setting and was beautiful beyond words to describe… Day was one of rare enjoyment for four guests at least.

As local residents were recognizing the need for protecting parkland and finding more leisure time to explore the river in canoes, awareness around the Neponset River’s polluted state also seemed to rise, as exhibited by letters to local newspapers and the formation of new organizations directly targeting the cleanup and recreational use of the Neponset River. In 1902 several “Neponset Green associations” were established and the Metropolitan Park Commission began buying “great tracts along both banks of the river from Lower Mills to Canton” (*Hyde Park Gazette* 1902b). This awareness may also have begun to exert
enough pressure on State politicians to enact legislation that would protect the Neponset River from pollution in the future. By 1913, the combination of manufacturing wastes from paper mills, tanneries and woolen mills along the Neponset River, and untreated sewage from the towns, factories, and homes along the river were negatively affecting public sensibilities. Greater public awareness and recreational use of the Neponset River led to the implementation of special legislation by the State to protect, with uneven success, the Neponset River, and its residents, from pollution (Goodnough 1913).

Technological and Social Changes and Interpretations of the Neponset River

To judge technological change as a unilinear process of general human advancement can serve only to legitimate the power of those who set the priorities, regardless of the costs imposed by particular technologies on other parts of the population. (Fischer 2003, p. 15)

Shifts in socio-cultural interpretations of the Neponset River have been influenced in part by technological changes and the simultaneous development of the city and the countryside in metropolitan Boston (Fischer 2003; Cronon 1992). In the early 18th century the shift from interpreting the Neponset River as “harvest river” to “engine of progress” was ushered in by the introduction of hydropower technology from Europe that transformed the relationship local residents had with the Neponset River. By the early 20th century the shift from water-borne and horse-based transportation, to freight and passenger trains, to, eventually, automobile and highway transportation, and the increased reliance on fossil fuels to power these new transportation modes, was slowly transforming local residents’ interpretations of the Neponset River. The Neponset had been transformed from a place of transportation and industry towards a hidden and forgotten place underneath bridges on the way to some other place, and behind street-facing storefronts, apartment buildings, and houses. From the earlier conflicts over the Stoughton dam fishway in Milton, to more contemporary ones, such as cleaning up chemical contamination in Hyde Park, these changes and the interpretive shifts that followed them, while often gradual, precipitated fundamental changes in how local residents related to the Neponset River and to each other.

In William “Bud” Barrett's 1966 book, A History of the Readville Race Track, technological changes and their far-reaching impacts on society and society’s relationship to its environment are illustrated at a 19th century race track along the Neponset River. Tracing the evolution of the track’s uses from agricultural fairgrounds and Civil War campground to harness racing and auto racing gives a clear
example of how the adoption and promotion of a new technological innovation - the internal combustion engine – changed the uses and interpretations of a place. In looking at other historical events from the industrial era, use of the combustion engine emerges over and over as a major transformative technology. It symbolizes the shift away from use of the Neponset River as a main transportation and industrial corridor and towards the construction and use of more streets and roads, the interstate highway system, and eventually, ex-urban industrial and business parks – all transforming the way in which people related to the Neponset River in their daily lives.

The combustion-engine-powered automobile soon became the new mode of transportation, and the emergence of highway construction and large infrastructure projects to accommodate this change began to require new models for living and working. These projects also posed a threat to the distinct local neighborhood identities that had evolved along the Neponset River. Local citizens organized against such projects based, first, on neighborhood identity and heritage, and, later, on environmental impact concerns. At the same time, rural life surrounding the river gradually disappeared as it gave way to a more urban lifestyle (on the north banks of the river) and a suburban lifestyle (on the south banks of the river). Increased use of and reliance on the automobile in the Neponset region, as in most of the rest of the United States, was largely responsible for the emergence of an increasingly suburbanized lifestyle.

This gradual move away from the river as a source of industrial power and as a direct route of transportation, coupled with demographic and geographic shifts facilitated by the increased mobility offered by automobiles and roadways, layered on top of the physical changes in the Neponset River's water and landscape caused by over one hundred years of industrial manufacturing (e.g., legacy of toxic chemicals, straightening of the river, and hardening of the river’s banks) and economic expansion, led to new interpretations of the Neponset River. Once “harvest river,” once “engine of progress,” the Neponset River in its lower reaches from Fowl Meadow to Dorchester Bay had become by the beginning of the 20th century a “hidden river” and “forgotten” place.

Floods, Hurricanes, and the Engineering of the River

As this chapter has shown, shifts in social interpretations of the Neponset River were due to a variety of historical events and processes, many of which were grounded in socio-cultural, economic, and
technological changes. However, as an ecological system, influenced by the larger Boston Harbor watershed, Blue Hill topography, and the North Atlantic Ocean, changes along the Neponset have also been driven by environmental events and processes such as hurricanes and floods.

The first record of property destruction along the Lower Neponset River came from a hurricane called “The September Gale of 1815” or “The Great Gale,” during which the horse-bridge across the river at Lower Mills between Milton and Dorchester was destroyed (EOPSS 2009). In 1888, an extensive flooding event along the Neponset in Hyde Park, led to public calls for technical intervention to protect people’s property by moving and re-channeling the river away from homes (Anon. 1887; Boston Daily Globe 1887a). However, river-wide interventions into the river’s flooding regime, and engineering efforts to reduce loss of property and life did not begin in earnest until the middle part of the 1900s (US Congress 1963).

In 1955, Hurricane Diane hit the coast of southern New England and Boston Harbor, causing record flooding throughout the region, killing between 185 and 200 people, and costing an estimated $832 million in damages (EOPSS 2009). Among the properties destroyed or compromised by Hurricane Diane were the Walter Baker dam and other industrial structures in and along the Lower Neponset River. As a result of the devastation, the State’s Metropolitan District Commission (MDC), now known as the Department of Conservation and Recreation (DCR), took much of the private land along the edges of the river into public ownership using eminent domain and in 1962 MDC began a systematic flood control project that involved straightening, deepening, widening and relocating the Neponset River (Neponset River Watershed Association 2008) to its present course.

Keeping the channel of the Lower Neponset open to commercial transportation remained an important engineering activity along the river during the late 1800s and early 1900s. From 1907 to 1909, the federal government dredged four miles of the river as it coursed through the estuary from its mouth in Dorchester Bay to Lower Mills, in the town of Milton (referred to as “Milton Mills” in the United States documents). The purpose of the dredging was “to permit the delivery at the localities concerned of freight, principally coal, at the lowest freight rates, by providing a depth of water necessary to accommodate ocean going barges” (United States War Department 1911, p. 82-83). Today, the river is dredged by the US Army Corps of Engineers from its mouth to the Neponset Highway Bridge for recreational boating and
bridge maintenance purposes, while the State agreed in 1910 to be responsible for dredging the river upriver of the Neponset Highway Bridge to Lower Mills.

Public health concerns of residents in Hyde Park, Dedham and Canton, also prompted initiation of dredging by the State under the authority of the Department of Health in 1911 through Fowl Meadow directly above Paul’s Bridge and upriver to Canton. This public health project built ditches in the surrounding Meadow to encourage drainage during periods of high rainfall in late spring and summer. The project was concluded in 1915 (The Commonwealth of Massachusetts Department of Health 1916).

Dredge materials from public health-related, and other river channelization projects, such as the 1962 flood control project and federal transportation dredging, were routinely deposited along the banks of the river in Hyde Park and Mattapan and in the salt marsh estuary in Dorchester, Milton and Quincy. This practice caused ecological changes that have threatened native flora and fauna along the Neponset River corridor and estuary. The responses to those threats by public and private organizations are explored further in the next chapter.

Connecting Past and Present Interpretations of the Lower Neponset River

As the glaciers retreated from the Neponset River Valley approximately 10,000 years ago, humans gradually began to alter the native flora and fauna of the river through selective hunting pressure, domestication and hybridization, as well as clearing of land for agricultural crops. With the arrival of Europeans and the colonizing of the river valley by English Puritans in the early 1600s, different and distinct interpretations that differed from the indigenous Massachuset interpretations of what the river meant, began to emerge.

Through the centuries, these ever-shifting interpretations have been successfully mobilized to produce a sense of identity and opportunity for some (e.g., Israel Stoughton and the early mill owners, recreational enthusiasts, etc.), while, for others, shifting interpretations have left them with a loss of identity with the river and a sense of disenfranchisement from their neighbors and governments (e.g., farmers and fishermen, Massachuset people, etc.). This chapter has illustrated that competing claims on what the Neponset River means are not at all new, and are part of larger and constantly changing socio-cultural,
political, economic, and ecological contexts. The answer to the question “Restoration to when?” should, therefore, involve a deeper consideration of how the different cultural interpretations of the past may be influencing how the different local and technical socio-political actors of today are currently framing efforts to restore the Lower Neponset River.

The next chapter (Chapter V) focuses more specifically on these current efforts to restore the Lower Neponset River. The chapter describes and evaluates the current political and natural resource management context within which current State-led restoration efforts are being undertaken, and introduces the different local, private and public organizations involved in various activities to protect, manage, and restore the Neponset River over the past 40 years.
HISTORY OF PUBLIC AND PRIVATE EFFORTS TO RESTORE THE LOWER NEPONSET RIVER

During the “environmental decade” of the 1970s, local residents concerned over the degraded condition of the Neponset River began to organize and lobby for cleaning it up and protecting it against development. Over time, political activism to protect, conserve, responsibly manage, and restore the Neponset River became better organized, more vocal, and more effective.

In 1973, for example, the Neponset Conservation Association (NCA), a group of concerned citizens residing in the Neponset River watershed, sought $8 million in state funding to make “improvements” along the Lower Neponset River. The NCA had originally brought together local citizens in 1965 over concerns about the ecological impact of the Southwest Corridor transportation project, which would have extended Interstate 95 northward from Route 128, through the Lower Neponset River’s Fowl Meadow area and into Boston (BTPR 1972), and “for land and water conservation in the Neponset River Watershed.”

After the Southwest Corridor threat was eliminated in the early 1970s, NCA began lobbying the State for funding to address many issues of concern facing the Neponset watershed, ranging from recreational amenities to ecological restoration. For example, the $8 million funding requested from the State in 1973 was to support projects such as: protecting, acquiring, and restoring the salt marshes from Adams Street to Tenean Beach; protecting, acquiring, and improving the river border lands from Paul’s Bridge to Adams Street; creating fish ladders at the Tilestone-Hollingsworth and Baker Dams; protecting, enlarging and improving the existing Fowl Meadow Reservation; managing the freshwater aquifer below Fowl Meadow; creating a new wildlife refuge along the freshwater reach of the river (including Fowl Meadow); constructing boat launch ramps; creating walkways and bike-ways; and establishing and improving park lands along each shore. While the 1974 funding was not obtained for these “improvement” projects, it was clear that by the early 1970’s an informed and active local citizenry had coalesced into a form of political organization that possessed a willingness to advocate at the state level for the Lower Neponset River.

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4 Neponset Conservation Association, 1973 flyer from ID3
In 1985, the NCA changed its name to the Neponset River Watershed Association (NepRWA) in order “to better reflect the breadth of its new mission and the organization’s commitment to an integrated, watershed-based approach to resource management” (Neponset River Watershed Association 2006).

Massachusetts Watershed Initiative (MWI) and the Neponset River Pilot Project

In 1993, at a Watershed Forum hosted by Raytheon Corporation, the Massachusetts Watershed Initiative (MWI) was launched. The MWI’s main purpose was to use a “watershed approach” to restoring and maintaining the multiple uses of the state’s waters and protecting aquatic natural resources under Section 319 of the federal Clean Water Act, as well as to facilitate better management and enforcement of water-protection standards across the State of Massachusetts (Michaels 1999). Trudy Coxe, the Secretary of Environmental Affairs of the Massachusetts Executive Office of Environmental Affairs during this time, was a supporter of using a watershed approach to ensuring clean water. She was also one of the State political leaders responsible for spearheading and promoting the MWI and selecting the Neponset River as a pilot project for the MWI (Coxe 1996). The Lower Neponset River was seen as representative of many of the non-point-source water pollution problems across the state (EOEA 1997). In addition, 1994 water and fish testing results identified elevated levels of polychlorinated biphenyls, or PCBs, in Brown bullheads from the Neponset. PCBs are a family of manufactured organic compounds that have been shown to disrupt the endocrine system leading to cognitive, neurological and sexual developmental problems (Johnson et al. 2000). They have also been linked to greater incidences of cancer, elevated blood pressure and elevated cholesterol levels, and immuno-suppression (Johnson et al. 2000). These 1994 testing results prompted the Massachusetts Department of Public Health to issue a fish consumption advisory. This advisory warned people not to consume Brown bullheads from the Neponset more than twice a week and it cautioned pregnant women and young children against consuming Brown bullheads from the Lower Neponset River at all (MA Department of Public Health 2007).

Ecosystem, Multi-Stakeholder Approach to Watershed Protection and Management

The MWI proposed to achieve restoration and maintenance of State waterways by embracing a more holistic ecosystem-based paradigm to restoration and management and practicing a more community-based, multi-stakeholder process in decision-making (Michaels 1999). The MWI Steering Committee,
composed of environmental, business and local, state, and federal government interests drawn from the Raytheon-sponsored Watershed Forum, defined this “watershed approach” to environmental management as: “Community-based environmental decision making using watersheds as functional systems to coordinate and integrate human activities in the prevention of pollution and protection or restoration of environmental quality, targeting limited resources to where the most environmental protection can be achieved for our dollars” (WISC 1995, p.5). According to this definition, the MWI would be both democratic and fiscally pragmatic.

State and Local MWI and Neponset Project Implementation

To facilitate the MWI at the State level, Massachusetts environmental agencies, from the Executive Office of Environmental Affairs to the Department of Fish, Wildlife & Environmental Law Enforcement, were re-organized based on watershed basins (DFWELE 1997a). The Riverways Program of the Department of Fish, Wildlife & Environmental Law Enforcement was assigned responsibility for providing technical assistance and outreach to public and private interests on river, stream, and watershed protection, restoration and stewardship (Kimball 1996). Across the State, Basin Teams composed of staff from the five EOEA departments, Department of Environmental Management, Department of Environmental Protection, Department of Fish, Wildlife & Environmental Law Enforcement, Department of Food and Agriculture and the Department of Conservation and Recreation (Metropolitan District Commission at the time), were to be the hubs for watershed planning and priority setting (EOEA 1997).

At the local watershed level, Watershed Community Councils (WCC) composed of municipal, agency, landowner, and individual citizen representatives, were to be convened as a forum for community decision-making (EOEA 1997a). In the Neponset River watershed pilot project, NepRWA served as the point of contact for the WCC (DFWELE 1997b; Stewart 1997). Citizen stream teams were formed at the sub-watershed scale.

In 1994 shoreline surveys were organized and conducted by NepRWA under the pilot project to launch the citizen stream teams and recruit members to the teams. These stream teams gave individual citizens a chance to participate in water quality monitoring of non-point-source pollution and served as a way to educate and inform the general public about watershed management and restoration activities and to
encourage stewardship behaviors (DeShazo and Garrigan 1996). In the Neponset River project, monitoring conducted by the stream teams was used in developing the 1997 Neponset River Watershed Basin Action Plan (NepRWA and EOEA 1997). As part of the pilot project, NepRWA also began a monthly meeting of a Neponset River Watershed Project Technical Advisory Group (TAG) in 1994 to promote and facilitate technical information exchange between agencies, local partners, and stream teams similar to co-operative extension arrangements between local landowners, resource users, and the federal and state governments (DFWELE 1995).

In evaluating the Neponset River MWI Pilot Project, Michaels (1999) notes that while the communication between government staff and professionals was enhanced and resulted in the successful merging of the government and professional agendas and the growth of the Neponset River Watershed Association’s coffers and membership (from 125 members in 1993 to over 500 members in 1996), it was not as successful in fostering on-going communication and collaboration between government staff and watershed professionals and local citizens. Her evaluation cites passivity, resistance to change, failure to recognize potential benefits from participation, concern that certain interests will influence and manipulate the agenda, conflicting mission and mandates among participants, poor public dissemination of information, and lack of outreach staff and resources as some of the reasons why she thinks public involvement was not as well-integrated as it could have been in the Neponset River MWI Pilot Project (Michaels 1999, p.574). In February 2003, the new Governor, Mitt Romney eliminated the MWI just a few weeks after his inauguration (Danforth 2003).

Post-MWI Lower Neponset River Fish Passage and Habitat Restoration

In 1998, 111 years after the last alewife was recorded in the Neponset River, and one year after completion of the MWI Neponset River Watershed Basin Action Plan, the Massachusetts’ EOEA formed a Neponset Fish Passage and Habitat Restoration Task Force to look at restoring American shad and alewives to the Neponset River. A year later, the US Army Corps of Engineers completed a preliminary lower Neponset River restoration plan (US Army Corps of Engineers 2002) for the River Restore Program (now Massachusetts Riverways) within the Massachusetts Department of Fisheries, Wildlife and Environmental Law Enforcement. Over the next several years, and with the technical assistance of the US Army Corps of
Engineers and two professional environmental restoration consulting firms, The Bioengineering Group and Milone and MacBroom, Inc, Massachusetts Riverways held several advisory committee meetings with twenty-six public and private organizations as well as community stakeholder meetings in which various restoration scenarios were presented. All of the restoration scenarios presented by Massachusetts Riverways, US Army Corps of Engineers, and the consultants involved the removal or partial removal of the Boston-Milton Baker Dam and its associated mill pond as well as the removal of the Tilestone and Hollingsworth Dam in Hyde Park (Milone and MacBroom, Inc. 2003; US Army Corps of Engineers 2002).

Discovery of Polychlorinated Biphenyls

In 2002 the State’s plans for restoring the Lower Neponset River for anadromous fish species by the removal of dams were complicated by the discovery of median PCB concentrations in sediment grab samples from the river that were more than 125 times greater than the median concentrations of PCBs in sediment samples from other rivers across the United States (Breault et al. 2004). The State altered its dam removal plans in order to remediate the PCB contamination before going forward with anadromous fish reintroductions and related dam modifications or removals. Some of the dam removal efforts were refocused on monitoring the level of PCB contamination in the river and estuary, searching for the source of this contamination, and deciding what course of action (remove or cap in place) to take to remediate the contamination (Breault et al. 2004a; Breault et al. 2004b; Breault and Cooke 2006). Massachusetts Riverways consulted various engineering, biological, chemical, and fisheries experts to evaluate the remediation alternatives in order to find a method that is technologically feasible, not prohibitively expensive, publicly acceptable, and would not compromise the return of American shad and alewives to the river.

Remediation of the upstream contamination prior to removal or modification of the dams is necessary in order to prevent a cascading effect downriver and in the salt water estuary (already extremely vulnerable due to its history as the site of numerous industrial and manufacturing facilities). Agency personnel responsible for Neponset River restoration desire to avoid the situation where PCB-laden sediments released upstream would adversely impact wildlife, fish, and invertebrate species, pose more of a
health risk to humans consuming fish, and endanger aquatic plant species native to the lower river.\textsuperscript{5}
Massachusetts Riverways has proposed that, after PCB remediation has been completed, it intends to move forward with removing dams, partially breaching dam structures, or constructing fish passageways at the dams along the Lower Neponset River in order to facilitate reintroduction of native American shad and alewives\textsuperscript{6}.

As noted previously, elevated levels of PCBs in another fish species found in the Neponset, the Brown bullhead, had prompted a fish consumption advisory by the Massachusetts Department of Public Health in the mid 1990s (MA Department of Public Health 2007). However, no signs were posted along the river to warn local residents about the potential health dangers posed by consuming white sucker caught in the Neponset or by swimming in the river, and it wasn’t until almost three years after the discovery of PCBs that public meetings were organized by the Massachusetts Departments of Environmental Management and DCR to inform local citizens about the dangers of fishing and swimming in the lower Neponset River and estuary. It wasn’t until 2007, four years after the initial discovery of PCBs between Paul’s Bridge and the Walter Baker Dam, that the Department of Public Health issued a public fish consumption advisory for white suckers caught in the Lower Neponset River (MA Department of Public Health 2007).

Formation of Lower Neponset River Restoration Community Advisory Committee

The PCB contamination findings dominate the town, neighborhood, and greater Boston media reports as the factor that could hinder progress on any future restoration plans (Fahey 2007). Clearly, solving the problem of PCB contamination in the river, not just removal of the dams, is also now the centerpiece of the Mass Riverways program to restore shad and alewife runs to the Neponset River.

To assist them in evaluating all options for the Neponset River’s clean-up and restoration, Mass Riverways partnered with NepRWA and a private facilitation firm to form an organization of citizens referred to as the Lower Neponset River Restoration Community Advisory Committee (CAC). It was convened as a group of citizens who could represent the local views of organizations in Dorchester, Mattapan, Hyde Park, Milton, and Quincy, as well as views from regional organizations representing

\textsuperscript{5} PO011008
\textsuperscript{6} Ibid.
Native American, sport fishing, and commercial fishing interests. The members were selected based on their active membership in organizations along the Lower River and their willingness to represent and speak for their respective organizations at the meetings. Individual citizens who did not have a formal affiliation with a recognized organization and who were not willing to speak for those organizations were excluded from CAC membership.

The CAC, consisting of 25 people, met monthly between January, 2008, and March, 2009, to learn about and discuss the Lower Neponset River’s history, contamination, ecology, and proposed methods of clean-up and river restoration, as well as to develop related recommendations that will be submitted to Massachusetts Riverways.

Neponset Salt Marsh Protection, Management and Restoration

The Neponset River’s salt marsh estuary, 1,300 acres stretching from the mouth of the river at Dorchester Bay to the Walter Baker Dam, was first protected by the state’s Metropolitan Park Commission in the late 1800s when it was designated the “Neponset Reservation”. It is presently owned and managed by the Massachusetts Department of Conservation and Recreation (DCR) (see Chapter IV).

History of Human Disturbance

Prior to 1938, dikes had been dug in the Neponset salt marsh both north and south of the river’s main course. These “dike fields” cut straight lines through the smooth cordgrass and salt meadow cordgrass in order to dispose of dredge material that was removed from the river’s channel bed to facilitate ship traffic and support highway and bridge construction. These dredged river sediments were dumped directly onto the marsh inside of these dike fields in order to prevent the sediments from migrating back into the river’s waters. The last known dikes in the Dorchester area of the marsh, which form the fields closest to the water’s edge, were created for dredging activities in the summer of 1960 (Palmer 1998).

This dumping of dredged material increased the elevation of the marsh by several feet, thus raising soil surfaces to a height above where salt water could inundate the marsh and promoting the growth of freshwater and upland herbaceous plants and tree species such as gray birch and aspen. This change in salt
marsh salinity and the plant community has resulted in a mosaic of fragmented salt marsh habitats comprised of native marsh grass interspersed with “tree-islands” and areas dominated by common reed, or Phragmites, that can grow over 12 feet high.

Built in 1975 and put into service by the Massachusetts Water Resources Authority (MWRA) in 1978, the Dorchester Tunnel is one of four aqueducts designed to supply the Metropolitan Boston area with 80% of its drinking water, obtained from the Quabbin Reservoir in western Massachusetts. The Dorchester Tunnel goes underneath the Neponset salt marsh and a service road is maintained over the aqueduct, cutting straight through the salt marsh grass from Bearce Avenue in Cedar Grove to the river’s edge. The service road is used by bird watchers, general nature enthusiasts, youth, and more recently as a staging area and transportation route for land-based equipment used in the 2000-2006 salt marsh restoration project. At the end of the road, a MWRA standpipe from the Tunnel has leaked a steady flow of fresh water into the Neponset River’s brackish-estuarine water since it was constructed in 1975 (Conuel 1990)\(^8\). Officials at DCR have estimated that between one and two million gallons of fresh water per day are lost from the pipe (Conuel 1990, p. 49).

State Designation as Area of Critical Environmental Concern: Biodiversity and Ecological Importance

Despite anthropogenic disturbances, one of the most striking features of the 40-acre Neponset Salt Marsh is it’s diversity of plant, bird, and other aquatic life. As a stop-over point in the North Atlantic flyway, over 200 species of birds, some extremely rare, have been documented using the Neponset salt marsh estuary (Donovan and Donovan 1995). Some of these colonial waterbirds are dependent on native salt marsh habitat for feeding and breeding.

Year round, fishermen throw lines in the waters of the Neponset salt marsh — in the summer for striped bass and American eel, in the winter for rainbow smelt. Smelt runs in the Neponset estuary are the second most productive in the state (Chase 1996). Historically, the estuary has served as an important nursery area for winter flounder.

In 1995 the Neponset Salt Marsh estuary was designated as an Area of Critical Environmental Concern (ACEC) by the Commonwealth of Massachusetts and a Resource Management Plan was

\(^8\) ID1Interview-092506; ID18Interview-101307; PO092706
developed to guide preservation, restoration, enhancement, use, and management activities in the estuary (MA Department of Environmental Management 1996). Legally, the designation of an area as an ACEC affords a higher level of resource protection, and a more intense public scrutiny must be carried out for proposed development projects or other activities within the ACEC area (Massachusetts Environmental Protection Act, Section 301 CMR 11.00 and 12.00).

Salt Marsh Restoration

Beginning in 1998 state, federal and corporate partners, sponsored by The Gillette Company, the US Environmental Protection Agency, a non-governmental organization named Coastal America, and DCR secured preliminary funding to plan for a 40-acre restoration project in the section of Neponset salt marshes located in Boston’s Dorchester neighborhood9. In a 2002 news release, the State’s EOEA Wetlands Restoration Program Office announced $550,000 in funding for the Neponset salt marshes restoration project. Senator John F. Kerry applauded the public-private partnership, claiming that: "Massachusetts is setting the pace for the rest of the nation on wetlands restoration."10

In 2005, the salt marsh restoration project began with removal of thousands of cubic yards of dredge spoils from 15 acres of filled salt marsh and expanded the salt water in-flow by breaching dikes, digging a new creek channel and revegetating the creek banks with saltmeadow cordgrass.

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9 Presentation provided by ID1- The Gillette Company: “Corporate Wetlands Restoration Partnership” 1999

In 2006, the Commonwealth of Massachusetts’ Office of Coastal Zone Management provided additional funds to DCR to design and permit the third phase of this restoration project focused on increasing tidal circulation and further improving fish, wildlife and native plant habitats in the estuary (EOEA 2005).

**Fowl Meadow Protection, Management and Restoration**

In the spring and autumn, when the river which runs through it overflowed its banks, it was observed by the first settlers to abound with water-fowl, hence it was called fowl-meadow, and the grass *fowl meadow-grass*. (Anon. 1888)

The freshwater wetlands of the Neponset River’s floodplain begin approximately nine miles from the mouth of the river at Paul’s Bridge along the Milton and Boston town line. Encompassing approximately 1,290 acres within the municipal boundaries of five towns and cities (Canton, Dedham, Westwood, Milton and Boston), this area is known as Fowl Meadow, so named in the seventeenth century for its abundance of waterfowl. Today, Fowl Meadow’s large freshwater aquifer provides municipal
drinking water to approximately 150,000 people (US Army Corps of Engineers 2002), including the Town of Dedham whose municipal well in Fowl Meadow went on-line in 1997\(^\text{11}\).

Human Disturbance

Over the years, especially during the mid and late 1800s concerns over its odors and possible human health hazards caused some to spell it “Foul” Meadow. In fact, in 1915 these concerns prompted the commissioning of a human health report by the state legislature (The Commonwealth of Massachusetts Department of Health 1916). The report suggested draining the meadow to reduce stagnant waters, and it eventually resulted in passage of a state law specifically directed at preventing pollution and cleaning up the Neponset River. Although drainage ditches and some filling were completed, storms and heavy rainfall events quickly overcame most of these efforts (The Commonwealth of Massachusetts Department of Health 1916).

Prior to this, the Meadow was not only used for fishing, and for the hunting of waterfowl, small mammals, and reptiles, but it was also used extensively for grazing livestock. The higher meadows between Sprague Pond and the Neponset River, and in the vicinity of the former Stop & Shop Warehouse were used as public grazing lands by the earliest English settlers. By the early 1800s the area was being used as a regional agricultural fairgrounds made more easily accessible by the building of the railroad hub at Readville (Barrett 1966).

In 1863, the US War Department ordered Massachusetts to train and ready an infantry of black soldiers to fight for the Union Army in the war with the southern Confederate states. This first infantry, famously known as the “54\(^{th}\)”, and immortalized in the movie “Glory,” trained at “Camp Miegs” near the agricultural fairgrounds between the New York and New England Railroad line (offering easy passage to southern battle grounds) and the Neponset River. Two other black troops, the 55\(^{th}\) Infantry and the 5\(^{th}\) Cavalry, also trained at Camp Miegs during the Civil War. By the end of the war, 139 acres of this high and lower meadow area, all the way to the banks of the Neponset River, were occupied by a large US Army General Hospital, barracks, officers quarters, parade grounds, horse stables, storehouses, laundry, kitchens and a chapel. Shortly after the civil war, it was returned to its prior use as an agricultural fairground, then

\(^{11}\) http://www.dwwd.org/history/ (accessed April 20, 2009)
converted into a horse race track in the 1880s and eventually turned into an automobile race track in the early 1900s (Barrett 1966).

The Stop & Shop Corporation, a northeastern grocery store chain, purchased the land from Boston and Dedham, paved a parking lot for extensive truck loading, and built 700,000 square feet of warehouse space in the 1960s. A new road was built to access the warehouse from Neponset Valley Parkway. The road runs adjacent to Fowl Meadow, near Paul’s Bridge and along the western boundary of Hyde Park’s Readville neighborhood. It is an elevated road that cuts a dike between the Neponset River that runs through Fowl Meadow and the backyards of houses in Readville. Many of these backyards flood seasonally and exhibit all the characteristics of the Fowl Meadow wetland in their species composition compared to the other backyards in Readville. When the Stop & Shop warehouse closed in 2004 it was bought by Campanelli Corporation of Braintree who leases it out for business and industrial purposes.

Increasing urbanization and the construction of Interstate 95 and Route 128 through Fowl Meadow has increased runoff into the Neponset River. Runoff from these highways can be contaminated by hydrocarbons and chemicals used in treating icy roads. By the 1970s, the Boston Transportation Planning Review, noted that this increased and polluted runoff had caused channelization which resulted in lower water levels during the summer months and increased chloride and sodium levels in the surface and ground water in the area of Fowl Meadow (BTPR 1972).

State Designation as ACEC: Ecological Services, Biodiversity, Historic Significance

In 1992 the State designated Fowl Meadow part of a larger ACEC that also included the adjacent freshwater pond and bog, Ponkapoag, located entirely within the Town of Canton. The entire 2,812 acres of the ACEC is part of the larger 6,800 acres Blue Hills Reservation owned by the State and managed by DCR as the largest urban open space area within 35 miles of any major metropolitan area in the United States (ENSR/Fugro et al. 1997). In addition, the portions of Fowl Meadow located immediately above Paul’s Bridge and Ponkapoag Pond and Bog were designated a National Environmental Study Area by the National Park Service because of their high number and diversity of endangered and threatened wetland dependent species, vernal pools, historic and archeological resources, high yield aquifers, and municipal
water supply sources, as well as the variety of recreational and educational opportunities that they provide (ENSR/Fugro et al. 1997).

Meadow Restoration

In 1993 the State granted the Massachusetts Water Resource Authority a permanent easement, with a width of 20 to 40 feet, running through Fowl Meadow from the Town of Milton to Canton. The easement was a well-used hiking and cross-country ski path owned by DCR known locally as Burma Road. The easement was used to construct and install a 48-inch diameter force sewer and water main as part of the “New Neponset Valley Relief Sewer” project (ENSR/Fugro 1997) below Burma Road. The sewer main runs through 2,000 feet of river floodplain of the Fowl Meadow in Milton into a pump station at University Avenue in Canton, a total of 8.4 miles. Installation of the main was completed in 1995 and landscaping improvements and mitigation along Burma Road were to be done in 1996 (ENSR/Fugro et al. 1997). According to photographs and personal accounts from long-term recreational users of Burma Road, these improvements were never completed despite the designation of the area in the Fowl Meadow ACEC Resource Management Plan as a “Conservation Zone” (ESNR/Fugro et al. 1997). By comparing photographs (Figure 16) at the same spot along Burma Road from 1985, 1995, and 2005, the visual aesthetic impacts of this sewerage project on Fowl Meadow are made clear.

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12 Commonwealth of Massachusetts, 1993 Resolves, Chapter 422, An Act Authorizing The Division Of Capital Planning And Operations To Grant Easements Over Certain Park And Conservation Land In The Towns Of Canton And Milton To The Massachusetts Water Resources Authority.
13 http://www.geiconsultants.com/content499.html (accessed on 20 April 2009)
As Figure 16 shows, the most evident changes in Fowl Meadow during the past twenty years involve the frequency in the presence and absence of standing water, lack of mature trees, and the increased presence of invasive herbaceous plant species. The road has been elevated, thus creating a dike through the Meadow and leaving formerly wet areas dry and dry areas wet, perhaps disrupting the natural hydrology of the wetland and threatening fragile vernal pools. Mature deciduous birch and maple species that lined Burma Road were cut down and no local deciduous trees planted to replace them. The ecological impact of this disturbance has been seen in the extensive colonization of areas by an invasive herbaceous plant called purple loosestrife along both sides of the road and throughout the Meadow near Burma Road.

Led by NepRWA and DCR, efforts were begun in 2008 to reduce the invasive purple loosestrife in the Meadow to encourage growth of native wetland plants and restoration of wildlife habitat. The eradication plan uses “biological control” involving the release of two species of the Galerucella beetle, G. pusilla and G. calmariensis. These beetles have been used elsewhere in Massachusetts to control purple loosestrife since the 1980s with minimal impact on native plant species. It is a five-year release plan that anticipates the establishment of an on-site breeding population of Galerucella beetles. The goal is to
directly restore 26.5 acres of meadow habitat, with an estimated 200 more acres benefiting from the long-
term presence of the beetles (EOEEA 2008).

Restoring the natural hydrology of the Meadow is complicated by a lack of evidence leading to a
direct causal link between anthropogenic disturbance and pollution, such as the sewerage project or runoff
from the highway and roads, and climate or weather-related changes. It is likely that a combination of
these factors has led to a decline in the amount of water in the Meadow within the last twenty years
(ENSR/Fugro et al. 1997).

**From ACEC to ACEC**

For the past 40 years, from the Lower Neponset River’s salt marsh ACEC to the Fowl Meadow
ACEC, local citizens, State officials, environmental agencies, politicians, and private corporations have
developed their own ways of talking about and working to protect, manage, and restore the Neponset River.
Sometimes efforts have been fairly cooperative and attempted to account for multiple stakeholders and
interpretations of the river’s meaning, as with the Neponset River MWI Pilot Project. While at other times,
efforts have neglected ecological concerns or created conflicts between stakeholders when different
interpretations of the river were not considered, as with the MWRA “New Neponset Valley Relief Sewer”
project. At the same time, these last 40 years of both cooperative and conflicting efforts serve as a shared
context for many of the storylines that emerged from my interviews with local citizens during this research
project. Current, local interpretations of the river and its restoration that this study seeks to identify and
analyze are held within this shared context and emerged in stories told to me by different study participants
about efforts they may personally have been involved in or have heard about that involved local citizens,
State agencies, politicians, or private corporations working to protect, manage and restore the Lower
Neponset River.
CHAPTER VI

EVERY “PLACE” IS MORE THAN ONE “PLACE”: THE NEPONSET RIVER AS A SENSE OF PLACE AND OBJECT OF RESTORATION

Local Stories of the River: Interpretations of the River as Place

From a practical and theoretical, as well as expert and local, frame of reference, ecological restoration implies some type of change. Restoring a heavily degraded urban river, such as the Neponset, may require significant human interventions that result in changes to the biological, physical, and aesthetic aspects of the river, depending on the level of restoration that takes place. To the extent that their sense of place is threatened by restoration activities, programs, and outcomes, some people may resist these changes. Other people may support river restoration, and the changes in sense of place that restoration might involve. However, the different types of restoration that people envision, and the amount of change people will tolerate, may be in conflict.

I made the assumption upon starting focal interviews and participant observations that I cannot know what the restoration of this urban river means to local residents until I first understand what the Lower Neponset River as a place means to them. In this chapter, I will document the variety of thematic “place identities” that emerged from my data. These themes document the variety of meanings that local citizens ascribe to the Neponset River as a place around which they organize their sentiments, values, hopes and desires, fears, and their lives, and what this means for local interpretations of restoration. In the next chapter, I will present an analysis that demonstrates how these various thematic place-based meanings on restoration of the river can be organized into interpretive environmental communities that project different, and sometimes conflicting, visions for restoring the Neponset River. Throughout this chapter and Chapters VII and VIII, all quotations from interviews and observational notes are footnoted with a participant code, in the case of interviews, (i.e., ID#), a short descriptor (e.g., interview, walk, focus group[FG], phone, etc.), and date (i.e., year or month-day-year).

To elicit information from participants about the Neponset River as a place and to understand their local knowledge of places along the river, and the meanings they ascribed to certain places, I invited
participants to reflect upon visual images of the river via a satellite map of the Lower Neponset River study site (Figure 17).

They also viewed photographs of specific locations along the river that either I or they had taken. In the interview excerpt below, I was showing one of the key informants in Mattapan the satellite map of the Lower River:

Figure 17. Satellite map used in interviews with participants.

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IN: Here’s a map of my whole study site. I’m working from all the way down here, all the way up the river, out to Paul’s Bridge.
ID4: Where’s down here?
IN: This is Port Norfolk… That line there is the current Greenway trail all the way to there, and this is the proposed Greenway trail, the yellow.
ID4: And that’s going where?
IN: This is Paul’s Bridge. This is Mattapan Square there.
ID4: They said that Mattapan Square was a problem at the Greenway planning meeting (laughs)… Yeah they had that big map… You remember the map they had like that? They had so many maps around there. For the longest time I said now where in the world is Paul’s Bridge? I never heard of it before.  

This conversation over the satellite map revealed that this Mattapan informant does not know where or what Paul’s Bridge is. In contrast, other local citizens who live in Hyde Park and participated in this study, talked about the river and surrounding land near Paul’s Bridge as an important place to them:

Another place that's very special is up by Paul's Bridge, I paddled the length, it's about two miles from my house up to Paul's Bridge, and when you go in there it's almost like your going into this fairy tale land, there's hollowed tree trunks and there's wildlife and you can almost imagine the wildlife, and imaginary characters that live along the river bank and there's trees bent over and there's moss coming down and it's just delightful, I don't even realize I'm in Hyde Park, I think I'm somewhere else, so that's a real special place right up through there.  

Thus, a geographic location important to other local citizens in the watershed, and which represents significant interpretations of the Neponset River as a place, is unknown to this Mattapan participant who lives less than one mile from Paul’s Bridge. In addition, when presented to the key informant from Mattapan, the satellite map began a broader conversation around the proposed Greenway and the Mattapan informant’s preference to see the Greenway sited in Mattapan, on the Boston side of the river, rather than in Milton.

In several cases, there were spontaneous discussions between different study participants over visual images and maps. I observed and listened to these impromptu conversations around maps and documented the places and stories that came from these interactions. In this particular example from my observational notes, two participants with very different interpretations of the river shared stories about their personal experiences in Fowl Meadow and Mother Brook:

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15 ID4Interview1-080907
16 FG2-summer2005
ID14 had the Charles River book for me. ID12 started asking him questions about the book and the Charles, and ID14 whipped out the map of the Charles River from the back of the book to show her. She wanted to see where she canoed near Mother Brook on the Charles [River] in Dedham. Their conversation was great. Here are two people who have never met. He’s an avid hunter/fisherman and she doesn’t like the thought of killing anything. Yet they connected over places – Fowl Meadow, Neponset River, Mother Brook, Charles River – while looking at this map.17

I also went on seven separate interview transect walks with seven different key informants in which they provided detailed information on their personal experiences and interpretations of specific locations along the Lower Neponset such as: Lower Mills, Walter Baker Dam, Salt Marsh Estuary, Hummock/Sachem Point, Greenway Trail, Fowl Meadow, Little Blue Hill, Tilestone & Hollingsworth Dam, Lewis Chemical Company, James G. Grant Company, Ponkapoag Pond and Bog, Shaffer Paper Site, Port Norfolk Estuary (Appendix E.1.). These walking interviews led to detailed stories about how the informants’ lives have intersected with changes they have observed along the river. On one of these walks, a key informant from Dorchester shared his memories of playing as a child near the upland areas near the Neponset’s salt marsh estuary when the river was still being used for primarily industrial purposes:

He then turned back to the river, and pointed out the three hills, or “hummocks” next to the highway. He said as a kid they used to go in those woods and play and collect birch to build crafts like candle holders. “It was our playground. Near the Keystone is where I first learned to swim. Used to go to wharfs near Keystone. They tore the wharf down years ago. They were for New England Cut Stone, Ice House, TJ Equipment. Everything here was industrial.”18

This place-based elicitation helped document how local citizens relate to the river in its current state as well as in some personally remembered, or learned-about-state, in the past.

For any individual informant, place-based meanings were sometimes different, depending on the specific site or exact location along the river the participant was discussing, or the social or political setting in which the discussion was taking place (e.g., personal interview with me, public meeting, etc.). In other words, to some participants the Lower Neponset River can be interpreted in more than one way based on the specific location being discussed or the social setting in which the river is being discussed.

From all of the interviews and observational data about how local citizens interpret the lower Neponset River as a place, eleven different place-based themes emerged: Native American history,
colonial history, industrial history, economic development, ecological resources, ecological services, outdoor recreation, dangerous place, refuge, visual aesthetics, and remembrance.

Place of History

This interpretive theme involves participants having a sense of the Lower Neponset River as a place of history; however, different historical periods were of greater importance to different participants.

For some, the Neponset River is a place where Native American history is central to their interpretation of the river. For example, the river’s name is a Massachuset word, there are unique archeological sites along the river’s banks that require further study and, for some, use of the river for centuries by Native Americans prior to European colonization is seen as a more ecological-friendly model for human-river relationships than current practices.

I like to think about what went on there for centuries, it was a very important place before modern times, because it was where all the fishing took place in the spring, for the Native Americans, it’s where the shad came up.19

Others see the colonial period of history as central to what the Neponset River, and surrounding area, means to them. This colonial period dates from the first meetings between European traders and Native Americans, and it includes the reliance of early settlers on fish and salt marsh hay from the river, the first tidal mill, first bridge, and the first horse-drawn railroad built along the river. These and other important historical markers symbolize the birth of economic and political independence from Britain and rise of early manufacturing in the United States.

He then pointed to underneath the current bridge at the granite stone [Adams Street over the river in Lower Mills]. He said that was the original bridge that John Adams used to take to and from work in Boston every day. The old Toll Road is now Dorchester Ave.20

For others, the Lower Neponset River serves as a reminder of the industrial revolution in the United States. Those participants who see the river as a place of industrial history interpret the Neponset River as a central player in transforming New England into an early industrial center, for better or worse.

19 ID34Interview1 -2005
20 ID1TransectWalk-092506
For some, the river and the power generated by its falling waters, was a remarkable, local example of “the economic engine” behind the growth of the United States:

…since the beginning of this country’s history almost, rivers have been the life-blood of industry. It’s that circular motion – the image of the “wheels of industry” on top of rivers - that the United States was founded on, and that was the economic engine of this country.\textsuperscript{21}

If you understand the industrial history of this site, it’s so clear that aside from being one of the very earliest dams on this continent, that [Walter Baker] dam [on the Neponset] could be understood. People understand why people build bridges, why they build dams when there’s an economic incentive to do so and so that what grew there had a really logical, intelligible and reasonable way of being and its all discernable if you start to look at what is still left, the archeological remnants of that earlier era are perfectly apparent.\textsuperscript{22}

Conversely, as opposed to viewing this industrial history as something to be celebrated, some see it as a legacy of waste and pollution. As the human population living and working along the river increased, the river became a conduit not only for manufacturing wastes and chemical pollution, but also for human sewage and water-borne disease:

ID22 explained to me in the late 1800’s it was built as a tannery and they dumped all their tanning wastes right into the river. Then she said it was “a storage and transfer type facility with drums full of who knows what and they were left to decay into the river. That was a problem. Everyone knew it.”\textsuperscript{23}

Place of Development

The lower Neponset River as a site of development was talked about in several different ways by local citizens. First, the Neponset is seen as a place of contemporary commerce and positive economic development and exchange:

I would like to imagine that the future of Lower Mills… will have many different eras celebrated for different attributes and I don’t want to see the now irrelevant industrial history just completely torn down by what will become new commercial exploitation of the land values. I think the charm and the richness of preserving will have economic dividends and if it can be in place the kind of review groups, public controls, maybe zoning incentives, careful delineation of what areas lend themselves to what kind of development so that people can be, developers can be enticed or encouraged to do the right thing, and benefit from it is more likely to result in positive, collectively valued goals.\textsuperscript{24}

\textsuperscript{21} ID6 Interview-080507
\textsuperscript{22} IDA Interview#16-2005
\textsuperscript{23} ID22-Interview-070705
\textsuperscript{24} IDA Interview#16-2005
Another way in which the Neponset is interpreted is as a place of development of new residential, retail, or mixed-use developments:

…we’re about housing development and economic development and both of those, both of that kind of work has a lot to do we hope, with the river…

To these study participants, the lower Neponset River is viewed as an ideal location for various types of residential development ranging from up-scale waterfront condominiums and artist lofts to affordable housing that has easy access along public transit routes that run parallel to and cross over the river. As one participant put it:

…the commuter rail-line runs to a certain extent, you know near the river and one of the things our organization is doing is working, we’re actually working with a collaborative of CDC’s [Community Development Corporations], one in Mattapan which is on the river, and another two in Dorchester. And we’re doing a project to look at housing development along the commuter, the Indigo commuter rail-line or the Fairmount commuter rail-line, and we’re trying to think about how to do housing, or mix-use… that kind of goes along the river as well. In particular, you know, around here in Hyde Park, what’s along the river is a lot of industrial space and so we’ve been thinking a lot about that and what could be there and we’d love to get housing there you know.

To these citizens, such mixtures of retail and residential developments along public transportation corridors are seen as essential to promoting “revitalization” in the neighborhoods along the Boston side of the river – including cleaning up contaminated former industrial sites or “Brownfields” – and to providing additional property tax revenue to the municipal governments of Milton, Dedham, and Boston.

To other study participants, retail and residential development along the Lower Neponset River is viewed in a negative light, and they voiced opposition against such developments using two arguments.

First, some feel that the river and its banks are unsuitable for any new developments because the current high density of buildings and traffic congestion along the river, especially in the Hyde Park and Mattapan neighborhoods of Boston:

My feeling is “overdeveloped”… if we’re talking developing high rises along the Neponset River. What I’m worried about is Hyde Park, not the City of Boston or Dorchester. I would like to view the Neponset River. Been going to meetings for years about opening up the area around the river here like in Dorchester. The only place you can view the river is on bridges, and you’d be killed if you stopped to look. Would like to see more open space.

25 ID24Interview#12-2005
26 Ibid.
27 PO 062007
The second way participants voice opposition to more retail or residential development along the river is in primarily economic terms:

I have lived behind this industrial area for my whole life. What happens to property values? What happens to blue collar guy like me who can’t afford to live in Hyde Park when this happens?28

To some study participants – some of whom at the same time oppose residential and retail developments – the Neponset River as a place of development means the creation of more recreation and public spaces, including the Neponset River Greenway Trail, neighborhood parks, regional parks, playgrounds, picnic grounds, athletic fields, boat launches and community gardens.

I want to see a [bike] trail extended… all the way from Paul’s Bridge, which is sort of the gateway to the Blue Hills, actually Burma Road… that goes along the Neponset… to get that connected to Downtown… and connections also from that path up to the Emerald Necklace and the Southwest Corridor and a path connection up to… Mother Brook, all the way to the Charles River, also stopping at Stony Brook on the way… So that’s like, sort of a network that the Neponset can connect to.29

Place of Ecological Resources and Services

The Lower Neponset River is a place of ecological importance to some local citizens, for both the natural resources and the natural services it provides. On the ecological resources end of the spectrum, local citizens interpret the river as native habitat for such iconic wildlife species as the great blue heron and striped bass, as well as former habitat for rare and endangered species of marsh nesting birds, amphibians, native plants, alewives, and shad.

He said they used to have trips to Lower Mills to watch the spawning rainbow smelt in spring… He explained that the smelt stay in the marsh during the day and at dusk lay their eggs upriver. “They got a good turnout to watch. It draws lots of seabirds” he said.30

I’ve been going down there for nigh onto fifty years I guess. There’s an affinity there… of all of those things that nature provides. I’ve always been interested in birds in particular. When they first started doing, oh gosh, I would say about 1997, 1998 they started a variety of projects. The bikeway, you know the history and…they all occurred together and part of the impacted area was the Neponset River marsh, the reservation down near Granite Avenue. And there was no real advocate for the marsh… I had an early interest in natural history so I would go down there and bird too. Used to see a least bittern on occasion, more rails as a regular fact… Yes, as a matter of fact yesterday my cousin saw a yellow rail… more yellow rails have been seen down there for the last 20, 25 years than all of the other areas in Massachusetts combined. And they also saw a Virginia rail down there as well. Last year there were reports of black rail.31
In terms of ecological services, some local citizens interpret the Neponset River and its underground aquifer as an important source of water for drinking, either now or in some water-scarce future, and the Neponset River estuary as a key nursery ground for commercially important fish species.

I’ve heard that some aquifers can be big enough to provide water for an entire city. And we’ve got one up here and we don’t know exactly where in the warehouse area it is and how big it is and how much of an impact, do we need to request they remove pavement and stuff off that area to return it to the aquifer? Because as long as it’s paved over you’re not going to have the water cycle working.32

You know the marsh down on the end how pretty that is, that’s a working estuary marsh, which is essential for the life of the ocean. If you’ve ever studied ecology, marine biology, you know, you need the marsh for the life of the ocean. For the, not just the birds and what not, and the flooding, but the fish and everything, it’s just vitally important.33

And, while the days of generating an income from muskrat trapping, hunting waterfowl and upland birds, rattlesnake hunting, and smelt and alewife fishing on the Neponset River have ended, those who share an interpretation of the Neponset River as an ecological place seem to have a greater awareness of these past economic, as well as cultural, ecological services.

She had a neighbor who is 80 years old… was part of a group of families who hunted muskrats in the Meadow during the 1930’s and 1940’s.34

He told me that there used to be a lot of muskrat trapping along the river in Hyde Park. A friend of his father’s (1930-40s) was the only fellow with a car, and that was because he was a muskrat trapper and made so much money doing it.35

Place of Recreation

The Lower Neponset River as a place of recreation is a common interpretation among local citizens; however, what constitutes recreation varies greatly, from “sanctioned” or legal activities like fishing, hunting, biking, jogging, walking, boating, gardening, photography, mural painting and kite flying to “non-sanctioned” and sometimes illegal activities like swimming, drinking alcohol, drug use, bon-fires, camping, and graffiti.

Regardless of the legalities, all of these citizens share a common interpretation of the Neponset River as a place to go for enjoyment or recreation in the outdoors.

32 ID12Interview1-081007
33 ID5Interview1-070307
34 ID12Interview1-081007
35 ID6Meeting1-071307
He told me, “There are two guys who still hunt sea duck at the mouth of the Neponset River around this time. Not many places to do that any more, just the Neponset and the North River.”

I have canoed the river, parts of it anyway, we, my family and I use the Neponset River trail along the river frequently, and Pope John Paul the Second Park… we have been, I have been on river boat, paddle boats cruises up the river and taken various agencies and academic folks and other officials out on tours and such…

Exercise, yeah. Recreation… something for the youth they can do. ‘Cause they come up as far as Ryan Playground now trying to get the youth to be involved but it would be something else for the youth to do because there is nothing. Especially if they can have some sort of supervised activity that would give the youth something else to do. ‘Cause they need, especially in the summer time when they’re not in school.

Place of Danger

To others, the Lower Neponset River is a place of danger. Some citizens fear the river as a place where others have drowned, or where crimes have been committed in the past and could easily be committed today or in the future.

He said there were no fences when he was a boy. His mom forbade him from going in the river. He told me of a case when he was about eight or nine years old of several boys who went out in an aluminum boat and it capsized, drowning one of the boys. “It scares you,” he said. When the river froze, which he said was unusual, kids skated on the river and would sometimes fall through and die. Another time a couple of kids were walking along the train trestle, when a train came, forcing them into the water and they died. So, he said, they decided to fence it in the late 30's, early 40's, because it was a hazard.

You know everybody’s afraid, there's so much fear. And, you know, not only women but men say they don't want to walk at night on the Greenway because… there are people that don't want to walk down there because it's dangerous.

Others fear the Neponset as a place that is contaminated by pollutants such as sewage, PCBs and heavy metals, and so they see the river as a human health hazard.

I always thought it was…bad to even live around. I thought maybe it wasn’t a good place… Because I thought it, like we’d get cancer from it…. There used to be a smell. It was a sweet smell… But then it was determined by someone, at some point word got out, that it wasn’t bad, wasn’t contaminated for the neighborhood around it. It was only if you, you know, went in the water and you disturbed it or whatever. That you couldn’t go in the water at all… So there’s this very loud and clear message that people are receiving that it is a very dangerous place. Can they go near the water or are they gonna get cancer? They were talking about putting a park at Lewis Chemical. I wouldn’t let my kids go there. They talked about having a restaurant there. I wouldn’t eat there.
Place of Refuge

The Lower Neponset River is a place of refuge to some, either alone or with close friends and relatives.

Sometimes I go by myself and then sometimes if I meet up with someone who I feel like can take an interest or value in it, I bring them along too… let the river speak for itself, and being close and still being in the city… There’s a lot of time I spent by the Neponset River. Different people I would introduce it to, or who were new to the neighborhood. It was a good meeting place. A good place to talk and think and reflect. Restore. Renew.42

To these local citizens the Neponset is a place that provides inspiration for writing a new poem or song, painting a watercolor, or capturing nature with the camera’s lens.

I’ll be gone for hours and hours just grab my camera and pack plenty of water and a few snacks and just go… So most of the time I’d be just out in Fowl Meadow along the Neponset taking pictures to just practice and see what I could get. 43

The river is also a place where religious or spiritual ceremonies take place and is seen as an escape and source of healing from the everyday stresses of urban living, an unhappy home life, or stressful work.

I can remember times that were really stressful as an adult that I’d say just get out there [Neponset River and Fowl Meadow]. I’d get out there, I’d bolt up there, I’d be in tears and I wouldn’t be in the Meadows more than ten minutes and the tears would just dissolve and I’d all of a sudden become aware of what was around me to communicate with.44

Place of Visual Aesthetics

Local citizens also see the Neponset River as an aesthetically pleasing place that can be enjoyed visually and passively, either from an apartment window, a car window, a park bench, or while passing over it or next to it on foot.

I have a friend in the Parkwell Nursing Home on Truman Parkway and the river abuts there, and so I can look out her window and see the river running right where the train track crosses over the river, I can look out the window and see that. I find it very peaceful, I enjoy it.45

We stopped at the Parkway Medical Plaza on the right. She said it was one of the best views of the river from their parking lot, besides from the bridges crossing the river… She said, “People get pleasure out of looking at the water.”46

42 ID2Interview9-2005; ID2Interview2-101706
43 ID12Interview1-081007
44 Ibid.
45 ID23Interview8-2005
46 ID22Interview1-070705
These citizens get visual enjoyment from passively observing the river as the seasons change and while they go about their daily business.

Place of Remembrance

Still other local citizens have a nostalgic connection to the Neponset River. These citizens see the lower Neponset River as a place of memory – where specific locations along the river connect up to specific times or events in their lives.

In bad weather I used to like to go up underneath the Neponset River Bridge and there’s a couple of holes in that area that generally were producing some decent stripers… that’s really the place where I would go up with my boat and just anchor up and just look at the stars, do a little fishing. Fishing was secondary, it was a way for me to escape, it was a way to get out of the weather and just really enjoy being outside… and those are some fond memories.47

To them, the Neponset River is a place of remembering their childhood, unique personal experiences, family gatherings, and friendships.

As little kids we were free and would walk up that way. We didn’t have to worry about stuff. And we’d walk over Paul’s Bridge and picnic there a lot. Then go up Neponset Valley Parkway. My grandmother used to call it “lover’s lane,” we’d never call it that way today. But, there were never any cars going down there you could be there for a half hour, forty minutes and maybe see one car, and think lost… So we used to like to walk up that way a lot. Go down by the brook and see what we could see there and look at the triple arched stone bridge and walk back.48

Expert and Local Interpretations of the Neponset River’s Restoration

After getting a good sense of the types of interpretations participants hold for the Neponset River as a place, I explored with participants the broader concept of “restoration” and how their interpretations more specifically related to the Lower Neponset River as an object of “restoration.” As a point of contrast, I also wanted to know how these local, everyday interpretations compared with the science-based, technical-bureaucratic interpretations of restoration used by research scientists, resource managers, and other experts who are employed by government agencies and who are responsible for carrying out restoration projects or making funding and management decisions regarding ecological restoration and clean-up projects along the Lower Neponset River.

47 Interview#17-2005
48 ID12Interview1-08100
Massachusetts Riverways program literature collected during the study and available on their current website (http://www.mass.gov/dfwele/river/) shows that although there are entire projects, such as one entitled “Neponset River Restoration,” that promote efforts to plan for the removal of the Walter Baker and Tilestone-Hollingsworth dams along the Lower Neponset and remediation of contaminated sediments, the program does not explicitly define “restoration.” Instead, Mass Riverways notes that their river and stream restoration projects focus primarily on removal of dams and other obstructions that are impacting river and stream health, while “reconnecting” both the “natural and cultural communities” of the river system.49 This focus on dam removal describes a concept of restoration that is similar to the US National Research Council’s call for restorations that emphasize the reconstruction of physical, hydrologic, and morphologic pre-disturbance conditions through engineering (NRC 1992). However, by referencing “cultural communities,” Mass Riverways also recognizes the social values of rivers, alongside their ecological values, and seems to imply that both of these types of values should play a role in restoration projects, similar to Cairn’s notion of “ecosocietal” restorations (Cairns 1988).

The Massachusetts’ Executive Office of Energy and Environmental Affairs (EOEEA), a state office that oversees the Massachusetts Riverways Program as well as the Division of Fish and Game, defines “habitat restoration” as: “the act, process, or result of returning a degraded or former habitat to a healthy, self-sustaining condition that resembles as closely as possible its pre-disturbed state.”50 Another agency, the Office of Coastal Zone Management, responsible for funding and providing oversight for projects through the Massachusetts Wetlands Restoration Program, including the Neponset salt marsh restoration in Dorchester and the purple loosestrife bio-control project in Fowl Meadow, defines restoration in much the same way. “Wetlands restoration” is: “the act, process, or result of returning a degraded wetland or a former wetland to a close approximation of its condition prior to disturbance.”51 Both definitions use the term “returning” to describe the process of restoration. And, both expert definitions


align closely with the US National Research Council’s (1992) definition for ecological restorations that places emphasis on the scientific and engineering aspects in the reconstruction of pre-disturbance physical, hydrologic and morphologic conditions.

In an attempt to compare and contrast the ways in which restoration is defined by scientists and technical experts versus the local, everyday definitions and interpretations held by study participants, I asked participants what the term “restoration” meant to them. I asked each participant whether they felt that the term was useful, and what other terms they found either equally or more useful. When asked what the term “restoration” meant to them, at least 12 of the 27 participants felt no affinity with the term “restoration” and offered alternate terms or phrasings that to them represented more meaningful synonyms or better descriptions. They offered the following terms and phrases:

“repair”:
…it'll repair itself if... the damage that's been done to it is lightened somehow, whether it’s actually just remove or stopping up that pipe that's dumping whatever it is...\(^{52}\)

“clean-up” and “make good”:
Cleaning up things and doing things to restore, repair… Make good.\(^{53}\)

“return”:
… that most of it is allowed to return to its natural healthy state, so that wildlife can thrive.\(^{54}\)

“non-invaded”:
Returning to a natural state I guess. A non-invaded state as you will.\(^{55}\)

“reclamation”:
…just the natural course of nature reclaiming itself, such as sea grass and marsh grass…\(^{56}\)

“reinvention” and “rehabilitation”:
A reinvention of it, reclamation of it, rehabilitation…\(^{57}\)

\(^{52}\) FG2-2005
\(^{53}\) ID4Interview1-080907
\(^{54}\) ID24Interview1#12-2005
\(^{55}\) ID13Interview-101107
\(^{56}\) ID8Interview1-071507
\(^{57}\) FG2-2005
...revitalization probably is not a bad word because it can imply that the river is becoming cleaner or more friendly to life... 58

As philosopher Elizabeth V. Spelman notes in her exploration into the concept of “repair” and how humans relate to it (2002, p. 3): “The English language is generously stocked with words for the many preoccupations and occupations of H. reparans [Homo sapiens with a motivation to “repair”]: repair, restore, rehabilitate, renovate, reconcile, redeem, heal, fix, and mend—and that’s the short list.” Spelman believes that exploring the subtle differences between these synonymous words is important to understanding how people construct the physical world around them, and more importantly how and when they choose to interact with it, or intervene on its behalf: “Why do some ecologists want to preserve an environment rather than try to repair the damage done to it?” (Spelman 2002, p. 4; emphasis added).

And that is what I found when I asked local study participants what “restoration” meant to them, differences in the terminology, but all seemingly grounded in a similar conceptual domain; a domain related to activities whose aim is to maintain a link with some state or place that existed prior to the occurrence of some form of decay, decline, or damage, which is judged as negative, and involving a process that allows for some type of return to an earlier time and state of being, which is judged as positive. The words and phrases used by local citizens to define restoration all imply a belief that human beings have the ability, or power, to fix what is broken; however, not everyone agrees on what is broken and on how humans should exercise their power to fix it.

When asked during interviews to further expand on their beliefs about how the Lower Neponset River should be “restored,” after the term was explicitly defined by participants, all 27 study participants felt that there was at least some value in the concept as it related to the Lower Neponset and its natural or built surroundings. However, as with the words used to describe the concept itself, participants varied in their descriptions of what they believed was degraded or broken about the Lower Neponset. Their judgments about what was problematic about the current state of the Lower Neponset could be related back to how individual participants interpreted the Neponset River as a “place” in their everyday lives. For example, in the following excerpt from an interview with ID13, a participant who identifies with the

58 ID3Interview2-070207
Neponset River as a place of ecological resources, he described to me what he sees as the “problem” with the Neponset River’s salt marsh estuary in Dorchester:

…when they were making the expressway [Interstate 93], they took some of the dredge and just dropped it on the existing marsh, and that of course elevated the marsh and has led to certain problems associated with Phragmites, specifically.59

In contrast, ID3, a participant who describes the Neponset River as a place of colonial and industrial history and remembrance, shared with me his view that the historic and human-built environment surrounding the Lower Mills area in Dorchester and Milton is to him the neglected and forgotten aspect of the river that is in need of repair:

…back in the 70’s… It [Lower Mills and Walter Baker Dam Complex] was designated to be a Heritage State Park like they have in Lowell and Holyoke and North Adams and Fall River… And for whatever reason, I don’t know why this one didn’t click. I mean, the whole program was voted in and the designation was supposedly made, but there was no back up funding when it came time to actually spend money to do anything… The money just wasn’t there and I don’t know why but, it just wasn’t there. The Massachusetts miracle maybe had crashed. Well, it was probably the same reason the Baker II didn’t happen until right now. I mean, you notice, finally, just before the building falls into the river…60

Based partly on this sense of place, which is the product of personal and shared experiences related to the Lower Neponset River (Tuan 1977), participants hold different views on what specific restoration activities are necessary (i.e., how restoration should be achieved) according to what they believe is problematic, neglected, or broken, and in need of fixing. For instance, based on his view that the main problem facing the Neponset’s salt marsh estuary is the elevation of the marsh and subsequent invasion by Phragmites, ID13 told me when I asked what restoration of the Lower Neponset meant to him:

…a wetlands restoration… to remove… allow nature to remove these invading Phragmites stands and return the area to its natural state, which would be Spartina alterniflora [salt marsh grass species] and rimming all of these areas in big cowlicks of Spartina patens [another salt marsh grass species] every place. So that’s what restoration essentially means to me. And, then that would attract those creatures that are indigenous to such a habitat. 61

And ID3, who saw neglect of the historic structures along the river in Lower Mills as the big problem to be fixed, responded to what restoration meant to him, with the following:

Historically, you know there has to be some kind of balance between preserving history and the back to nature movement… I’m thoroughly in favor of environmental protection and all that kind of thing but to just negate all that by saying, oh, the dam has to go. The dam is like one of the first in the country. There was a dam there in the 1600s, you know when Israel Stoughton put his grist mill there, there was some kind

59 ID13Interview1-101107
60 ID3Interview2-070207
61 ID13Interview1-101107
of a dam, not very fancy of course, but some kind of dam, because this was a natural falls on the Neponset and that’s why they picked it to be there. And you know if they wanted to put a fish ladder there no problem with that, but just to take the dam out completely… I have no problem with the fish getting back up there, it’s just taking out the whole dam… obviously from what I’ve been saying restoration to the Paleolithic period of time when everything was natural and nothing was manmade up and down the Neponset River that’s not, well to me, it’s just too much over the dam.62

Similar connections between how participants value and relate to the Lower Neponset as a place and their responses to how the river should be restored came up repeatedly throughout the interviews. An example of interest is the similar interpretations of the Lower Neponset’s restoration as told to me by ID17 and ID23, who both interpret the river as a place of danger. They separately told me stories of knowing, and sometimes personally being present, when children had accidentally drowned, or nearly drowned, in the Neponset. They also both told me independently that they believed that one of the primary problems facing the Lower Neponset River is that it is currently too dangerous for children and families due to the risk of falling in and drowning. When asked what restoration of the river meant to them, both of their responses included a belief that there should be fencing, or some other type of netting, along the river to prevent accidental drownings.63 This connection between fencing and restoration raises important points, many times overlooked by ecological restoration experts, that local citizens may view the river as still a “wild” place, despite its very urban surroundings, and that within the concept of restoration for these people the river must be “tamed” in order for it to be restored. Underlying this belief lies a sense that to them restoration is more about making the river part of people’s everyday lives than returning the river to some pre-disturbance condition.

Others believe that humans should not intervene as directly in the restoration of the Lower Neponset River and tend to subscribe to this interpretation by telling stories about the river’s restoration that support a hands-off approach. These personal interpretations and stories revolve around returning the river to some natural ecological state through benign neglect and focus more on raising public awareness and encouraging public education programs around the Lower Neponset River’s human and natural history both of which would cost less money than human interventions. ID5, who described the Lower Neponset

62 ID3Interview2070207
63 ID17Interview120507; ID23Interview12005
River as a place of both ecological resources and industrial history, responded to my question about what the Lower Neponset River’s restoration meant to her with the following answer:

We’d be happy if they’d just clean up the hazardous waste and leave it alone… they’re trying to spend I don’t know how many thousands of dollars trying to restore the marshes in the other area and it’s doing it on its own right there. And that’s free. So, just let it be as much as possible.64

One participant, ID6, with a strong sense of the Lower Neponset as a place of refuge and ecological resources, described the restoration of the river, specifically the removal of dams, as “a grand experiment” in which he criticized the State for wasting resources on “something that will not be beneficial to people or the environment for some time.” And, he went on to say: “My grands [grandchildren] won’t see the benefits, and even theirs may not.” So, while ID6 described the Lower Neponset River’s restoration as involving a large amount of human intervention by the State, this did not reflect his personal values or interpretations and his belief about how restoration of the Lower Neponset River should actually be carried out. Instead, his personal reflections on and interpretations of the Lower Neponset’s restoration tell a different story, and reveal his concerns over the trash in the river and a deep appreciation for the river and estuary as a “connected system” that, given enough time and on its own, will support fish again without the need for human interventions such as dam removals:

ID6 said that there are fish already in the river and adapted to it, noting that the fish that go from salt water to fresh had not been there for hundreds of years. And, that there are more and more fish as the river gets cleaner, since the factories closed and sewers were stopped from flowing directly into it. He wondered what would happen to the rest of the river if the dams were torn down. He wondered if it would ruin the river. He made reference to “all that trash.” “The river is a connected system” he said, and he wondered how this trash would impact the fish currently in the river and estuary… Instead [of removing the dams], he wondered about cleaning up all the trash that’s there now… He said, “Time will return the fish, not people.” 65

On the other hand, and unlike the example cases illustrated above, some participants did not express to me a clear sense of what they believe to be broken nor straight-forward judgments about specifically how they believe the restoration of the river should be carried out. Instead, they talked more ambiguously about how restoration should be done. One of them said that any restoration activities must reconcile the current human presence and the river’s “original condition,” with an underlying sentiment that humans are entitled to stay near the river:

64 ID5Interview1-070307

65 ID6Interview1-071307
…restoration is kind of a mixed issue because you don't want to restore it completely to its original condition because then we wouldn't be here would we, I mean we would go back to the Indians and we'd all go back to Europe or wherever we come from.  

Statements and stories from study participants such as these reveal the variety of local interpretations of the act of “restoration,” in the case of the Lower Neponset River, and offer individual judgments on how to restore. Further, these judgments offer insights into the way participants may personally value or interpret the Lower Neponset River and its restoration based on their relationship to the river as a place, which in turn is related to their personal and shared experiences, and how they value this place in terms of the past, present, and future. As Spelman notes: “Such judgments [regarding repairing and fixing] disclose in an intimate way what we do and do not value about ourselves and the people and things around us. For though we do not repair everything we value, we would not repair things unless they were in some sense valuable to us, and how they matter to us shows up in the form of repair we undertake” (Spelman 2002, p.8).

Similar cases to the above excerpts, in which study participants with different senses of place characterize what is broken about the Neponset River and how to fix it in different ways, are found repeatedly throughout the interview transcripts and observational notes. However, because of the type of qualitative and interpretive methodologies used in this study, no direct causal relationship between individual participants’ sense of place sentiments and specific judgments about how the Lower Neponset River should be restored can be proven. This apparent relationship between how people relate to place and how they describe restoration that shows up repeatedly in the interpretive analysis of this study’s data could be further investigated using alternate sociological and social psychological data collection and analysis methods.

The connections between local senses of the Lower Neponset River as a place and judgments about its restoration are further explored in Chapter VII. The differences and similarities are used to identify separate interpretive environmental communities, to describe the characteristics of the different interpretive communities, and to explore the local contexts and people most closely associated with them.

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66 Anon1Interview2005
Comparing Expert and Local Interpretations of the Lower Neponset River’s Restoration

A key difference between how restoration experts and local, non-expert citizens interpret the Lower Neponset River’s restoration seems to lie in the degree to which they tacitly agree or differ over what is degraded or in need of repair. It follows, then, that if there is no agreement over what is in need of repair, or restoration, it will be difficult to ever reach agreement over how to fix it. There will always be a conceptual and communication barrier because the goals, or endpoints, of the restoration may be different and even in contradiction to each other depending on the original needs. Said another way, lack of consensus on what constitutes the existing problem will inevitably lead to conflict over what is the most appropriate fix. To analyze this disconnect, I took a subset of the differences between local citizen interpretations of how the Lower Neponset River is “broken” and the various scenarios for fixing it (described above), and compare those with the needs and goals for restoration set out by the state environmental agencies most involved in the Neponset River’s restoration, EOEEA, Massachusetts Riverways, and the Office of Coastal Zone Management. This analysis develops a matrix table of expert versus local interpretations of restoration that can then be used in a variety of ways to better plan for more inclusive public dialogue over the Lower Neponset River’s restoration, identify areas where differences between experts and local citizens may be most intense and difficult to overcome, areas where there is already agreement, and areas where there is a possibility for negotiation and openness to change.

As shown above, the local citizens who participated in this study talked about the Lower Neponset River’s restoration in relation to their interpretations of the Neponset as a place in their everyday lives which, in turn, appears to inform how they frame the specific ways in which the river is degraded. In contrast, the various state agencies involved in the river’s management and restoration define restoration in terms agreed to by a national body of experts (US National Research Council, which is part of the National Academy of Science) that focuses on ecological form and function across many different river systems in different parts of the nation, and not based on the specific urban nature of the Lower Neponset River nor the different roles it plays in people’s everyday lives in terms of social, cultural, psychological, and historical importance. This expert definition of restoration also emphasizes human intervention, in the form of technical and engineering efforts, to stop and reverse ecological damage caused by human disturbance (NRC 1992). In this way, the NRC definition frames the specific ways in which the river is
degraded by linking negative human impacts to the collapse of ecological processes and destruction of a rivers form and function.

According to the state agencies’ definition of restoration, the reason behind a restoration such as the one being planned for the Lower Neponset, is that the river’s ecological system, and more specifically, its biology, hydrology, or morphology, has been broken as a result of human disturbance. Their problem-solving rationale says that humans should therefore step in to conduct activities to fix the system and return it to a pre-disturbance state. However, it is important to point out that this rationale contradicts how some of the local citizens who participated in my study frame the problem and possible solutions. While, similar to the agencies, they believe the problems the Lower Neponset faces are a result of human disturbance to the river’s ecology, but their problem-solving rationale instead leads them to an interpretation of restoration that calls for a completely hands-off approach.

While one agency, Massachusetts Riverways, recognizes that there is a “cultural community” related to rivers, the agency does not explicitly define how this relates back to their definition of restoration and the restoration projects they plan and carry out. Most significantly for an urban river such as the Neponset, Massachusetts Riverways and other state agencies do not recognize in their programmatic materials nor in their presentations at public meetings which I observed that there may be many cultural communities along the same river that have different interpretations of the problems facing that river, as well as different possible solutions to those problems.

Massachusetts Riverways programmatic emphasis on restoration projects such as the one on the Lower Neponset has been focused on dam removal in order to improve the river as habitat for anadromous fish. This implies that the reason for doing the restoration is related to a belief that the river’s ecological system is degraded by the presence of the dam (i.e., a specific type of human disturbance). This has the effect of privileging the bio-physical aspects of the restoration over the cultural, and emphasizes a fairly significant amount of human intervention (e.g., bulldozing equipment to tear down the dam) in order to achieve restoration of the Lower Neponset. The dam removal may secondarily benefit local citizens who value the river for recreational purposes (i.e., kayakers, canoeists, fishermen) and in terms of the river’s native ecological resources and services. However, this focus on dam removal may not recognize that

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67 PO010908; PO032907
other parts of the cultural milieu frame the river’s degradation in terms of history, aesthetics, economic development, refuge and inspiration, danger, and memory, thus resulting in a diversity of different restoration visions.

To illustrate the range of local, citizen interpretations and restoration visions compared with the fairly uniform interpretation of restoration subscribed to by the Lower Neponset River “experts”, Table 3 summarizes the statements I collected from interviews with 12 different study participants68 and places them in relationship to the human interventions that the US National Research Council and natural resource agencies involved in the Lower Neponset River use to define how river restoration should be carried out. In this table, the expert definition of restoration calls for scientific and engineering activities to be used in returning physical, hydrologic, and morphologic conditions of an ecological system to pre-disturbance conditions, through chemical clean-up, reintroduction of native vegetation, and other types of physical, chemical and biotic manipulations (NRC 1992). This definition is represented by the column 3 heading, “Human Intervention.” The local interpretations in column 1, “No Human Manipulation,” show the greatest degree of difference when compared to expert interpretations for restoring the Lower Neponset River, while local interpretations in column 3, “Human Intervention,” show the greatest similarity between expert and local interpretations for restoring the Lower Neponset. Column 2, “Un-Specified Human Intervention,” represents local interpretations that recognize, or support, a certain amount of unspecified human manipulation, such as clean up, bringing the river closer to some natural condition, opening up vistas, or improving public access, but do not call for specific actions (as in column 3) that would require significant engineering or technical manipulations, such as removal of dams, cleaning up PCBs, or removal of Phragmites.

68 Some of these statements are based on more than one interview with an individual participant, and are not direct quotes from the data but composites of several quotes from the same person.
Table 3. Summary statements by local citizens describing *how* they believe the Lower Neponset River’s restoration should be carried out, compared to the expert definition of ecological restoration represented as “Human Intervention” in column 3.

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<td>Restoration means nature reclaiming itself naturally, with no human disturbance.</td>
<td>Restoration means bringing the river closer to some natural condition before it was polluted by human activities.</td>
<td>Restoration means returning anadromous fish to the river and creation of fish passageways or removal of dams and other obstructions.</td>
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<tr>
<td>Restoration means raising awareness of the river and its history.</td>
<td>Restoration means repairing and cleaning up nature to get it back the way it used to be - to its previous state, at some previous time.</td>
<td>Restoration means cleaning up PCBs, sewage and other human-created pollutants.</td>
</tr>
<tr>
<td>Restoration means preserving and maintaining historic structures.</td>
<td>Restoration means opening up vistas and postcard views of the river.</td>
<td>Restoration means getting rid of the Phragmites (common reed) in the estuary and purple loosestrife in Fowl Meadow.</td>
</tr>
<tr>
<td><em>Restoration means educating the neighbors of the river.</em></td>
<td>Restoration means improving public access to the river and increasing usage of the river.</td>
<td>Restoration means removing impervious surfaces and other human impacts from the wetlands of the watershed.</td>
</tr>
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</table>

Table 3 presents a way to classify the different ways that local citizens interpret the Lower Neponset River’s restoration based on level of human intervention and compare them with the expert definition of restoration. What this table also does is create a matrix of expert and local interpretations of restoration that can be used as a simplified model for recognizing and identifying areas of local conflict and consensus over how to restore the Lower Neponset River. For example, columns 1 and 3 represent the most intense differences in terms of how the Lower Neponset River’s restoration should be carried out, and therefore these local interpretations hold the greatest potential for conflict between both experts and local citizens (comparing the entire contents of columns 1 and 3) and between local citizens (comparing cells within columns 1 and 2).

Column 3 of Table 3 shows that there is already agreement between experts and some local citizens over degradation of the river and the specific types of human intervention that could be used to solve the problem. Although there may be differences when comparing the cells within column 3 over how to prioritize resources to carry out those activities, the central problem facing the Neponset for both locals
and experts is the same, namely human activities have degraded the river’s ecology in some way and humans must fix it. Column 1 reveals that to other local citizens, human intervention, in the form of engineering activities and fixes, is not necessary to restore the Lower Neponset. These “no human manipulation” interpretations may be in conflict with local interpretations in columns 2 and 3 that call for unspecified or specific human actions to be undertaken, although they are not all mutually exclusive. For instance, educating the neighbors of the river is compatible with all of the interpretations in column 3 that call for specific human interventions to restore the Neponset. However, preserving and maintaining historic structures may not be compatible with bringing the river closer to some natural condition (column 2) or removal of dams (column 3) and removal of impervious surfaces (column 3). Local interpretations found in column 2 may hold the greatest possibility for ongoing negotiations over how the Lower Neponset’s restoration should be carried out since these local citizens seem to have clear ideas about what is broken, but lack specific, concrete solutions to fix it and may be more open to change.

**Conclusions and Caveats**

This chapter shows that within the ways in which individuals connect with and know a place are embedded various judgments and interpretations of what is broken, damaged, or degraded about that place and various ideas about how to fix it. In the case of the Lower Neponset River, these different interpretations of place and restoration may lead to different ways of framing the problems facing the river, each leading to different solutions.

These insights should be useful to natural resource agencies and restoration experts who are working to ecologically restore the Lower Neponset River while taking into account “cultural communities,” since the local interpretations of the Lower Neponset as a place and an object of restoration come out of a socio-cultural context grounded in the river’s rich history, local citizens’ shared and personal experiences, the regional economy, and local politics. These non-expert interpretations provide a means for restoration experts and decision-makers to reflect upon their professional definitions and how it is carried out in practice. In addition, it gives them a way to think about how those definitions and practices may relate or conflict with the different local place-based interpretations of restoration. For example, there may be agreement between local citizens and experts that the main problem facing the Lower Neponset is
human activities that have led to disturbance of the river’s ecological processes; however, not all citizens may agree that the solution should involve human manipulation of the river through expensive engineering fixes. These local citizens would rather see the river left alone and protected from further human activities that endanger an ecology that they believe, and observe, to be returning naturally.

Such comparison may also be useful when trying to understand conflicts between local citizens about what the Lower Neponset River’s restoration should look like, or even if it should be done, as well as disagreements between local citizens and natural resource agencies and restoration experts who are planning for or already carrying out restoration projects. Understanding the socio-cultural context of these conflicts can assist agencies in planning more inclusive and productive ways of engaging the local public in restoration planning, implementation, and eventual monitoring activities. For instance, including citizens who believe that restoration of the Lower Neponset River should involve making the river safer for children and families recognizes that there are local citizens who value making the river a part of people’s everyday lives as just as important, if not more important, than returning the river to some pre-disturbance condition. Including local citizens with values that may differ from expert definitions and practices of restoration may in turn lead to greater involvement in, and even support for, river restoration activities that create a broader sense of civic engagement and well-being in local citizen’s everyday lives.

While this research found that study participants with similar senses of place tend to characterize what is broken about the Neponset River, although not necessarily how to fix it, in similar ways, this does not mean that this is a direct cause and effect relationship, or that it is true for all citizens. The type of qualitative and interpretive methodologies I used in this study do not lead to establishing, or proving, a direct causal relationship between individual participants’ sense of place sentiments and their specific judgments about how the Lower Neponset River should be restored. In fact, one main bias this research has is the fairly uniform characteristics of the study participants and the way in which they were selected for participation (i.e., existing involvement or interest in river activities) – they were all primarily long-time residents with a strongly developed sense of place and an existing connection to the Neponset River. Residents living in the area for a shorter period of time and without an established connection to the Neponset River are likely to have a less developed sense of place that is grounded in the very local (i.e., their sense of place may still be bound up in previous locales where they have lived). These caveats pose
important questions for further research. First, does length of residency in a particular place impact a local citizens' judgments about restoration of that place, and, if so, how? And, second, does this apparent relationship between local citizens’ senses of place and judgments about restoration hold true in a larger, more diverse segment of the population? These are questions that could be further investigated using alternate sociological and social psychological data collection and analysis methods.
CHAPTER VII

EVERY RIVER IS MORE THAN ONE RIVER: INTERPRETIVE ENVIRONMENTAL COMMUNITIES AND NEPONSET RIVER RESTORATION

Through this research project I set out to explore the extent to which various local, everyday interpretations of the Lower Neponset River and its restoration exist and how an understanding of the similarities, differences, and interactions between these interpretations can be used to inform the theory and practice of urban river restoration. By using a set of qualitative methodologies, including ethnographic interviews and participant observations, I identified and explored in Chapter VI how local citizens interpret the Neponset River as a sense of place, how they define the concept of restoration generally, and how they specifically judge the Lower Neponset as an object of restoration.

The local, everyday interpretations of place and river restoration, laid out in the preceding chapter, serve as the foundation for answering the three more specific research questions I originally posed in Chapter III: 1) What are the differences and similarities between local storylines of the Lower Neponset River and its restoration? 2) How do these storylines about the Lower Neponset River and its restoration diverge or converge with each other to create local interpretive environmental communities? and 3) How do these local interpretive environmental communities relate to each other at specific places of conflict related to the restoration, clean-up, and management of the Lower Neponset River? The results of questions one and two will be discussed in this chapter, and the results of question three will be presented in Chapter VIII.

This chapter consolidates local interpretations of the Neponset River (as a place and as an object of restoration), as told to me by local citizens during ethnographic interviews in multiple individual narratives and observed by me during participant observations from 2005 to 2008. The interview data is used to give “voice” to the socio-political actors in each community, while participant observation data is used to describe specific settings, events, as well as social and political interactions that represent the unique characteristics of each interpretive community. These narratives and observations were thematically sorted and weaved into composite storylines that represent distinct thematic narrative threads
(stories) related to a particular way of interpreting the Lower Neponset River and its restoration. These narrative storylines reference specific symbols and metaphors, and are contextualized through social interactions, psychological commitments, and in some cases (but not necessarily) unique social and political settings. I found that such storylines when shared by three or more people bind those people together in a particular way of framing (through discourse) the Lower Neponset River’s restoration. These communities of interpretation, or discourse coalitions (Hajer 1995; Davies and Harré 1990; Fischer 2000), are analytically grouped into “interpretive environmental communities” of like-minded citizens who share, disseminate, and modify particular storylines (Table 4).

The interpretive environmental communities presented in this chapter are organized by their distinct storylines, which relates them to specific senses of place, including geographic locations, and types of narratives that reflect shared interpretations of how the Neponset River should be restored. Stories told to me in interviews and circumstances documented during participant observations, including interactions among study participants, between study participants and other local citizens, and between study participants and experts or elected politicians or government officials, are used to describe the characteristics of the different interpretive communities, including their shared symbols and metaphors as well as their social and institutional contexts, and to provide examples of the specific shared storylines most closely associated with each interpretive community that make them distinct from the other interpretive communities. This type of interpretive analysis of observations – from different types of community meetings and events related to the local political, economic, and bureaucratic-technical planning processes of river restoration, remediation, and redevelopment – was useful in further substantiating storylines developed from interviews and in locating those storylines within a broader social context. The detailed notes from participant observations were useful in describing how local interpretations and different interpretive environmental communities are (or, are not) represented in the political and scientific processes of river restoration, remediation, and redevelopment. Supplemental documents from governmental and non-governmental organizations, as well as newspaper articles, were also used to further ground and distinguish the interpretive community storylines presented here.

Among the different local storylines captured during almost three years of interviews and observations, six were shared among different participants in this study. These six storylines comprise

Each composite storyline and its interpretive environmental community are accompanied by one or two maps that can be found in Appendix E. These maps serve as cartographic representations of how each interpretive environmental community and its storyline relates to the Lower Neponset River’s built and natural environment. These maps are denoted by an alphanumeric code – E.1.a., E.2.A.a., and so on – where the first upper-case letter identifies the Appendix, the number (and in some cases a second upper-case letter) identifies a main storyline map, and each new lower-case letter corresponds to a new location or feature discussed in the narrative.
Table 4. Interview participants sharing similar storylines.

<table>
<thead>
<tr>
<th>Esplanade Visions(8)</th>
<th>History Uncompromised(6)</th>
<th>“Smart” Development(5)</th>
<th>Personal Connection(13)</th>
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Interpretive Mosaics: Lower Neponset River Storylines and Interpretive Environmental Communities

Esplanade Visions: Managing and Revitalizing the River and its Landscape

Participants in this interpretive environmental community express unity in their efforts to ensure that the Lower Neponset River and the abandoned industrial sites along the river’s banks are re-developed and managed as a waterway and parkland for multiple public uses, primarily aesthetic, recreational and athletic. Most of them look to the Charles River Esplanade as a model for how this should be done, even referring in print and speech to the Neponset River’s Greenway and parkland as an “Esplanade” and as the missing link to Olmstead’s Emerald Necklace. The Lower Neponset River, as depicted in their storyline, is a place of visual aesthetics and outdoor recreation. However, the Lower Neponset also requires continual
maintenance and up-keep, as well as vigilance against illegal and dangerous activities, such as teenage fighting, under-age drinking, graffiti, and various other public safety concerns. To participants in this community, restoration of the Lower Neponset River should involve cleaning up the contamination in the waterway in order to make it safe for canoeists, kayakers, and fishers, as well as cleaning up contaminated land areas adjacent to the river for safe public uses, including gardening, playing team sports, launching canoes, picnicking, biking, hiking, and jogging. They also believe that creation of new parks and public recreational areas from old industrial sites or other abandoned property, and the repair of aging park property and infrastructure that could pose a danger to the public, should also be part of the Lower Neponset River’s restoration.

Shortly after the last railroad car made its final delivery to New England Millworks at 60 Hilltop Street along the Neponset River in Dorchester around 1990, the Conrail Company put their railroad right-of-way up for sale (E.1.a.). Boston area parks advocates, the residents of Dorchester’s Cedar Grove neighborhood in Boston, and local politicians immediately began lobbying for the state to purchase the right-of-way for development of a bike and walking path along the Lower Neponset River. Sharing the 19th century visions of Charles Eliot and Frederick Law Olmstead, these early local proponents of a Lower Neponset River Greenway embodied the main focus of this storyline — restoration of the Lower Neponset River means managing, cleaning up, revitalizing, and providing public access to the Lower Neponset’s waterway and landscape for aesthetic, recreational and athletic uses.

The sale of the Conrail railroad bed and associated right-of-way along the Lower Neponset was seen as the ideal opportunity for completing a south Boston link in the regional network of parks and greenway trails along all of Boston’s major rivers – the Charles, the Mystic, and the Neponset. This trail link is referred to by this interpretive environmental community as a continuation of Olmstead’s “Emerald Necklace” that was originally supposed to surround the entire city of Boston in a greenway.

In addition, acquisition of the rail bed offered an incentive for the State to clean up abandoned and contaminated industrial sites along the Lower Neponset that were causing public health and safety concerns among Boston’s Cedar Grove residents (E.1.b.).

In 1998, after meeting with neighborhood associations and other local organizations and businesses along the Lower Neponset River and in the Boston metropolitan area, the State’s Department of
Conservation and Recreation (then the Metropolitan District Commission, MDC) completed the Phase I Master Plan for the Lower Estuary of the Neponset River Reservation (MDC 1996). This Plan was meant as a guide in planning for public open and green space and recreational opportunities for the river corridor from Dorchester Bay to Mattapan Square. Phase I of the Master Plan gave the state, non-profit park and land trust organizations, such as Boston Natural Areas Network and the Trust for Public Lands, a way to work with local citizens in providing guidance to begin land acquisition, de-contamination and construction of a Lower Neponset River Greenway consisting of bike and walking paths, park land, and canoe launches (MDC 1996). A Phase II plan (to be completed later) was recommended to guide extension of the Neponset Greenway to the Blue Hills Reservation via Fowl Meadow in Hyde Park and Milton. This history of the Lower Neponset Greenway trail and parks creation is very important to this interpretive community, and to the sense of ownership and shared sentiment toward the Lower Neponset area that is felt within this interpretive environmental community.

The civic engagement of people was key, you know the beauty of the [formation of] the Greenway Council had to do with the fact that they asked those already in neighborhoods who were regarded as connectors or leaders through the civic associations. Those council members took the planning meeting results back to the associations where they dealt with cynicism, specifically towards Pope John Paul II park because three previous projects – race track, Patriots stadium, and one other – had been talked about in that location for years and nothing had happened.69

There are constant references among participants within this interpretive environmental community to the Charles River’s 17-mile “Esplanade” as a model for how the Lower Neponset River’s Greenway should be created and managed for recreation.

…what I’d like to see is something similar to the Charles River… I’ve ridden by in cars and see people sitting there and just looking out at the Charles River, just as a place to relax and unwind, and right now along the Neponset River you really can’t do that except for where Pope John Paul Park is, there isn’t really the feasibility or the accommodations to… come and just pull in the car and sit and watch, have a picnic just sit there have a cup of coffee, tea, whatever, and just watch the river.70

“Esplanade” comes from the French term for leveling the ground by getting rid of trees and other vertical structures (Wedgwood 1872) that enables longer, less obstructed views. Even when the Charles River is not specifically cited in comparison, such an “Esplanade” vision is apparent among members of this interpretive community:

69 ID10Interview2-071307
70 ID23Interview2005
As we crossed over the Fairmount bridge and she urged me to look down at the river, ID22 said, “The overgrowth of vegetation along the banks makes it look smaller. If it was opened up all the way from Hyde Park to Mattapan it would look much larger… Clear away the sides. Trees are beautiful but, what’s the expression, ‘you don’t see the forest for the trees.’”

To maintain the character of the “Esplanade,” and to ensure that residents and visitors to the river feel that the public areas are safe and clean, appropriate uses of the river and parks should be decided upon in cooperation with local citizens and then managed by state and local authorities. Such management is expected to include attractive landscape plantings, grass mowing and other landscape maintenance, police patrols, appropriate educational signage, graffiti removal and suitable trash collection facilities.

…people want to be able to have access to the river, want to use it for their bike paths and all kinds of access. I think you can just… maintain a certain kind of habitat for the animals and clean it up… people are going to want to have your maintenance, cutting the lawn, keeping the shrubbery in shape. That’s the way I see the Pope John Paul II Park, the whole Charles River up to however far they have it maintained in the Mystic, it’s all very highly maintained.

This spirit of the “Esplanade” can be most vividly seen in the largest park along the Lower Neponset referenced in the interview excerpts above, Pope John Paul II Park in Dorchester (E.1.c.). PJP II, as it is called by local citizens, abounds with wide open vistas of the river across mowed fields of grass and athletic fields, park benches for sitting, and paved trails for walking, biking or jogging.

This storyline is most often heard from members of the Neponset Greenway Council, seven of whom were focal participants in this study. The Council is a group of citizens from throughout the Lower Neponset River area that was formed in 1995, as part of the public process for developing the Lower Neponset Greenway Master Plan. The Greenway Council meets monthly in various locations along the Lower River. These meetings are organized and run by staff of the Boston Natural Areas Network, an urban “affiliate” of the Trustees of Reservations that protects open space throughout the State. There are on average 15 people in attendance at these meetings, with the majority being residents who live along the Lower Neponset River in the neighborhoods of Hyde Park, Mattapan, Dorchester and Milton (E.1.e.). There is a core of five members who have been active in the council since its inception and attend every meeting. State police and staff from the State DCR also attend on a regular basis to provide updates on security concerns, new developments and park maintenance. Security concerns and routine maintenance at Pope John Paul II Park, Neponset II Park (E.1.c.), along the Greenway trail (E.1.f.), on Sachem Point/
hummock (E.1.g.), and at the Martini Shell in Hyde Park (E.1.h.), along with the need for more funding for Greenway and park maintenance, are topics of discussion at almost every Council meeting.

Members of the Greenway Council whom I interviewed and had informal conversations with feel that the Council has been instrumental in getting the Neponset Greenway Trail completed from Pope John Paul II Park to Central Avenue along the river. One participant and Council member was proud to say: “it is the only state trail that’s really been motivated by a community group.”73

Plans to continue the Neponset Greenway to Paul’s Bridge and Fowl Meadow in Hyde Park (E.1.i.) coupled with mounting public pressure on the State to clean up PCB contamination in the Lower Neponset’s sediments (E.1.j.) has brought renewed life to the stories told by this interpretive environmental community. Since this community’s primary storyline revolves around the current, completed trail’s creation in the mid- to late-1990’s and the process that was used at that time to develop the political support and find the funding to implement contamination clean-ups along the rail bed and at PJP II Park and Neponset II Park, current efforts to restore the Lower Neponset River supported by this interpretive community involve sharing and remembering the lessons learned from their experiences in order to inform, and perhaps influence, current discussions.

IN: Why is the process [of Greenway planning and development] so slow?
ID10: It’s simple. Very simple. Short-terms of political officials and appointees which is matched to election cycles. Leadership changes. All of these things call for re-education of officials continuously… Cathy [current DCR staff person responsible for Neponset Greenway and liaison with Council] has been involved in the planning process for the Greenway 5 or 6 years. So, she wasn’t involved in the Master Planning. There was a big gap in staffing then. All of these political changes is why I’m such a big fan of the Master Planning processes that lays out what people want for long-term projects and ties them together. We call it “norming, storming, waiting.”74

Such lessons may also lead to calls for involving more local citizens in the planning. Specifically in the case of extending the Greenway, this could mean getting more citizens from Mattapan, Hyde Park’s Fairmount Hill, and Readville neighborhoods, as well as the towns of Milton and Dedham, actively involved on the Greenway Council. During the January 2009 Council meeting there was a brainstorming session around priorities for the upcoming year and expanding citizen involvement was one of the items brought up for consideration.75 In addition, based on their experiences in Phase I, securing adequate

73 ID29Interview#4-2005
74 ID10Interview2-071307
75 PO020609
funding early on for remediation of contaminated sites, as well as maintenance and upkeep of trails and parks, should be a key priority in planning for and establishing the Neponset Greenway extension.

Then there are issues with funding cycles and bond caps with a 5-year limit. Citizens groups have no money and staff, and so it was vitally important to get private money [through Reader’s Digest Foundation] to assist in the funding of the Council and Greenway planning processes. 76

History Uncompromised: Preserving and Restoring the Human History of the River

Participants in this interpretive environmental community believe that the Neponset River is an irreversibly altered, human-dominated environment with an important human history that should be the subject of protection, preservation, and restoration. They believe that the river’s waters and its fish and wildlife exist for the aesthetic and recreational enjoyment of humans, and so the Neponset River should be managed for human use, including historical education and tourism. With the discovery of PCBs it must also be managed as a public health hazard and cleaned up in order to allow safe public uses. This interpretive community lacks trust in Boston city planners, especially the Boston Redevelopment Authority, whom they view as enabling private developers to modify or tear down historic structures for residential and retail uses without regard to the historic value of those buildings. As an example of Boston’s neglect of historical sites along the Lower Neponset from Port Norfolk to Fowl Meadow, many of the participants in this interpretive community told me the story of the failed efforts to protect and revitalize Dorchester Lower Mills-Walter Baker Dam Complex as a Heritage State Park. Participants in this interpretive community are also distrustful of river advocates who they believe all want to tear down or irreversibly alter the dams (and in the process take away their historic qualities) in order to re-introduce American shad and alewives to the river. Such environmental “activists,” they believe, are ignorant of the historic value of the river’s built environment and privilege fish and nature over people and the human history of the river. Instead, the revitalization and preservation of historic structures and creation of educational exhibits – that convey both the environmental and human history of the river — should be the priorities for restoring the Lower Neponset River.

Concerted efforts in Boston and Milton to preserve and restore the Lower Mills-Walter Baker Dam Complex (E.2.A.a.) as a “Lower Mills Heritage State Park” – similar to other Massachusetts Heritage Parks in North Adams and Lowell – began in 1978 (Boston Redevelopment Authority 1978). The original

76 ID10fnterview2-071307
proposal for a Lower Mills Heritage Park was explicitly linked to the general clean up of the Neponset River and development of recreational amenities such as bike and walking paths and canoe launches, as well as educational displays on the history of the mills and the river’s role in early industrial history. Many of those who shared, and continue to share, this dream of a Lower Mills Heritage Park, are part of this interpretive environmental community. They not only share a common storyline related to the Heritage Park’s promise and its eventual denial, but the sentiment that the restoration of the entire Lower Neponset River must entail the preservation and restoration of human history, including built structures, along the river. To many in this community, the failed attempt to create the State Heritage Park at Lower Mills contains cautionary lessons relevant to current river restoration and “revitalization” efforts and the fate of all historic sites along the Lower Neponset.

In 1984, the Lower Mills Heritage Park project was granted $3.4 million in capital improvement funding by the State legislature for planning, historic restoration, preservation, educational exhibits, and construction. The State felt the site was worthy for such funding as the “last surviving intact cluster of nineteenth century mill buildings in the city of Boston.”

However, by the late 1980’s the project was described by one local citizen as “in suspended animation,” which appeared to be the result of confusion over funding during a change in State leadership. Also at issue was the increasing pressure on the City of Boston brought by commercial and residential real estate developers who wanted to shift the focus from public Heritage Park development to include construction of private condominiums and retail space. One of the results of this failed attempt to create a Heritage State Park at Lower Mills was a palpable distrust of developers by people in this interpretive community. Even the permitting and planning agency of the city (Boston Redevelopment Authority) was not to be trusted because they did not take into consideration the historic nature of the buildings and other structures around the river when granting permits for the redevelopment of old buildings or in the construction of new buildings.

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77 Dorchester Argus-Citizen, 22 Sept 1983

78 ID3Interview1-041007
Partly as a result of the Heritage Park failure and their distrust in developers, participants who share this storyline regard restoration of the Lower Neponset River to mean preserving historic structures along the river and protecting them from destruction by developers.

The charm and the interest of the neighborhood [Lower Mills] will only remain and be unique if more is made of the existing buildings and they not be allowed to be transformed and have the history obliterated…. I don’t want to see the industrial history just completely torn down…. If there can be in place the kind of review groups, public controls, maybe zoning incentives, carefully delineating what areas lend themselves to what kind of development so that developers can be enticed or encouraged to do the right thing.79

When the historic Stoughton school house along the Lower Neponset on River Street, just west of the Walter Baker complex on the neighborhood line between Lower Mills and Mattapan, was converted into up-scale condominiums in 2007, one participant commented at a public meeting:

…the building is not capable of historic preservation any longer. Gives us an idea of what happens when developers get what they want along the river.80

This distrust is also directed towards environmental activists, river advocates, or “purists” who have expressed their interest in removing or modifying the Walter Baker Dam in order to reestablish native anadromous fish populations of American shad and alewives in the Neponset River. Participants in this interpretive community believe such advocacy for dam removal offends the historic value of this dam and bodes ill for the other historic structures along the river. This distrust also comes from what they view as an inconsistent privileging of fish and nature over people and history. One participant expressed his confusion when what he described as an “over-the-top green-person” who advocated so strongly for the removal of the Walter Baker dam was then opposed to the removal of another human-built structure, the Blue Hills Reservoir in Milton.

ID34, who’s the naturalist and over-the-top kind of green person… he’s fighting a battle up there with the State over the Blue Hills Reservoir in upper Milton. And it’s funny because now that was a man-made reservoir. I mean, it’s not like it was a natural lake. And now because it’s water and because it looks better than something else, and because maybe the natural environment has adjusted to it being a man-made reservoir there for like 25, 30, whatever years, now they’re fighting to keep the reservoir. It’s like on one side he wants this dam out, which is historic… and on the other [he wants to] preserve the reservoir which is dammed, with rocks, you know man-made 50-foot tall wall and pump house and not looking very much like anything natural.81

79 ID39Interview-070505
80 PO-080107
81 ID3Interview2-070207
Instead of putting “fish before people,” citizens in this interpretive community believe restoration of the river means more public education about the history of the built environment, including preserving or restoring historic buildings and sites, understanding the river’s role in early American colonial and industrial history, as well as creating public education programs about the environmental history of the river as it relates to United States history. They value the Lower Neponset River as a place of historic significance.

In addition to the distrust of developers and environmental activists, citizens who share this storyline are united in their belief that the Neponset River is an irreversibly altered, human-dominated environment. When asked what he thought about the proposal to remove the dams along the river, one participant responded:

We can’t undo what’s already been done with regard to the changes caused by industry along the river. We should leave the past in the past. After all, since the beginning of this country’s history rivers have been the life-blood of industry. It’s that circular motion, the wheels of industry along rivers, that the United States was founded on and that was the economic engine of this country. 82

The river’s damming and altered flow pattern has not been conducive to anadromous fish passage since the 1700’s when the river became more highly valued as a source of power for industry. With the fish gone, and the river no longer being used as a source of power, the river’s waters, and what is left of its fish and wildlife, now exist primarily for the aesthetic and recreational enjoyment of humans. This community feels that the Neponset River is no longer a “natural” environment, and so it is more important to focus current restoration efforts on preserving and restoring the human history of the Lower Neponset, and teaching people about that history.

Participants in this interpretive community have been directly or indirectly involved in getting more historic sites along the river recognized by the State and municipalities, and thereby raising public awareness as to their importance. Such historic recognition has been somewhat successful at the Readville Trotting Park in Boston where a plaque was put up in 2007 to recognize the site’s importance to the history of harness horse racing, 83 and the Granite Railway in Quincy where tours of the railway are conducted throughout the summer. To this community, restoration of the Lower Neponset River should emphasize colonial history and historic industrial structures, such as old mill buildings, factories, railroads, and dams,
since they have played such a large role in influencing the river over the past two centuries. Once again, participants use the proposed Heritage State Park as an example of what this could mean.

If there was a heritage park that whole thing [Walter Baker Dam complex on the Milton side] would be fenced and interpreted and people could go down and stand… there’d be a little plate that would say here’s the site of the Israel Stoughton grist mill of 1635 or whatever it was, 1640. The rail trail is there, they’ve got kiosks to mount modern day event notices and DCR’s “though shalt not do this and that on the rail trail.” But, there’s no historical stuff at all. There’s some stuff about birds and bees and fish and snakes and whatever. But even right around Baker there’s nothing, you can walk that whole rail trail right through the Baker property and there’s not a thing there to tell you about any of it.84

Some even feel that components of this industrial history are worthy of “restoration” for their own sake.

One citizen even talked about restoring the old turbine in one of the mill buildings to demonstrate to tourists how the Walter Baker Chocolate Company generated electricity by hydropower.85

State ecological restoration experts and other local interpretive environmental communities advocate for the construction of fish passageways or breaches in the dams along the Lower Neponset River to facilitate the restoration of native anadromous fish species. The complete destruction of historic structures and reconstructions that represent to them historic structures and functions (such as the current dam that was rebuilt after Hurricane Diane in the 1950’s) in the name of “river restoration” is not acceptable to anyone in this interpretive environmental community. One participant told me:

I think there are other dams further up the river. There’s one up in Hyde Park, the paper mill dam. And there might be I’m not sure if there’s one more up in Dedham that they were talking about possibly removing. But, the one down here [Lower Mills] is really the one that I’m concerned about. It’s really the crème de la crème of historical dams. You know, it’s one of the first in New England, if not wider history…. You know if they were gonna tear the [Walter Baker] dam out I would be down there at hearings screaming bloody murder.”86

In addition, fish passageways adjacent to or through historic structures are viewed by the History Uncompromised community as a threat to the historical integrity of the local environment and as an unwarranted compromise with river restoration advocates. Thus, support of fish passageways would require specific citing and guarantees that the construction would not destroy the historical integrity of surrounding dams and buildings.

84 ID3Interview2070207
85 ID3Interview2-070207
86 Ibid.
You know if they want to put a fish ladder along one side of the dam and, you know they could probably easily do it on the Milton side… at the south end of the dam there’s a big concrete slab there with two big round things. That’s where in the Baker days, in the modern days, there were two turbines in there… But, you could easily use that end of the dam, that chamber that’s there you could not really destroy the main part of the dam and just do your fish ladder out where that power room used to be without reinventing the wheel or reinventing the turbine.87

Many who share this storyline are members of or attend events sponsored by the Dorchester Historical Society, Hyde Park Historical Society, Milton Historical Society, or Dedham Historical Society.

And, while this interpretive environmental community’s storyline is most vividly illustrated in the Milton and Dorchester Lower Mills area, and in the specific case of the Walter Baker Dam mill complex, there are other historic areas along the Lower Neponset, including the Granite Railway in the Neponset estuary, Paul’s Bridge, and the old Readville Trotting Park in Fowl Meadow that are just as important to this community (E.2.B.). All of these historic sites are talked about by participants in this interpretive community as being essential areas for preservation and restoration when discussing the Lower Neponset River’s future.88

“Smart” Development: Economic Growth and Revitalization of the River

Participants in this interpretive environmental community all value the Lower Neponset River as an economic amenity with high potential for attracting economic and urban redevelopment, or “revitalization” to the neighborhoods and towns surrounding the river. They all see further development of the Neponset River Greenway Trail as an additional amenity connected to the river because it provides an alternate means of transportation by bicycle or walking and recreational opportunities to residents or visitors. Abandoned industrial properties along the river, including old mills and factories, represent an untapped source of property revenue for Boston, Milton, and Dedham, as well as provide additional housing, services and facilities for residents, and attract consumers. Such redevelopment of existing properties and new development projects serve as shared storylines among participants in this community. The phrase “Smart Growth” is used by many in this community when discussing development projects along the river, denoting the consideration of transportation, environmental, and social needs in planning these projects. To this interpretive community, the restoration of the Lower Neponset River means

87 ID3Interview2-070207
88 ID1Interview-120507; ID1TransactWalk092506; ID3Interview1-022507; FG2-2005

140
cleaning the river and surrounding lands to standards that will enable them to provide private or public access to the river.

Many participants in this study felt that the abandoned industrial properties along the river, including historic mills and factories, diminish the aesthetic qualities of the river and are also sources of pollution that directly impact the Lower Neponset River’s water quality which could in turn not only effect fish and wildlife, but also human health. The participants that share this sentiment and also believe that these abandoned properties and post-industrial locations are an untapped source of tax revenue for Boston, Milton, and Dedham, as well as possible sources of personal financial gain, are a distinctive interpretive environmental community. This interpretive community believes that the clean-up and redevelopment of these riverside sites could bring additional money to cash-strapped local governments as well as provide additional housing, services, and facilities for residents and visitors. People in this interpretive environmental community see the Lower Neponset River as an amenity that enhances opportunities for river-related development and associated economic growth. As one developer along the river told me: “If you look at the environment and development intelligently there are ways to make this work. Our development will win by highlighting the location on the river. The community will win with physical access to the river.”

The current Greenway (E.3.A.a.) makes the Lower Neponset an even more attractive amenity to development proponents since it offers a safe and maintained area for recreation and family activities inside the city. In addition, members of this community point out that its location near public transit routes (bus and rail) and major highways (E.3.A.b.) also adds to the Lower Neponset River’s development potential and value. One of the main stories related to the Lower Neponset restoration that exemplifies this interpretation is a proposal to develop a new rapid transit route and upgrade existing commuter service along the current Fairmount Commuter Rail Line (E.3.B.a.). The proposal, formally called the Fairmount/Indigo Line, but referred to most often by local citizens who know about it as the “Indigo Line,” was first envisioned in 1999 and is spearheaded by several Community and Economic Development Corporations in Boston, including the Dorchester Bay Economic Development Corporation, Mattapan Community Development Corporation, and the Southwest Boston Community Development Corporation.

89 Interview-040208
These groups, with the support of various local non-profits and businesses including, Hyde Park Main Streets, Conservation Law Foundation, Alternatives for Community and the Environment (ACE), and city and state politicians, are collectively known as the Fairmount-Indigo Line Collaborative or the Fairmount Coalition. The inclusion of mixed residential, commercial and retail development all along the route’s corridor qualifies this as a “smart growth” development, according to citizen proponents of the plan, the City of Boston, real estate professionals, and urban planners:

I think it’s a good thing. A lot of people are afraid of it like they were afraid before of the [MBTA] Orange Line. But they were so proved to be wrong with the Orange Line. They call it “Smarth Growth.” And basically what smart growth advocates is the development of housing along the rail lines, the tracks, transportation corridors…

The phrase “smart growth” is used by members of this community when discussing development projects along the river, a phrase signifying that the development projects they support will take into consideration unique transportation, environmental, and social needs of the local and regional area and will not promote urban or suburban sprawl (Goody and Clancy 2005).

Visioning meetings run by architects and planners hired by the Southwest Boston Community Development Corporation were held at the Hyde Park Municipal Center during the spring and early summer of 2007. The meetings were designed to get input from local residents about what they wanted the Indigo Line and surrounding area to look like. There was strong, vocal opposition by some residents against any more residential development along the river, and a deep concern about plans that called for the removal of light industrial businesses along the river. Residents who shared the sentiment that the Lower Neponset River itself should be the center of these new development plans insisted that this was only a visioning process, and that nothing would be built or closed without permitting. Besides, those promoting and supporting the development argued, this will mean better services in the neighborhood and better resale value on homes. One man, who described himself as a relatively new resident of Hyde Park, offered his support of possible Indigo Line developments, and the possible economic changes they would bring, at one of these visioning meetings:
Concerned over property taxes? That’s an important point, but the danger is to talk about any change as inevitably bad. This is a long-term plan. The property values could go up on their own. This is decades out. It’s my prerogative to improve my property and can’t help it if property value of neighbor also goes up as a consequence.  

Like other planned developments along or near the Lower Neponset, the Indigo Line Collaborative views the river as a way to connect new buildings or existing, restored buildings to the landscape via promenades, walkways, bridges, and park benches. It is a feature to attract city dwellers to get a “taste of the out of doors.” Citizens in this interpretive community believe that restoring the Lower Neponset River should mean cleaning its waters and improving the lands along its edge by not only remediation and trash pick-up, but also continuing the Greenway through Hyde Park. They see this Greenway extension as a way to attract retail and residential developers, occupants, and visitors who can gain visual pleasure from views of the river along the Greenway or from building windows.

I see the Greenway as a way of me telling people about a piece of nature that’s in our area that they can take advantage of. That’s how I see it. I mean the bike path, the walking path, everything. You know people will actually buy houses because of that.

Like this story of proposed “smart growth” development along the river, all stories told by this community about the restoration of the Lower Neponset River focus on the economic development and revitalization projects completed, currently underway, or being planned for properties along the river. Completed projects include the Baker Lofts and the Walter Baker Condominiums in Dorchester-Lower Mills (E.3.A.c.), Milton Landing Condominiums in Milton (E.3.A.d.), River Street Condominiums along River Street in Dorchester-Lower Mills (E.3.A.e.), and the artist lofts in Hyde Park (E.3.B.b.). Besides the Fairmount-Indigo Line corridor, on-going and proposed projects include a 350,000 square-foot retail development, including supermarket and a sporting goods store, on the site of the former Bay State Paper factory complex along River Street in the Mattapan-Hyde Park neighborhoods (E.3.B.c.), a mixed retail-residential development on the Milton side of the Lower Mills-Baker Dam complex (E.3.A.f.), a residential development at the Bay State Paper complex along Truman Parkway in Milton (E.3.B.d.), and a 1,850 unit residential development at the former Stop & Shop warehouse in Readville (E.3.B.e.).
Personal Connections: Maintaining and Restoring the River as a Personal Refuge

Participants in this interpretive environmental community talk about a connection to the Neponset River that is deeply personal. This community shares similar stories about the river as a character in their lives, much like a family member or childhood home, which they believe has had an influence in shaping who they are. However, the specific connections with the river differ among individuals, encompassing separate locations, types of activities, people, and memories. Those specific locations along the river serve as personal refuges from the daily stresses of everyday life where participants either go alone or with close friends or family members for peace and quiet or for inspiration to create poetry, photographs, songs, and paintings. This interpretive community shares the view that the restoration of the Lower Neponset River should involve maintaining current places of refuge and creating more places that allow people to form personal connections with the river and its surroundings.

The stories this interpretive environmental community tells are about a connection to the Lower Neponset River as a place that is deeply personal – although, by “personal” they do not necessarily mean “solitary” or “alone.” To this community, restoration of the Lower Neponset River means maintaining the characteristics of the Lower Neponset that make it a unique place where one can find refuge away from the hustle and bustle of city life while still in a metropolitan area.

At the estuary there is a little island that has birches on it… you go through the Phragmites, so it has this feeling of being, of adventure you know, you got a small little path that people work to go out there on, and then you’re suddenly out of the Phragmites… and it’s very, very pretty with the birches and I don’t know what the other trees are there, little grasses, and it feels like a real haven, and a wild place within blocks of everything.93

This community interprets the restoration of the Lower Neponset River in terms of past memories, which involve to a large extent meaningful personal experiences and life stories. These stories are each unique, but in the telling of them participants in this interpretive community share a similar sense of personal connection with the Lower Neponset River that may include a connection to the river’s Greenway, development, history, social life, and ecology that is deeply personal. To them, the Neponset River is a place of remembering their childhood, unique personal experiences, family gatherings, and friendships.

93 Anon2Interview2005

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In the pre-teens, teens, 11, 12 years, we used to play there. It was our playground basically ‘cause there weren’t many playgrounds around. And we would migrate down there after school and there was a wharf – right where the Neponset II is now. There was a wharf, a long wharf. There were actually two wharves, a long one and small one. There were a couple of businesses down along there and there were railroad box cars, we used to play in those. And eventually you learned to swim there, and it was basically your swimming hole during the summer when the tide was in. And once in a while we used to migrate onto the marsh, looking for minnows.94

This personal connection to the river can sometimes be emotional and therapeutic.

You know, it’s a place to go to find peace when the whole world’s troubled and all this awful stuff’s going on, whether it’s going on behind closed doors in your own home, in the community, at work, or in the world.95

For some community members it involves active involvement in river activities, while for others they only need to see the river, be near it, know it is there in the course of going about their everyday lives.

I find it [Neponset River] very peaceful. I’m the same way with the ocean. Just to sit there and watch the water is very peaceful to me and relaxing.96

Many take inspiration from it either in producing poetry, photographs, or watercolor paintings. Much of this seems to be related to specific places in the natural and built environment that are in the Lower Neponset River watershed and have played an important part in their personal lives. Some of the specific sites include the estuary at Port Norfolk and in Dorchester (E.4.a.), Sachem Point (E.4.b.), Little Blue Hill (E.4.c.), Fowl Meadow and Burma Road (E.4.d.), Squantum Point (E.4.e.), Dorchester Park (E.4.f.), Kennedy Playground canoe ramp (E.4.g.), former Keystone Factory (E.4.h.), former Walter Baker Chocolate Company (E.4.i.), Momponset Street at the river’s edge (E.4.j.), wooded areas along Truman Parkway (E.4.k.), Tenean Beach in Port Norfolk (E.4.l.), and the gas tank in Dorchester Bay (E.4.m.).

A free-verse poem written in a wooded area on the banks of the Lower Neponset River in Hyde Park by one local participant captures a unique connection with the Lower Neponset River that exemplifies the deeply personal aspects of this interpretive environmental community. Built around his experiences growing up along the river in Mattapan, being drawn into gang culture and his eventual escape from that culture after being involved in a retaliation killing in which a cousin was arrested and sent to prison – the

94 ID1Interview1-101006
95 ID2Interview1-081007
96 ID23Interview1-2005
poem talks about how the river has become his “divine inspiration” and “home.” Part 1 of this poem, below, serves as a striking example of a personal story about finding refuge in the Lower Neponset:

“AQUAVISION #1
Some people die old, some people die young. I sense that death is dictated by the use of the tongue. Use your voice meekly the “infrared” may pass you by. Speak up for what you believe and surely you can die.
To be influential is to push a panic button. Many people feel black folk shouldn’t say nothing. At last 5ft 4 has a grudge at this nation, with enough knowledge and wisdom to survive confrontation. I will not “renig” from this campaign though i’m looked at with shame. If I chose to leave this system I will return from which I came.
Nature is my home water is my gate where I can release all this anger and finally feel my fate. The system hurts so many and I feel Guilt to just stand by and pretend that I am happy when people die and cry. People lie and steal and make a quick “mil” and with all this around me I still supposed to “chill”?! Im not happy til everyones happy. I served the servants, I confided in nature, and now I am imposing as a revolution maker. Music is the tool, lyrics are the school and if that doesn’t change a mind or stimulate a heart. Then I’ll return home to water where I’ll faithfully depart. So the hell with your electronics, and your… and your material will. Try to take them to my home so you can see how unreal your accomplishments seem when you bring them to the realness of a beautiful stream. Neponset River you make me quiver but for Divine Inspiration you surely deliver.”

Many other types of personal connections and memories surrounding the Lower Neponset were conveyed to me by participants. One participant was even married along the river:

He was married to his partner at [that spot] along the river, and when we moved there to talk in the shade a pleasant smile came across his face, and said he was always moved by “the beauty of the river.”

All share a similar conviction that in a physical sense, the river’s restoration requires making the river more accessible to the public, keeping people’s memories of the Lower Neponset River alive, and cleaning up PCB and other chemical contamination to make the river a safer place to visit. To citizens in this interpretive community, restoration of the Lower Neponset should draw attention to the connection between people and the river on a personal level. And, by doing so, it should offer people the opportunity to experience and develop that connection first-hand, no only by means of canoeing, hiking, and biking, but also through painting, photography, writing or engaging in simple contemplation that such a refuge could provide.

[The Neponset River] can be a place to go to find peace and quiet or just to be assured that they don't live in the middle of an urban setting, you know to sort of have a refuge from that, I think that's a great goal.

97 ID2Interview#17-2005
98 ID9Interview-071307
99 FG2-2005
Putting Up a Fight: Preserving Neighborhood Identities and River Legacies

Participants in this interpretive community share the experience of watching their neighborhoods poised in the crosshairs of future development projects, both in the past and in the current time. These development projects are typically proposed by people who do not live along the river – are “outsiders” - and the members of this community see these projects as a direct threat to the essential characteristics of their local neighborhood and the neighborhood’s connection to the Neponset River. They recognize a link between the fight for “neighborhood preservation” in a city where waterfront real estate is rare and of great economic value, and the fight for “protection” and “restoration” of the river and its natural resources for future generations of neighbors - whether their own children, their grandchildren, or the children next door.

In 1979 two residents of “the Port” – as those who live on the peninsula at the mouth of the Neponset River lovingly call their Port Norfolk neighborhood (E.5.a.) – were fed up with trucks driving through their streets at all times of the day and night and leaving hazardous wastes between their homes and the Neponset estuary. Those trucks were coming and going from the 15-acre waste disposal site of the Shaffer Paper Company (E.5.b.). They decided to organize their neighbors in a protest against the dumping. Mothers with young children in strollers, teenagers, and elderly residents of the Port all gathered along the entrance to the Shaffer site early one weekend morning blocking trucks from entering the site. The trucks turned around. When the organizers decided to follow one of the trucks that left the site, they ended up near New Jersey where they discovered that the truck was going to a hazardous waste disposal site used by the company. This, they felt, confirmed their fears that the site in their neighborhood was used for hazardous waste disposal. After several major and suspicious fires at the Shaffer site, it was bought by Suffolk County and the City of Boston who used it as a waste transfer station for municipal, county, and city-generated trash. While it continued to be used as a dump site, the neighborhood was given assurances that it was not for hazardous material.

In 1985 the site was bought by the State and used by the DCR, as a transfer waste station for trash generated from beach clean-ups, parkway maintenance, and various other DCR activities. As part of the 1995 Phase I Master Plan for the Neponset Reservation, the Shaffer site was selected as a future “passive” neighborhood park that would focus on the ecological features of the Lower Neponset estuary. Contaminant testing of the site’s soils and plants was commenced at this point, but was never completed.
after the neighborhood of Cedar Grove obtained the political support and funding for another, larger park focused on recreation – what would come to be known as Pope John Paul II Park (E.5.d.).

In 2007, developers came to the Port Norfolk Neighborhood Association and presented a detailed plan for how they wanted to develop the former Shaffer site as a maritime center for youth, including a marina, parking lot, and clubhouse. There was unanimous opposition from neighborhood residents to this plan, which re-galvanized the push for clean-up and designation of the site as a park.

As the story of the Shaffer Paper site illustrates, this interpretive environmental community is concerned about how contaminated sites in their neighborhoods may be threatening the health of their families, and polluting the Lower Neponset River. Citizens who share this storyline are active in neighborhood, civic association, or crime watches. Like the Shaffer site, places such as the former Lewis Chemical Company site near the Fairmount Hill neighborhood and Logan Square in Hyde Park (E.5.e.) and the James G. Grant Company near the Readville neighborhood of Hyde Park (E.5.f.) have involved planning for clean-up and pollution mitigation for more than three decades, but final clean-up or mitigation has yet to occur.

People in this community also share concerns about proposed residential, recreational, and retail development projects that could threaten their neighborhoods’ identity, safety, and the quality of the Neponset River.

We just started a neighborhood association because of the proposed development of the Stop & Shop warehouse parcel on the wetlands. So, it’s called CPR, Citizens for the Preservation of Readville… We’re working hard on this project and it will be a forum for people to just get together and preserve the area… it [proposed development] is too massive and would destroy the whole character of this neighborhood. And plus, I don’t trust what it would do to the Fowl Meadow and Neponset River Reservation.100

In a city where waterfront real estate is increasingly rare and, therefore, of greater economic value, neighborhoods on or in close proximity to the waterway of the Lower Neponset are subjected to new development schemes that are seen as a threat to both neighborhood identity, safety, and the local environment.

I’m concerned with development on the… close to, the river… we are trying to get a plan… coordinated developed, or restricted of development along the river. So I would like to see their planning on it, so that we don’t continually have cheesy houses going up on the river somewhere. And the other thing would be I would like to know that it’s safe.101

100 ID12Interview1-081007
101 ID25FG1-2005
Development plans at the former Stop & Shop warehouse in Readville (E.5.g.), as part of the Fairmount-Indigo Line Collaborative through Hyde Park (E.5.h.), and the Greenway trail extension adjacent to the Columbine neighborhood in the Town of Milton (E.5.i.) are just some of the development proposals cited by this community as posing threats to their neighborhoods. One participant described concerns in the Capen Street/Columbine neighborhood of Milton over the proposed Greenway trail extension:

…one problem is if it [Greenway trail extension] were on the Milton side there’s a good chunk of it that would be quite isolated… they think that someone’s going to come and attack them in their homes and rape their daughters and steal their TV sets… I would feel uncomfortable and unsafe, I mean I hate to say it but I really don’t think anybody’s whacky to feel that it would be a little uncomfortable in that section.\(^\text{102}\)

These development projects are typically proposed by people who do not live along the river and are considered “outsiders” by local residents. Such projects are seen by this community as a direct threat to the essential characteristics and identity of their local neighborhood, to the safety of its citizens, and to the neighborhood’s connections, including public access, to the Lower Neponset River. As one resident from Port Norfolk explained to me:

…it’s frustrating, it’s hard. But we have to keep fighting because it keeps happening. And it isn’t just stuff about the river, it’s other things in the neighborhood too, about condo conversion, and this and this and this. And what was it, about 20 years ago the BRA [Boston Redevelopment Authority] came to the neighborhood and they had meeting after meeting after meeting with the neighborhood to figure out a whole rezoning of the neighborhood. And again people come in and say, well I wanna put this on this little piece of property against the zoning that everyone worked together on. So you’re fighting them on that. It’s always a struggle. You have to be vigilant and you have to keep fighting all this. And it’s 99 percent people from outside the neighborhoods that come in and they decide they know what’s best and they want to do this. But most of what they want to do is for their own greed.\(^\text{103}\)

As a consequence of these two concerns – lingering contamination and development pressures – this interpretive community views the restoration of the Lower Neponset River as preservation of their neighborhood’s identity. Those in this interpretive environmental community share the sentiment that the fight to preserve their neighborhoods and the fight to clean-up, as well as restore and protect, the river from future developments are the same struggle. And, they believe that this fight must be fought not just for their own sake, but for future generations of neighbors - whether their own children, their grandchildren, or the children next door. This is how one Port Norfolk resident described “the fight” to both preserve her neighborhood and protect the Neponset River:

102 ID11Interview2-073107
103 ID5Interview1-070307
So if we can continue on with the idea of saving this area as a natural environment then we’re basically saving it for the children. You can say you’re saving it for the birds, you’re saving it for the plants, you’re saving it for the trees, but we’re really saving those things for the children…. It’s very frustrating when you know the laws are in existence to save the Neponset, you know that the state has already purchased the site [Shaffer Paper] for the people and for the river itself to save it. And yet, again and again people try to go against the laws and try to get things for their own purposes, whether they are good purposes or bad purposes, but it’s still against the rules, against the laws for the protection of the river…. And a lot of people don’t think like that. You know, they don’t think like that… and there are many people in this neighborhood because people do value the river in this neighborhood, they always have valued it. So, that’s frustrating that you know the laws are there, you know that area’s protected, yet I don’t know how many times you have to fight, you have to keep fighting, because these people come in and they have this idea of what they want to do.  

Wildland Dreams: Returning Nature to the River

Participants in this interpretive environmental community share a desire to reverse and permanently remove human impacts that they see as detrimental to the Lower Neponset River and its surrounding marshes, wetlands and forests. They all dream that the Neponset River should be returned to some previous “wild” state where humans can go to hike and observe nature, but leave no trace. Many of them allude to a kind of “balance” and “harmony” that they believe existed between humans and the river prior to European arrival. Most participants in this community feel that no more development beyond what already exists should be allowed, and when sites of former human development (such as old factories, dams, and warehouses) are abandoned they should be cleaned up and returned to natural or redeveloped with the lower Neponset River’s environment fully integrated into the new development. To this interpretive community restoration of the Lower Neponset means to remove all barriers that hinder fish and wildlife uses of the river, including dams, fences, and other aspects of the human-built environment that are no longer useful.

According to local citizens who have been observing the Lower Neponset River’s salt marsh estuary for over 60 years, something has changed. As one participant put it, “You can’t see as far as you used to” over the marsh and “the colors of the grasses just aren’t as distinct”. The main source of these visual differences is the abundance of the tall, brown, plume-headed common reed, Phragmites, a non-native invasive species, that has come to dominate the Neponset River’s salt marsh estuary from upland to water’s edge, particularly on the Boston side of the river in Cedar Grove (E.6.A.b.) and the Quincy and Milton side in the vicinity of Gulliver’s Creek (E.6.A.c.).

104 Ibid.
While Phragmites is native to North America’s fresh water meadows and upland areas adjacent to salt marshes, some experts and natural history buffs I spoke to believe that the species colonizing the Neponset salt marshes is a more aggressive non-native European species of Phragmites. This is supported by genetic research on Phragmites that showed that European traits have entirely replaced native traits in New England (Saltonstall 2002). And, perhaps of even greater concern, at least as it relates to the issue of ecological river restoration in the Neponset estuary, is that the Phragmites is not invading a fresh water meadow or an upland area, but an estuarine salt marsh of high biological diversity.

The problems with Phragmites are both social and environmental. First, it grows to over six feet tall, thus obscuring people’s treasured views of the river and colorful grasses. Second, it multiplies by sending out runners, which increases the elevation of the land as they disperse and trap sediments in their root systems. This process creates even more fresh water, wetland habitat and forces out the native estuarine Spartina salt marsh grasses. Without those native grasses, significant ecosystem impacts occur on a variety of native species. For example, loss of native salt marsh grasses may mean that the over 168 migratory bird species that have been documented nesting, feeding, or traveling through the marshes in Dorchester and Milton on their annual migrations along the North Atlantic flyway (E.6.A.d.) will find it increasingly difficult to find suitable habitat within the Neponset salt marsh (Chambers et al. 1999). With a higher elevation, the marshes are no longer inundated with the tidal salt water necessary to make the Neponset estuary an ideal nursery area for rainbow smelt (E.6.A.e.), herring, mackerel, winter flounder, soft shell clam (E.6.A.f.), dogfish shark, spiny shark, skate, and an important Boston Harbor feeding ground for striped bass, blue fish and harbor seals (MA Department of Environmental Management 1996).

Citizens in this interpretive environmental community are united in their efforts to reverse and permanently remove negative human impacts on the Lower Neponset River and its surrounding marshes, wetlands, and forests by returning native animal and plant species to the river. This involves removing obstructions or constructing a fish passageway at the Tilestone-Hollingsworth Dam (E.6.B.b.) and at the Walter Baker Dam (E.6.A.g.) in order to allow anadromous shad, alewives, and rainbow smelt, and the catadromous American eel to reach habitats further upstream to complete their life-cycles. It also involves...
eliminating the invasive Phragmites, as well as knotweed, in the Neponset salt marsh estuary, and purple loosestrife in Fowl Meadow (E.6.B.c.).

One member of this community describes what removing the dams and returning anadromous fish to the Neponset River could look like:

…if the dams come down we will be able to open up seventeen miles of the Neponset River to anadromous fish that would come up, lay eggs and return to the ocean, so I think that’s important… if we were to go back in time to the point before I don’t know before the industrial revolution or before you know maybe if we went back three hundred years… and we would take a snapshot of what the river did then, what it looked like then, the type of plant species along it’s banks, the type of fish that swam it, the type of birds that fed off it, and then you take a snapshot of what we have today, which is far less than… the number, the diversity of what you would have back then. So restoring it would be to get it as close back to that point I guess.106

This interpretive environmental community shares a “dream” that restoration of the Lower Neponset River means returning nature to the river and creating and preserving existing “wildlands” along the Neponset where there is no development and little to no human disturbance (E.6.A.h.).

Stories are told about a “balance” being struck between humans and nature in the name of the Lower Neponset’s restoration, and in reverence to the memory of the early human inhabitants of the river.107 As a member of the Massachusetts-Ponkapoag Tribal Council and citizen representative to the Neponset River Community Advisory Committee testified at a January 2008 public meeting organized by Massachusetts Riverways:

The Neponset people, and there were Neponset people, were forced to leave the Neponset River because those persons who came later decided there was a better use for the Neponset river than our use which contributed to the well-being of our Universe and yours for centuries. Now I'm going to speak for the elders- I'm going to speak for the finned, the furred, the winged, and the ancestors- mine and yours. These are the voices that you are not listening to. These are the voices you are not listening to. Put the river back the way it was. Allow the herring to come back and sing their song.108

This Native American sentiment is shared among this interpretive environmental community and spoken about in reference to places along the Lower Neponset such as the Clovis period Wamsutta archeological site located in Fowl Meadow (E.6.B.e.), or Sachem Point (E.6.A.i.), where the indigenous Massachusetts people would base their summer camp and catch shad and alewives in their fish weirs below the falls.

Stories about setting aside permanent “wildland” reserves where people can go to hike and

106 ID37Interview#18-2005
107 In The Ecological Indian, Shepard Krech III (1999) deconstructs this idea of “balance” as a myth. Regardless, in the public imaginary the vision of Native America as “in harmony” with “pristine” nature persists (Harkin and Lewis 2007).
108 MeetingTranscript010908
observe nature but leave no trace are common. This community believes that no more development beyond what already exists should be allowed by the government, and when sites of former human development (such as old factories, dams, and warehouses) are abandoned they should be cleaned up and returned to a natural state, or, if that is not possible, redeveloped with the Lower Neponset River’s environment fully integrated into the new development. In describing the threat posed to the river and Fowl Meadow by a proposed residential development at the former Stop & Shop Warehouse in Readville and Dedham (E.6.B.f.), one participant remarked:

We’ve altered and we may have permanently altered it, we might have to remove a lot of structures and roadways and stuff to restore it the way it should be… You know, I have a dream, I would like to see all of a sudden a miracle happen down here and somebody like Trustees of Reservations come in and buy up the land, get rid of the buildings, put up a little viewing stand or bird blind or something like that (laughs) and return the whole thing.109

Citizens who share this storyline also tend to be current or former members of environmental or conservation organizations, such as the Neponset River Watershed Association, The Trustees of Reservations, Audubon Society, Friends of the Neponset Estuary, or Friends of the Blue Hills. Most have participated in water-quality monitoring or endangered and threatened species assessments along the Lower Neponset with the watershed association or the former Friends of the Neponset Estuary group.

The ultimate goal of river restoration according to this interpretive environmental community should be to remove all barriers that hinder fish and wildlife uses of the river, including dams, fences, and other aspects of the human-built environment that are no longer useful. If money were no object, those who espouse the idea of returning nature to the Neponset and encouraging wildlands would remove every bit of human evidence from near the Lower Neponset, as this community member clearly articulates:

I would tear down Route 93, which crosses over it [the Neponset River], I’d tear down the bridges, I’d go about a quarter mile back from the bank of the river on both sides and I would tear out every single thing, every building, every house, every you know, all the way back, every single stream, and I would re-vegetate it with natural you know what was their in the beginning, and just let it come back.110

Conclusions

Each of these interpretive environmental communities represents specific senses of place and types of narratives, or storylines, reflecting shared interpretations of what the Neponset River means and

109 ID12Interview1-081007
110ID37Interview#18-2005
how it should be restored. These interpretive communities are not concrete, territorially bound
communities, but are instead “communities of meaning” that form and dissolve around shifting values,
beliefs, and opinions that are expressed through public discourse, narrative storylines, and other external
factors of economy, politics, and in the case of the Lower Neponset River, ecology. They are used in this
study as analytical descriptions and constructs that distinguish how local study participants and their fellow
citizens differentiate their interpretations of the Lower Neponset and its restoration among themselves,
forming discourse coalitions of like-minded citizens. As such, these communities are also interpretive in
the sense that they are based solely on my critical interpretation of the distinctions between the storylines
and how they are thematically similar or not.

Members in an interpretive community identified specific geographic locations in their narratives
and shared storylines that can be interpreted as spatial representations of how they relate to the Lower
Neponset and its restoration. A few examples of such symbolic spatial features and the communities they
relate to include: the Neponset Greenway and the Esplanade Visions community, the Lower Mills area and
the History Uncompromised community, and Fowl Meadow and Dorchester salt marsh estuary and the
Wildland Dreams community. Such geographic spaces can hold symbolic significance in both positive and
negative ways depending on each community’s interpretations.

Comparing the different ways that communities interpret these same symbolic spaces is one way
of differentiating between communities. For example, while the shared vision of the Neponset Greenway
as a treeless, wide-open, public space set aside for scenic and recreational enjoyment binds the Esplanade
Visions community together, other local citizens that identify with the Wildland Dreams community may
not share a similar vision of how the Neponset Greenway relates to the restoration of the Lower Neponset.
They may instead see the Greenway as an opportunity to create a more rural “wilderness” place for
recreation:

…if we do develop that Greenway and the river too, and remove the dams that would enable traffic all the
way from the estuary right through, you know right into the Blue Hills, by bike or by canoe, maybe a little
portage around you know some of the rocks off Baker dam, but there could be a path, you know you don't
have to walk out onto the road… I think it would make the Charles River look like a commercial disaster,
because you build all these grass lands along the river, the Charles River and what do you see, you see
Boston or Cambridge from the Charles, where as from the Neponset you see trees and birds and blue sky,
so it's a different, more rural experience, more wilderness experience.

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111 ID38Interview2005
These differences, and similarities, in how different communities relate to specific geographic spaces are central to the social construction of Lower Neponset restoration, and what this means for understanding and resolving policy conflicts over the river’s present and future restoration will be explored in more detail in Chapter VIII.

One of the other ways in which these interpretive communities can be distinguished from one another is in the way they talk about the relationship between humans and the Lower Neponset River, or “nature” in general. For example, those in the Esplanade Visions community see the river and its surrounding landscape as a place requiring continual maintenance, or “control,” from mowing the grass at Pope John Paul II Park\textsuperscript{112} to keeping kids from drinking on the dock at Neponset II Park\textsuperscript{113}. This interpretive community talks about the river as a human-dominated landscape where overgrown bushes, trees, and grasses should be trimmed back in order to ensure views of the river. There is also a sense among members of this community that the river is a place of danger that requires police “patrols” and fencing to ensure that children, or adults, do not accidentally fall in the river, or use the river’s less maintained areas for drinking, drugs, and other non-sanctioned and illegal uses. The “Smart” Development community also talks about the human relationship to the river using “control” and “patrol” language, although for different reasons. Members of this community discuss the need for control over the Neponset River environment in terms of zoning restrictions that control the type of development that can be done along a waterfront. The “Smart” Development community, similar to Esplanade Visions, is also concerned about issues around public access and the need to plan for safety measures that will protect property owners from liability concerns over accidental death or bodily harm.\textsuperscript{114} On the other end of the spectrum from this idea that humans need to “control” and “patrol” the Neponset River and its surroundings are the members of the Wildland Dreams interpretive community. In their view, the relationship between humans and nature should be one of “respect,” with humans removing themselves, as much as possible in an urban

\begin{footnotes}
\footnote{\textsuperscript{112}PO091106; PO020608}
\footnote{\textsuperscript{113}PO90606}
\footnote{\textsuperscript{114}ID15Interview1-101207; Interview-040208}
\end{footnotes}
setting, from controlling the Neponset River: “I think it’s important for our whole planet to take care, to take care of the natural areas and respect them.”

The social context within which these six interpretive environmental communities are found also differs. Four of the six communities, all but “Smart” Development and Personal Connections, have specific types of non-governmental, voluntary organizational affiliations that have gatherings that bring local citizens together on a monthly, or at least semi-yearly, basis. Esplanade Visions has the Neponset Greenway Council that meets monthly. History Uncompromised members are involved in the historical societies of Dorchester, Hyde Park, Milton, and Dedham who hold public meetings and events throughout the year. Putting Up a Fight has the civic and neighborhood associations that meet monthly during the fall, winter, and spring. Wildland Dreams community members are all involved, or have been involved in the past, in the Neponset River Watershed Association, the Friends of the Neponset Estuary, or the Friends of the Blue Hills. These memberships and regular gatherings may contribute to local citizens’ senses of belonging and solidarity with other like-minded individuals that only reinforces their interpretations of the Lower Neponset River as a place, and facilitates the development and maintenance of a shared vision of what its restoration means to them collectively, and personally.

On the other hand, the “Smart” Development and Personal Connections communities have different avenues for reinforcing their beliefs and values about the Neponset River that may rely more on individual political connections, economic systems, and personal psychological or emotional experiences rather than organizational affiliations and collective identities.

From what I observed and heard, “Smart” Development community members’ visions of the Lower Neponset River’s restoration are drawn from a business and individual drive for economic success that relies on finding political players who will support them in word and a financial climate that will support them in dollars. As opposed to the four communities involved in voluntary organizations and civic associations where solidarity, social cohesion, and a sense of belonging may be among the reasons local citizens join and stay involved, the “Smart” Development community operates in an individualistic,
capitalist environment where competition and economic profits drive alliances that then create shared visions of the Neponset Rivers’ restoration,\(^{117}\) such as the Fairmount-Indigo Collaborative.

For the Personal Connections community, a sense of belonging and shared vision does not seem as important, at least as it pertains to their connections to the Neponset. Perhaps one of the reasons for this is that twelve out of the thirteen participants in this community also share storylines with the other interpretive environmental communities, four with Esplanade Visions, three with History Uncompromised, seven with Putting Up a Fight, and three with Wildland Dreams (see Table 4). Members may feel less of a need to associate with a collective identity or shared vision because this community embodies an intensely personal way of valuing and envisioning the Lower Neponset River’s restoration.\(^{118}\) In its individualistic nature, it is most like the “Smart” Development community, although without the profit motive or political connections.

The interpretive environmental communities identified through my research are by no means the only ones that may exist in the Neponset River watershed. The fairly uniform demographic and socioeconomic characteristics of the local citizens who participated in this study dictate to a great degree the type of communities that emerged from their narratives. Local participants with a greater diversity of demographic and socioeconomic characteristics might result in an entirely different configuration of communities. In addition, since these communities are based solely on my critical interpretations of the data, another researcher may arrange them in slightly different ways leading to a different constellation of interpretive communities. Despite these caveats, this interpretive analysis is a fruitful one for understanding the variety of meanings and interpretations that people ascribe to the Neponset River in particular, and to nature in general.

\(^{117}\) Interview-040208

\(^{118}\) ID2Interview1-101706
CHAPTER VIII

PLACES OF DIVERGENCE AND CONFLUENCE IN URBAN RIVER RESTORATION

One of the questions this research set out to ask was: How do local interpretive environmental communities relate to each other at specific locations of conflict related to the restoration, clean-up, and management of the Lower Neponset River? To address this question I used GIS technology to generate cartographic representations of the local storylines and their associated interpretive environmental communities (Appendix E) at specific geographic locations of conflict, referred to in this project as “policy hot-spots,” along the Lower Neponset (Appendix F). In order to analyze the descriptive geographic and spatial differences in how interpretive environmental communities relate with one another over the river’s restoration, the following policy hot-spots were mapped along the Lower Neponset River – Shaffer Paper Co., Walter Baker Dam, Bay State Paper Co., Tilestone-Hollingsworth Dam, Lewis Chemical Co., James G. Grant Co., Stop & Shop warehouse, and the proposed Neponset River Greenway Trail from Central Avenue to Paul’s Bridge. The policy hot-spots and the neighborhoods and towns in which they are located are listed in Table 5 and cartographically represented in Appendix F.1.

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Neighborhood and Town</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaffer Paper Co.</td>
<td>Port Norfolk, Dorchester (Boston)</td>
</tr>
<tr>
<td>Walter Baker Dam</td>
<td>Lower Mills, Dorchester (Boston)</td>
</tr>
<tr>
<td></td>
<td>Town of Milton</td>
</tr>
<tr>
<td>Bay State Paper Co.</td>
<td>Mattapan and Hyde Park (Boston)</td>
</tr>
<tr>
<td>Tilestone-Hollingsworth Dam</td>
<td>Mattapan and Hyde Park (Boston)</td>
</tr>
<tr>
<td></td>
<td>Town of Milton</td>
</tr>
<tr>
<td>Lewis Chemical Co.</td>
<td>Fairmount Hill, Hyde Park (Boston)</td>
</tr>
<tr>
<td>James G. Grant Company</td>
<td>Readville, Hyde Park (Boston)</td>
</tr>
<tr>
<td>Stop &amp; Shop Warehouse</td>
<td>Readville, Hyde Park (Boston)</td>
</tr>
<tr>
<td></td>
<td>Town of Dedham</td>
</tr>
<tr>
<td>Proposed Neponset Greenway Trail from Central Ave. to Paul’s Bridge</td>
<td>Mattapan, Hyde Park, and Dorchester (Boston)</td>
</tr>
<tr>
<td></td>
<td>Town of Milton</td>
</tr>
</tbody>
</table>
These policy hot-spots arose out of my observations, interviews, and archival research as places of persistent conflicts between local interpretations of the Lower Neponset River’s restoration. Many of the conflicts surrounding these locations were a reaction to specific policy statements or proposals made by elected politicians or government officials.

This spatial analysis synthesizes the narrative data, places the interpretive environmental communities within a more specific geographic and policy context, and, with these narrative, spatial, and policy representations, explores the connections and the disconnections between the social, political, economic, and ecological complexities surrounding the restoration of the Lower Neponset River.

**Mapping Interpretive Environmental Community Interactions**

Using my Field Journal notes, and spatial information conveyed to me through local citizens’ stories and transect walks, including canoe trips with citizens near and on the Lower Neponset River, I constructed a geographic information system database using the geographic software ArcGIS, version 9.0, to create maps of each local interpretive environmental community described in Chapter VII (Appendix E), and to generate maps for the six policy hot-spots described and analyzed in this chapter (Appendix F). These policy hot-spots are defined as specific geographic places where there were notable divergences and confluences between different interpretive environmental communities regarding restoration of the Lower Neponset River.

These maps use my interpretations of the narrative, observational, and archival data that document specific stories of conflict and agreement, in order to spatially describe, explore, and analyze the cognitive, spatial, and policy similarities and differences between interpretive environmental communities. The results of this analysis are then used to draw more specific conclusions about conflict surrounding the Lower Neponset River’s restoration and make recommendations that may be used to inform the theory and practice of urban river restoration.
Placing River Stories: Policy Hot-Spots

Eight locations along the river – a proposed bike path, two dams, four former industrial sites, and one current industrial site (Appendix F.1.) – kept coming up in interviews and observations as places that play a significant role in how participants in the interpretive environmental communities described in Chapter VII geographically and cognitively frame the debate over the Lower Neponset’s restoration, and how they perceive other interpretive communities. Part of the reason these specific locations were on the minds of the participants was because the State, City of Boston, or Town of Milton had made public specific policy statements or proposals relating to the restoration, clean-up, or redevelopment of these particular areas along the Lower Neponset (Table 6).
Table 6. Hot-spot policies and interpretive environmental community support and opposition.

<table>
<thead>
<tr>
<th>Hot-Spot</th>
<th>Policy Statement or Proposal</th>
<th>Support Policy</th>
<th>Oppose Policy</th>
<th>Neither Support Nor Oppose Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neponset Greenway Extension</td>
<td>The State proposes to site the Neponset Greenway extension through Milton and along Truman Parkway.</td>
<td>-Esplanade Visions -History Uncompromised -“Smart” Development</td>
<td>-Putting Up a Fight</td>
<td>-Wildland Dreams -Personal Connections</td>
</tr>
<tr>
<td>Walter Baker Dam</td>
<td>The State proposes to remove the dam.</td>
<td>-Wildland Dreams</td>
<td></td>
<td>-Putting Up a Fight -Personal Connections</td>
</tr>
<tr>
<td>Bay State Paper/Tilestone-Hollingsworth Dam</td>
<td>The State proposes to clean up PCB contamination behind the dam and remove the dam.</td>
<td>-Putting Up a Fight -Wildland Dreams -Personal Connections -Esplanade Visions -History Uncompromised</td>
<td>-“Smart” Development (oppose dam removal only)</td>
<td></td>
</tr>
<tr>
<td>Shaffer Paper Co.</td>
<td>The State proposes to finish testing, conduct a clean-up, and create a “passive” public park.</td>
<td>-Putting Up a Fight -Wildland Dreams -Esplanade Visions -Personal Connections</td>
<td>-“Smart” Development</td>
<td>-History Uncompromised</td>
</tr>
<tr>
<td>Stop &amp; Shop Warehouse</td>
<td>The City of Boston supports a private developers’ proposal to turn the former Stop &amp; Shop Warehouse facility in Readville and Dedham into the largest residential or mixed residential-retail development in the City of Boston.</td>
<td>-“Smart” Development</td>
<td>-Putting Up a Fight -Wildland Dreams -History Uncompromised -Personal Connections</td>
<td>-Esplanade Visions</td>
</tr>
<tr>
<td>Lewis Chemical Co.</td>
<td>The City of Boston supports Community Development Corporations and other private and public entities who want to re-develop and build a new building on the site as part of the Indigo-Fairmount Line.</td>
<td>-“Smart” Development -Esplanade Visions</td>
<td>-Putting Up a Fight -Wildland Dreams -Personal Connections</td>
<td>-History Uncompromised</td>
</tr>
</tbody>
</table>

These policy statements frame and re-frame the restoration of the Lower Neponset River based on internal (e.g., legal interpretations, agency policy, etc.) and external (e.g., constituent lobbying, economic...
downturn, etc.) political and economic factors. Their influence on framing the debate affected each interpretive community differently depending on the policy hot-spot. At some hot-spots official policy statements appeared to either strengthen or weaken the commitments of local interpretive environmental communities, while in other hot-spots they inspired coalitions between interpretive communities. In still other hot-spots, the new framing introduced by official policy statements divided interpretive communities further.

Each of the policy hot-spots occurs in the story repertoire of three to six of the local interpretive environmental communities, many times as a direct result of participants reading a newspaper article that was recently published about plans for the site or attending a public meeting about plans for the site. But, the way these policy hot-spots relate to each local interpretive community differs greatly (Table 6)– they are places where interpretive communities have been constructed and reinforced, places where the socio-cultural boundaries dividing communities have been maintained, and places where communities are beginning to merge or divide, perhaps being reconstructed into new communities.

By visually depicting and mapping how the local interpretive environmental communities relate to each other, and respond to political or government policy proposals and statements at a particular policy hot-spot, the diversity of interpretations or meanings of the place in the context of a dynamic socio-cultural and political environment can be identified. Differences between communities become more distinct, or differences break down and the existing and potential similarities between local interpretive communities are revealed. This place-based analysis creates a valuable way of visualizing and spatially representing local senses of place and interpretations of restoration when trying to reach agreement, or at least find mutual understanding, in how to restore the Lower Neponset River.

In order to illustrate in detail how the different interpretive environmental communities interact with each other over plans to clean-up, restore, or redevelop these locations, I selected six of the eight policy hot-spots to map and analyze in depth. These six hot-spots are either presented alone or with one other hot-spot location that offers a similar or contrasting analysis. I combined two of the hot-spots into one (Bay State Paper Co./Tilestone-Hollingsworth Dam) since they are at the same geographic location and both involve similar interpretive communities. I also eliminated one hot-spot from this analysis, the James G. Grant Co. in Hyde Park, as it is the only industrial site still in operation. Although it plays a significant
role in framing participants’ interpretations of the river’s restoration, the Grant Co. hot-spot involves a myriad of other legal and management issues (e.g., City of Boston permits, City and State jurisdictional negotiations, etc.) that, while important to management and restoration efforts when the Neponset River runs adjacent to City of Boston properties, are beyond the scope of this analysis (Coneco Engineers & Scientists, Inc. 2006).

Hot-Spot 1: Extending the Neponset Greenway

In 2006 the State’s Department of Conservation and Recreation (DCR), that manages and maintains the current two miles of the Neponset Greenway trail from Port Norfolk to Milton, began planning for extension of the Greenway’s biking and walking trail through Mattapan, Milton, and Hyde Park to Paul’s Bridge and Fowl Meadow and to the Blue Hills Reservation lands beyond. When completed, the entire trail will be approximately 8 miles in length, from Tenean Beach in Port Norfolk to Paul’s Bridge and Fowl Meadow on the Milton/Boston line near Readville (Appendix F.2.). The Greenway serves as a symbolic, visible analogy of the river’s potential as a cultural connector of local citizens, neighborhoods, businesses, and local governments. The Greenway is also a physical, geographic, land-based connector between the other seven policy hot-spots along the Lower River (Appendix F.2.). As a public open space, the Greenway and its parks give local citizens a way to physically connect with the Lower Neponset, in both legal ways and illegal ways. So, the Greenway is also a place where similarities and differences in the local interpretive environmental communities and storylines identified during this study can be seen most publicly.

The Greenway is a conduit for diverse and at times conflicting interests and interpretations about the river’s meaning, its place in the natural and built environment, and its restoration. These diverse interpretations are publicly expressed at the various Greenway planning and community involvement processes, most notably at meetings run by the DCR, at the monthly Neponset Greenway Council meetings, and through the diversity of ways local citizens use the Greenway in their everyday lives. Citizen input, monitoring and airing of general concerns about the trail, its adjacent parkland and the Lower Neponset as it flows near the trail, are facilitated by a non-profit “affiliate” of The Trustees of Reservations (TTOR) –
Boston Natural Areas Network (BNAN) – that organizes and convenes monthly meetings of the Neponset River Greenway Council.

The completed Greenway, and the promise of the Greenway extension, holds psychological and social importance to participants in the Esplanade Visions interpretive community who have personally worked to clean up the former industrial sites along the Lower Neponset River to create the current trail and parks. Some of these participants are regular attendees at monthly Neponset River Greenway Council meetings and have even labored with their own hands to lay boards across an old railroad trestle over the river in Lower Mills to make it suitable for bike traffic. In this way, the Greenway and its proposed extension is a shared symbol of pride among participants who believe one important aspect of the Lower Neponset’s restoration is managing and revitalizing the river and its landscape for recreational and aesthetic purposes. Similarly, those participants in the History Uncompromised interpretive community who value the history of the built-environment surrounding the Lower Neponset River supported the creation of the completed Greenway and support the proposal to extend the Greenway. They envision the trail as a way to link the different historic sites along the river, facilitate public access to sites, and educate the public with interpretive history signs along its path. In addition, the trail extension would intersect the Fairmount-Indigo “Smart Growth” corridor, which participants in the “Smart” Development interpretive community talk about as important to the Neponset River’s restoration and revitalization. Thus, participants in this community also support the Greenway’s extension, because it adds another aesthetic, recreational, and even transportation amenity that could attract people to live and work in Hyde Park, Mattapan, and Milton.
Figure 18. The State proposes to site the Neponset Greenway extension through Milton and along Truman Parkway. Solid = agreement with proposal; Dashed = disagreement with proposal; Dotted = neither agree nor disagree. See Appendix F.2.

In contrast to supporters, participants in the Putting Up a Fight interpretive community view the Greenway extension as a threat to their neighborhoods.

The opposition that some participants in the Putting Up a Fight interpretive community have towards the Greenway’s extension was apparent during DCR spring 2006 public planning meetings. Some residents from Milton’s Columbine neighborhood (one of which is a study participant) told the DCR and other citizens at the meetings that they must protect their neighborhood and homes from the proposed bike path between the river and their neighborhood. Columbine encompasses an area of less than two square miles on the southern banks of the Neponset between Walter Baker Dam downriver and Blue Hill Avenue upriver (Appendix F.2.). In reaction to trail maps presented by DCR at the planning meetings (Figure 19),

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119 PO-030806
some of the Columbine residents complained that putting the trail behind their homes would invite “crime” and “questionable people” and “trash” into their neighborhood from across the river in Mattapan.\(^{120}\)

Figure 19. The State proposes to site the Neponset Greenway trail extension through Milton and along Truman Parkway. Conceptual planner’s drawings of Greenway trail. From DCR 2006.

On the other hand, although they did not speak up at the meetings, the Mattapan participants I spoke with, who are also in the Esplanade Visions interpretive community, told me in interviews and in private conversations during participant observations that they would actually prefer it if the trail went along the Mattapan side of the river because it would mean better access for the elderly and it would be a less-expensive form of transportation for getting to a job or running errands.\(^{121}\)

The demographic differences between the Columbine neighborhood and the Mattapan areas directly across the river and along River Street are characterized in Table 7. This census data shows a stark contrast in population density, racial diversity, and income between the two neighborhoods.

\(^{120}\) Ibid

Table 7. Comparing demographic characteristics between Mattapan and Columbine neighborhoods. Data is from US Census Bureau 2000 and City of Boston 2006.

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>Mattapan Neighborhood City of Boston</th>
<th>Columbine Neighborhood Town of Milton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population per square mile</td>
<td>13,338</td>
<td>1,999</td>
</tr>
<tr>
<td>Percent population minority, non-white, foreign-born</td>
<td>77 – 99%†</td>
<td>13%</td>
</tr>
<tr>
<td>Median household income</td>
<td>$36,073</td>
<td>$78,985</td>
</tr>
</tbody>
</table>

† From three Census 2000 block groups and environmental justice data (US Census Bureau 2000).

These differences could serve as a socio-cultural and economic boundary at the river’s edge, which appears to lead to differentiation of perceptions over the meaning of the river and its restoration as well as a lack of interest or will to try and understand “the other side.” This has led to continual derailing of DCR planning meetings over the Greenway’s extension and lack of a solid plan for the Greenway’s completion.122

Despite the different attitudes, values, and meanings that may be reflected in these demographic differences, and despite the contentious debate over where to cite a portion of the new trail, a strategic plan came out of the 2006 planning meetings without a final decision on where to site the trail in the portion of the river near the Columbine neighborhood (DCR 2006) (Appendix F.2.). DCR intends to resolve the issue of the trail in Milton by designating that portion of the Greenway extension as a “special study area” (Appendix F.2.) and holding further public meetings (DCR 2006).

Participants in the Wildland Dreams and Personal Connections interpretive communities have mixed feelings about the Greenway extension.

The Wildland Dreams community supports the extension as a more permanent way of protecting public land along the river and bringing greater awareness of the river and attention to the protection of Fowl Meadow; however, they are concerned that the trail may remove most of the vegetation along the river that serves as a wildlife corridor and makes the river feel like a “wilder” place.

Those participants who see the Lower Neponset’s restoration as part of maintaining their personal connections with the river have conflicted feelings about the further development of the Greenway trail. Many in this community would like to see more public access to the river in order to re-connect people with the Lower Neponset on a spiritual or psychological level. However, opening up formerly “private” spaces to public access could conflict with their desire to maintain a personal refuge along the river. For

122 ID11Interview2-073107
instance, much of the DCR-owned property along the river bordering Truman Parkway in Hyde Park and Milton and along River Street in Mattapan is undeveloped except for a canoe launch or unpaved walking path through the woods and underbrush (Appendix F.2.). These are places where participants in this interpretive community choose to go to find solace in nature or inspiration from the river for that next poem, painting, or photograph. Creating a paved bike path or maintained walking trail through some of these areas would make those spaces no longer “personal” places – an intrusion that this community might find objectionable.

However, from what I observed and heard from participants, most citizens in this community would not speak up about these concerns in a public setting since they either do not want others to know about their special river places or do not want authorities to know that they have participated in illegal activities, whether trespassing after dark, or drinking, while in those places.123 So while the concerns of this interpretive community may not arise during public debates (Figure 18), they may nevertheless cause citizens who are part of this interpretive community to stay away or withdraw from the public planning process for the Greenway extension and/or to find other locations as a “personal refuge” – possibly losing their unique personal connections with the Lower Neponset River.

Hot-Spots 2 and 3: Walter Baker Dam and Bay State Paper Co./Tilestone-Hollingsworth Dam

From an ecological standpoint, dams are detrimental to the natural flow regimes, terrestrial-riparian-instream connectivity, and the survival and recruitment of anadromous, catadromous and diadromous species in streams and rivers (Naiman and Bilby 1998). Removal of dams has therefore become an important tool in the expert’s eco-restoration toolbox (FISRWG 2001; US EPA 2000) and has been adopted by the State of Massachusetts as a key policy option for restoring ecological function to the state’s waterways (EOEA 2007). However, social and cultural differences and local citizens’ sense of place attachments around dams can pose serious obstacles to their removal (Lichatowich 1999; Lewis et al. 2008).

In 2002, the State’s plans for restoring the Lower Neponset River by the removal of the Walter Baker and Tilestone-Hollingsworth dams were complicated by the discovery of elevated levels of
polychlorinated biphenyls, or PCBs and lead, in the river’s sediments, water and fish (Breault et al. 2004). This discovery has raised public health concerns among local citizens that live near or use the river regularly. These concerns are expressed by participants in all the interpretive environmental communities identified in this study, even if those same participants and communities conflict over dam removal.

As discussed in Chapter V, the centerpiece of the State’s restoration plan for the Lower Neponset River is removal of both the Walter Baker Dam that crosses the river at Lower Mills-Dorchester and Lower Mills-Milton (Appendix F.3.), and the Bay State Paper Co./Tilestone-Hollingsworth Dam that crosses the river at Hyde Park and Milton along River Street on the border with Mattapan (Appendix F.4.).

**Walter Baker Dam**

![Diagram of Walter Baker Dam with various perspectives and connections]

Figure 20. The State proposes to remove the Walter Baker Dam. Solid = agreement with proposal; Dashed = disagreement with proposal; Dotted = neither agree nor disagree. See Appendix F.3.
The Wildland Dreams interpretive community supports the State’s plan to remove the Walter Baker Dam, while the Esplanade Visions, History Uncompromised, and “Smart” Development communities all oppose the dam’s removal (Figure 20). The Putting Up a Fight and Personal Connections interpretive communities did not express strong support or opposition to the removal of the Walter Baker Dam, but instead view the remediation of contaminants behind the dam as more important than dam removal. Each of these communities has a different set of reasons for their stance.

Participants in the Wildland Dreams interpretive community support the dam’s removal because they believe that this would reverse the two centuries of human-caused damage to the Lower Neponset. They also feel that removal would mean more wild places along the river, a return of native species, particularly the anadromous American shad and alewives, an increase in biodiversity, and overall improvement in the ecological health of the river.

Participants in the Putting Up a Fight interpretive community are neither vocally in support of or opposed to dam removal. Instead, they are more concerned with the State cleaning the PCB-contaminated mill pond behind the dam before the dam is removed. They feel that the contamination poses a risk to their neighborhoods and families. If the river is cleaned and the dam is eventually taken down, they feel that it would make the river into a place that their neighborhoods can be proud of and create a natural legacy for the next generation.

Similarly, participants in the Personal Connections interpretive community are not vocally in support or in opposition to the dam’s removal, but are instead concerned that the State clean up the PCB contamination before the dam is removed. Knowing the river is clean would help them feel safe spending time exploring the estuary and the wooded areas near Lower Mills. If the dam is removed they believe this could be a source of inspiration, by allowing them to imagine the connections between the river and the sea that fish migrations past the dam would create.124

Among the participants who oppose the removal of Walter Baker dam, the most vocal public objections come from the History Uncompromised and “Smart” Development interpretive communities. Participants in the History Uncompromised community that oppose the Baker dam’s removal believe that restoration of the Lower Neponset should involve the preservation and restoration of the historic human-

124 http://landscapemosaics.com/enviro_advoc/anadromous.html
built environment, including dams. They believe the dam’s removal would destroy a dam of critical historic importance to the United States, thus destroying the overall historic character of the river at Lower Mills (Appendix F.3.). Participants in the Esplanade Visions interpretive community also believe the dam’s removal would take away from the historic character of the river at Lower Mills, which they believe is one of the reasons people are attracted to the Greenway trail. Participants in the “Smart” Development interpretive community believe that if the Walter Baker dam is removed residential property immediately adjacent to the river – most notably Walter Baker Condominiums and new residential units planned for Milton Falls – would not be as attractive to buyers. They view both the mill pond behind the Walter Baker Dam and the water falling over the dam as real estate amenities of aesthetic value, that if removed would mean a loss of economic value as well (Appendix F.3.).

All of these interpretive communities, while expressing different specific reasons for supporting or opposing the dam’s removal, represent three distinctly different ways of interpreting how the Lower Neponset River should be restored, specifically when it comes to removal of the Walter Baker Dam. First, the Wildland Dreams interpretive community sees the dam’s removal through an ecological lens with their key concern for returning the river to a more “wild” state. Second, the Putting Up a Fight and Personal Connections interpretive communities see the removal of the dam through a public health lens with their key concerns for ensuring the river is clean for humans. And, third, the Esplanade Visions, History Uncompromised, and “Smart” Development interpretive communities all see the dam’s removal through a development-focused lens with their key concern for the recreational, economic, and historic amenities of the river.
Figure 21. The State proposes to clean up PCB contamination behind the Tilestone-Hollingsworth Dam behind the Bay State Paper Co. site, and then remove the dam. Solid = agreement with proposal; Dashed = disagreement with proposal; Dotted = neither agree nor disagree. See Appendix F.4.

While there are PCBs in the sediments behind the Walter Baker Dam, which is the concern of the Putting Up a Fight and Personal Connections interpretive communities, the highest levels of PCB contamination in the Neponset are found behind the Tilestone-Hollingsworth Dam in Hyde Park (Appendix F.4.). Levels of PCBs from sediment samples behind this dam were found to be four times the average levels for other rivers in the New England region and 125 times the median level for PCBs for rivers nationwide, as well as above the Food and Drug Administration Action Level for PCBs of 2.0 mg/kg (Breault et al. 2004; MA Public Health Department 2007).
All of the interpretive environmental communities believe that the State should remove the PCBs behind the Tilestone-Hollingsworth Dam (Appendix F.4.), although for somewhat different reasons. The most vocal supporters of the PCB clean-up are participants in the Putting Up a Fight interpretive environmental community. Participants in this community who live in Hyde Park and Mattapan in the vicinity of the Tilestone-Hollingsworth Dam talked in private conversations and at public meetings about the heavy industry along the Lower Neponset that they suspected had dumped wastes into the river for years causing detrimental health effects to their neighbors and the river itself. Some of these participants, both individually and collectively, have been fighting with private property owners, the City of Boston and the State to get the river cleaned for over thirty years, and they all share a belief that the river should be cleaned up in order to protect their neighborhood from health threats related to the pollution as well as to protect and enhance their neighborhood’s connection with the river for future generations. They want the river to be cleaned up, and the Tilestone-Hollingsworth Dam removed, so that they and their children and grandchildren can canoe the river, fish from the river, sit upon its shores and even one day swim in its waters.

Participants in the Wildland Dreams interpretive community believe the PCBs should be cleaned up because they threaten not only human health but also the health of the fish and wildlife that live in and around the Neponset River. Participants in the Personal Connections interpretive community believe that the clean up of the river would allow them to more safely seek refuge near and on the river. The Esplanade Visions community believes that the removal of PCBs is essential to creating a safe place for recreation, while the History Uncompromised interpretive community would like to see the PCBs cleaned in order to ensure safer public access to the river and its historical resources. And, participants in the “Smart” Development interpretive community see the clean up of the PCBs behind the Tilestone-Hollingsworth dam as beneficial to the retail redevelopment at the Bay State Paper Company site (Appendix F.4.), which includes a plan to create a public walkway along the river behind the dam, and to a proposal to create a new residential development along the Milton side of the river.

While all of the different interpretive communities fully support the clean-up of PCBs, the future removal of the Tilestone-Hollingsworth Dam is not as unanimous. The dam is within the Fairmount Indigo

125 PO-120607, ID12Interview3-120907
“Smart Growth” Corridor (Appendix F.4.), qualifying new developments at the dam, in principle, as “Smart Growth” developments. This has created some opposition to the dam removal by several participants in the “Smart” Development interpretive community who would like to develop a new residential complex along the Milton side of the river adjacent to the dam and maintaining the dam with the possibility of generating electricity at some future time (Appendix F.4.). All other interpretive communities support the removal of the Tilestone-Hollingsworth dam once the clean up of PCBs behind the dam is complete.

Hot-Spots 4 and 5: Shaffer Paper Co. and Stop & Shop Warehouse

In some instances, policy statements and proposals for clean-up, restoration, or redevelopment of the Lower Neponset River have risen out of citizen advocacy and organization at the local level in response to perceived “outside” threats to neighborhood values, safety, and public access to the Lower Neponset River, rather than originating from political or government officials. Two of the policy hot-spots, the Shaffer Paper Co. in Port Norfolk (Appendix F.5.) and the Stop & Shop Warehouse in Readville (Appendix F.6.), illustrate two different ways that this bottom-up, citizen advocate response can serve as a catalyst for prompting State government action.

Shaffer Paper Co.

The former Shaffer Paper Co. is a 15-acre tract of land adjacent to the State-designated ACEC Neponset Estuary at the mouth of the river in the Port Norfolk neighborhood (Appendix F.5.). The site was a road construction machinery shop and dumping site for baled paper and hazardous chemicals from the late 1960’s to 1980’s, with a long history of citizen’s fighting to clean and reclaim the area as river access for the Port Norfolk neighborhood. It was supposed to have been one of the first parks created along the Neponset River Greenway trail (Appendix F.5.) according to the Phase I Master Plan (MDC/DCR 1995). But, contamination tests at the site were halted by the State after another Dorchester neighborhood – Cedar Grove – successfully lobbied to get the 65-acre Pope John Paul II Park cleaned up and created prior to the Shaffer Paper site (Appendix F.5.).

126 http://www.archive.org/stream/portnorfolkrevit00bost/portnorfolkrevit00bost_djvu.txt (Accessed 20 April 2009)
Participants in the Putting Up a Fight and Wildland Dreams communities who are also residents of Port Norfolk attended the May 2007 Neponset Greenway Council meeting to express their concern about a proposal by private developers to develop the Shaffer Paper site as a youth maritime center, including a 142-space parking lot. They asked the Council to support them in opposing the development and to encourage the State to finish testing the site for contamination and create a park. Participants in the Putting Up a Fight interpretive community fear that such a development would eliminate neighborhood access to the site, increase traffic in the neighborhood, and foreclose on the opportunity to create a public park. Participants in the Wildland Dreams community fear that development of the site as a maritime center would harm the newly established native Spartina grasses by hardening the shore line for new docks and other structures (Appendix F.5.). Participants in the Esplanade Visions interpretive community who are also part of the Greenway Council felt that such a development conflicted with their vision of the Shaffer Paper site as a park along the Greenway. As a result of these concerns, the State DCR announced in April that it would recommence contamination testing on the site and restart the process of planning for a park in Port Norfolk.
Participants in the Esplanade Visions interpretive environmental community fully support development of the Port’s new park over the private youth maritime center (Figure 22) primarily because it was part of the original Greenway Master Plan and already State-owned property. One participant called the lack of the Shaffer site park “a missing tooth in a terrific smile,” referring to the site’s location along the current Greenway trail (Appendix F.5.).

Participants in the Putting Up a Fight interpretive community believe the park is essential in order to protect the site, and the river, from outside developers and that it will be a great location for family picnics and educating their children about nature and the Neponset River.

Also in support of the public park on Port Norfolk are participants in the Wildland Dreams community who point to the new marsh grasses re-populating the shoreline of the Shaffer site (an area of the estuary that had been mud flats for two centuries) (Appendix F.5.), the nesting of peregrine falcons in a tree on the edge of the site, and the numerous water bird sightings as “good signs” that offer evidence to them that the Shaffer site is “restoring itself.” Contrary to the recreational development opportunity supported by local politicians and some in the Esplanade Visions community, those in the Wildland Dreams interpretive community would like to see a completely “passive” park like the one designed in the original Master Plan for the Neponset Reservation and would even like to see setting aside the site as a “wildlands” area where “park” activities are very limited.

Participants in the “Smart” Development community who believe the site should be developed as a youth maritime center (Appendix F.5.) see an opportunity for revenue generation that will also meet a civic need in Dorchester to provide a place for youth to go after school and in the summer. The development plans specifically said the center would be designed “to engage area youth to experience the Neponset River for purposes of outdoor water sports, education and competition.” While the “engagement of youth” should have appealed to the Putting Up a Fight interpretive environmental community because it talks about keeping young people in the neighborhood and out of trouble. However, those proposing the maritime center are considered “outsiders” to the Port neighborhood which raised suspicions among “insiders” and long-term residents of their real motivations to develop the site.

128 Dorchester Reporter, 31 May 2007, “Unfinished Business,” Bill Forry. State Representative Marty Walsh was quoted in the article saying: “People want to put in a passive park, but I'm not necessarily for putting in just another passive park,” Walsh said this week. “We have a shortage of baseball fields, especially a shortage of girls softball fields. If there's room there, I'm for making it recreational space. It would probably take $7 million to $15 million to finish off [the Port Norfolk parcel]. The neighbors certainly want to do that because it's a big connector for the whole greenway. But if I had to choose between putting another park in my district or funding special needs, I'm going to fund special needs.”

129 ID5Interview-062907

130 Powerpoint and conceptual schematics presented at Port Norfolk Civic Association in Spring 2007, obtained from ID5.

131 Even long-term residents who were not born and have not lived their entire lives on Port Norfolk do not consider themselves to be true “insiders” to the neighborhood. Only those who are born and grow up and stay in the Port can consider themselves true “Port Rats.”
The City of Boston has given their support to private developers proposing to turn the former Stop & Shop Warehouse facility in Readville and Dedham into the largest residential or mixed residential-retail development in the City of Boston. Solid = agreement with proposal; Dashed = disagreement with proposal; Dotted = neither agree nor disagree. See Appendix F.6.

The former Stop & Shop Warehouse, located on 72 acres adjacent to the Neponset River as it flows through the State-designated ACEC Fowl Meadow (Appendix F.6.), was developed in the 1950’s as the largest cold-storage warehouse in the country by the Stop & Shop Corporation. The site adjoins the Readville neighborhood of Hyde Park and the boundary between the City of Boston and Town of Dedham bisects the warehouse.

In an April 8, 2007 Boston Globe article in the Real Estate section, and then in a more recent Globe article in June\textsuperscript{132} development plans for the site were released for the first time to the public. The

\textsuperscript{132} The Boston Globe 08 April 2007, “South of the Border” by Robert Preer; The Boston Globe 30 June 2007
current owners of the site, Campanelli Construction\textsuperscript{133}, were proposing to put 1,850 housing units, making it the largest residential development in the City of Boston. The newspaper articles made reference to the fact that Campanelli had obtained tacit approval of their development plans from the City of Boston.

Participants in the Putting Up a Fight interpretive community along with residents of Readville who had learned about the proposed development through neighbors were concerned about the scale of the development, and the fact that they had not been informed. One participant said the development was being “bluffed” and rushed through without giving people living closest to the site any information.\textsuperscript{134} In an effort to inform and organize citizens about the possible new development, six long-time, and in at least three cases, life-long Readville and Hyde Park residents (four of whom were study participants) formed the first civic association for the Readville neighborhood – called Citizens for the Preservation of Readville, or CPR (Appendix F.6.).

Participants in the Putting Up a Fight interpretive community strongly oppose the development because they believe that such a development on the edge of their neighborhood would negatively impact the quality of everyday life in the neighborhood by opening up dead end streets, increasing traffic, and threatening Readville’s identity and security if the development is designated “affordable housing.” Several participants said they believed affordable housing on the site would pit a “bedroom community” against “people with too many needs who will not assimilate.”\textsuperscript{135}

Participants in the Wildland Dreams interpretive community oppose the development because they are concerned about the direct and indirect ecological impacts such a development would have on Fowl Meadow and the Neponset River (Appendix F.6.), including increased pollution from storm water run-off, trash, and the risk of damage to rare plant and wildlife species found in the Fowl Meadow.

Similarly, participants in the Personal Connections interpretive community oppose the development because they believe it would damage or degrade sites of personal refuge in the Fowl Meadow area. In addition, more people living on the edge of the Meadow may mean more people using the river and Meadow at that site, thus making it less “private” and “personal.”

\textsuperscript{133} The site was purchased by a limited liability corporation named CFRI/Sacks/Meadow Road LLC for Campanelli in 2004 at a price of $26 million. (PO080107)
\textsuperscript{134} PO080107
\textsuperscript{135} PO082607, ID12Interview1-081007
Participants in the History Uncompromised interpretive community are also opposed, though not as strongly, since the site is close to or on top of Readville historic sites and monuments, such as Paul’s Bridge, the Civil War monument in Camp Meigs Park, and the Readville Trotting Park memorial (Appendix F.6.).

The views of the participants in the Esplanade Visions interpretive community are not as clear. While sympathetic to the opposition expressed by the Putting Up a Fight and Wildland Dreams communities they did not offer a solid stance for or against development of the Stop & Shop warehouse site. Some expressed a view that any debate about the site’s development should be between the City, the developers, and the residents of the Readville neighborhood.

In support of the site’s development, participants in the “Smart” Development interpretive community believe that this is an ideal location for a residential community since it offers views of the Great Blue Hills, Fowl Meadow, and Neponset River, and is within walking distance to public transit. It is also located near the end of the proposed Lower Neponset Greenway extension. The development could also potentially provide much needed affordable housing in the City of Boston.

Hot-Spot 6: Lewis Chemical Co.

Hyde Park’s motto, “Si Tentas Perfice,” is Latin for “Whatever You Take Up, Finish.” This is also an apt description for the long, seemingly endless battle that has been waged individually and collectively by Hyde Park residents and participants in the Putting Up a Fight interpretive community since the 1960’s over clean up of the former Lewis Chemical Company site near Fairmount Hill neighborhood and Logan Square (Appendix F.7.). Characterized by the City of Boston as “one of the most serious sources of continuing pollution in the Hyde Park area,” the site’s surface and subsurface soils and groundwater are contaminated with high concentrations of metals, such as lead, volatile organic compounds like TCE, DCA and xylene, and PCBs (City of Boston, DND 2007).

The Lewis Chemical Company operated a hazardous waste collection, transport, storage, and processing facility on the Hyde Park site from 1963 to 1983. Study participants who lived near the site when it was in operation said they complained to City officials over seeing “drums of who knows what” in
the water and on the earth next to the site and the “sweet” smell emanating from the building, but nothing was ever done. The City of Boston acquired the property in 2000 when the new owner fell behind on his water and sewer bills and the City’s Water and Sewer Commission took the property and foreclosed on it. Ownership, and clean-up responsibility for the site, is now the responsibility of the City of Boston’s Department of Neighborhood Development (DND) Real Estate Management & Sales (REMS) Program (Appendix F.7.).

While contamination testing and mapping of the Lewis Chemical Co. site was done by the EPA, State DEP, the private owner, and the City of Boston from 1986 to 2002, clean up of the site has not begun. In frustration over a lack of clean-up activity and little to no publicly available information about progress, 13 local citizens petitioned the City in 2005 requesting that the Lewis Chemical Co. site be designated a Public Involvement Plan (PIP) site, pursuant to the Massachusetts Contingency Plan (MCP) forcing the City DND to prepare a plan for involving the public in the site’s evaluation and clean-up. The citizen petitioners were made up of a diverse group of individuals, including participants from all five of the six interpretive communities – Esplanade Visions, “Smart” Development, Putting Up a Fight, Personal Connections, and Wildland Dreams. All interpretive communities agreed that the site’s clean-up was part of their vision of a restored Neponset River and they are united in their efforts to keep the City accountable for getting the clean-up completed.

136 Interview1-070705
137 http://www.cityofboston.gov/dnd/M_Environmental_Fact_sheet.asp

181
What has arisen as an area of conflict between citizens is the question of what to do with the site after it is cleaned. I observed clear differences between participants who all attended the Southwest Boston Community Development Corporation visioning meetings for a “smart growth” corridor as part of the Fairmount/Indigo Line proposal at which the possible uses of the Lewis Chemical site were discussed (Appendix F.7.). Participants in the Esplanade Visions, Putting Up a Fight, Wildland Dreams, and Personal Connections interpretive communities felt that there was already too much development along the river in Hyde Park and that the site should be designated as some type of park. The Esplanade Visions and Putting Up a Fight participants thought the park should have a canoe launch that would allow for more public access directly onto the river. And, the Wildland Dreams and Personal Connections participants thought the park should be more naturalistic with views of the river. Participants in the “Smart” Development
community felt that a new building on the site designed to serve as an expanded performance space and educational facility for the Riverside Theater (currently in Logan Square), along with other new attractions nearby such as a restaurant and movie theater as well as the extension of the Neponset Greenway Trail (Figure 25), would be beneficial to current and new residents of the neighborhood and be good for businesses and property values.

Figure 25. Conceptual drawing from SWBCDC meeting of Lewis Chemical Co. site re-development, 2007.

Meanwhile, the City of Boston is committed to “ongoing revitalization efforts along the Neponset River” as part of the Lewis Chemical Co. site’s clean-up (City of Boston, DND 2007). They cite the different potential uses for the cleaned site as a community theater, restaurant space, or canoe facility, all focused on economic growth and transit connections to the area:

“The Lewis Chemical area of Boston is a densely settled urban landscape. It has many existing infrastructure features such as roads, streets, rail, and rapid transit… The reuse of the existing land in this neighborhood is critical to the health of this portion of Boston. This redevelopment effort will create several new features on the exiting land using many of the key infrastructure elements of the area. By creating the opportunity for economic growth in the area we will: • Help reduce vehicle miles traveled by providing job opportunities in the area. • Reduce air pollution through increase in the use of public transportation. • Create building space that will incorporate green building principles adopted by the City of Boston.” (City of Boston, DND 2007, p.7-8)

In addition, a presentation made at a “smart growth” conference by the City’s DND REMS Program in 2007 that spoke about the Lewis Chemical site’s redevelopment echoed the preferred use of the site by the Indigo-Fairmount coalition (Good Clancy 2005) and participants in the “Smart” Development interpretive community who share the belief that redevelopment of the Lewis Chemical site should focus on economic

139 http://cfpub.epa.gov/bf_factsheets/gfs/index.cfm?xpg_id=274&display_type=HTML
growth and building space.\textsuperscript{140} So, to the City and proponents of “Smart Growth,” a restored Neponset River in the vicinity of Lewis Chemical should be primarily a visual and recreational amenity that would draw more developers and visitors to the area. This interpretation conflicts with other local interpretive communities that believe restoration of the Lower Neponset River in Hyde Park, and at the Lewis Chemical site, should focus on creating more “natural” places to sit and watch the river, or to launch a canoe into the river, and should not involve any more residential, retail, or industrial development than currently exists.

**Beyond Conflict: Opportunities for Common Ground along the Lower Neponset**

At the six policy hot-spots described here, the conflicts over the Lower Neponset River’s restoration, clean-up, and redevelopment are already entrenched from years of debate. That is why these hot-spots were chosen – they most clearly emerged from the data as places of environmental conflict where polarizing policy contexts continue to exacerbate the debate. One of the first steps in getting beyond such conflict stalemates will involve creating a more productive and flexible approach to public dialogue over the Neponset River’s restoration where all the different interpretations of river restoration are listened to and considered as a part of the policy formulation, and not a hindrance to it. Focusing on the geographic locations and policy contexts where shared interpretations and commitments already exist between communities (where there are convergences) may be the first place to look for finding common ground among conflicting interpretations. Ideally, finding such common ground over certain locations and in specific policy contexts could provide a greater openness to overcoming irreconcilable differences in other locations and policy contexts by highlighting common sentiments that may exist in other locations across communities of meaning.

One common element to all of these policy hot-spots is that the “Smart” Development interpretive environmental community is never aligned with the Wildland Dreams, Putting Up a Fight, and Personal Connections communities when it comes to how the Lower Neponset River should be restored (Table 6). Looking at how the analysis was conducted, some of this difference may be explained by what turned out to be a weak association between the “Smart” Development storyline and the Lower Neponset River’s restoration. Participants in the “Smart” Development community, as defined in Chapter VII, express an

\textsuperscript{140} http://www.nbabigdeal.org/files/pdf/track1/Transit-to-Redevelopment-Toms-Barrasso.pdf
interest in achieving economic gains using existing policy processes around the river’s restoration and revitalization more than expressing an interest in what the river and its restoration means to them on a personal or societal level. It may be that the storylines of economic growth and development around the Lower Neponset River’s restoration that were apparent from the data do not constitute a single interpretive environmental community united around one way of interpreting the river’s restoration as much as an interpretive “economic” community united around a strategy for financial gain that uses any new public “amenity” available to them. Another explanation for the schism between the “Smart” Development community and the Wildland Dreams, Putting Up a Fight, and Personal Connections communities is in the selection of the policy hot-spot locations themselves – they are all on or adjacent to current or potential future recreational or economic development sites.

Still, despite these possible analytic weaknesses in the storyline-interpretive environmental community linkage and selection of policy hot-spot locations, there are clear alliances between the way wildland dreamers (Wildland Dreams), neighborhood preservationists (Putting Up a Fight), and refuge seekers (Personal Connections) interpret the restoration of the Lower Neponset. Equally clear are the differences between how this alliance and the economic growth proponents (“Smart” Development) interpret the river’s restoration at all six policy hot-spots, particularly when it comes to policy proposals related to increasing retail and residential buildings along the river’s edge.

Beyond the differences between interpretive communities that this analysis illustrates, it also raises the possibility for finding common ground between the Wildland Dreams, Putting Up a Fight, and Personal Connections interpretive communities. Their shared opposition to an interpretation of the Lower Neponset’s restoration based on economic growth and revitalization, and their shared support to a restoration that is based more on ecologically-focused, neighborhood-focused, and emotional relationships to the Lower Neponset River (Appendix F.A.).

Beyond voicing their shared interpretations and policy preferences by participating directly in public meetings about the Neponset River, participants in the Wildland Dreams and Putting Up a Fight interpretive communities also utilize citizen organizations to insert their policy preferences and interpretations of the Lower Neponset River’s restoration into the larger public dialogue in order to influence the policy process. Participants in the Wildland Dreams interpretive community use non-
governmental environmental organizations such as the Neponset River Watershed Association, Friends of the Blue Hills, and the Audubon Society, among others, and participants in the Putting Up a Fight interpretive community utilize their membership in neighborhood and civic associations. The willingness of participants in the Wildland Dreams and Putting Up a Fight communities to engage in open public dialogue and use larger organizations to influence policy, could strategically benefit participants in the Personal Connections interpretive community, who tend to be less publicly outspoken in their views and preferences despite deep personal connections to the Neponset River.

On the flip side of these differences, participants in the Esplanade Visions and History Uncompromised communities have more in common with the “Smart” Development community, or are at least not vocal about their differences, at three of the six policy hot-spots (Appendix F.B.). There is disagreement between participants in both the Esplanade Visions and History Uncompromised interpretive communities, and the “Smart” Development community at the Tilestone-Hollingsworth Dam. However, in this case there is a fairly weak opposition within the “Smart” Development community, with only one private development opposing removal of the dam, and all three interpretive communities do agree that the PCB contamination behind the dam should be cleaned by the State. At the Shaffer Paper site, the other location where there is not commonality among the Esplanade Visions, History Uncompromised, and “Smart” Development interpretive community participants, the Esplanade Visions community participants are apparently in opposition to the development of the site as a youth maritime center partly because it is State-owned and managed property and partly because of a belief that the Shaffer Paper site should become a new park along the Greenway as proposed in the original Greenway Master Plan. In addition, at the Stop & Shop Warehouse, participants in the History Uncompromised interpretive community are opposed to development of the site as residential unless there is some consideration of the site’s historical importance as a Civil War encampment, harness race track, and early automobile race track. At all other hot-spot locations, there is common ground between those who would interpret the Lower Neponset River’s restoration as managed, recreational-developed landscape (Esplanade Visions), historic preservation (History Uncompromised), and economic growth (“Smart” Development) (Appendix F.B.). The similarities between participants in these three communities of interpretation seem to lie in a shared sentiment that the Neponset River is a human-dominated place, and an appreciation for the recreational,
aesthetic, and historic qualities of the river coupled with a desire to develop these qualities further. In addition, these three communities, particularly participants in the Esplanade Visions and “Smart” Development communities tend to be more closely aligned geographically, in the upriver portions of the Lower Neponset, where policy proposals and statements are focused towards promoting the economic growth and revitalization of Hyde Park and the City of Boston (Appendix F.B.).

Participants in the Esplanade Visions and History Uncompromised interpretive communities, like the Wildland Dreams and Putting Up a Fight participants, also use various citizen organizations to insert their policy preferences and interpretations of the Lower Neponset River’s restoration into the larger public dialogue in order to influence the policy process. Most of the participants in the Esplanade Visions interpretive community are also members of the Neponset Greenway Council and they use this forum and the backing of the TTOR’s Boston Natural Areas Network to gain access to political and government officials to express shared concerns and interpretations about the Lower Neponset River’s restoration. Participants in the History Uncompromised community are most active in the Dorchester Historical Society, Milton Historical Society, and Dedham Historical Society which serves to facilitate exchange of information about the status of historic properties and allows them to raise money for protecting historic sites, as well as interact with public and government officials over their shared concerns to protect and restore historic properties along the Lower Neponset. The “Smart” Development participants are more inclined to rely on industry and economic development groups and lobbying of elected officials to express their policy preferences and influence public dialogue and the policy process.

Given their differences, what are the openings to finding further agreement or at least facilitating more open dialogue between all interpretive communities over the Neponset River’s restoration? By looking at where and how participants in the Wildland Dreams-Putting Up a Fight-Personal Connections communities (Appendix F.A.) converge with the Esplanade Visions-History Uncompromised-“Smart” Development communities (Appendix F.B.), further cross-community linkages become apparent and may offer some alternative forms of conflict resolution that have yet to be recognized or have yet to materialize.

In terms of where cross-community linkages may occur or could be facilitated, the Neponset Greenway, both as it currently exists and in its proposed extension, can be seen as one spatial linkage between all of the policy hot-spots (Appendix F.2.).
Dam, Lewis Chemical Co., and the Stop & Shop Warehouse would be along the proposed extension, while the Greenway extension would build upon existing linkages between Shaffer Paper Co. and Walter Baker Dam to create new spatial linkages from Port Norfolk to Fowl Meadow, as one could travel through and past the Shaffer Paper Co. site to the Stop & Shop Warehouse site (and every other hot-spot site in between) by walking or biking. Following on this geographic cross-linkage, participants in the Esplanade Visions interpretive community, like the Greenway trail itself, could serve as a facilitator of cross-community dialogue and possible agreements between the Wildland Dreams-Putting Up a Fight-Personal Connections communities and the Esplanade Visions-“Smart” Development-History Uncompromised communities over at least the three policy hot-spots, Bay State Paper Co./Tilestone-Hollingsworth Dam, Lewis Chemical Co., and the Stop & Shop Warehouse, that the new Greenway would pass near.

To play such an intermediary role, participants in the Esplanade Visions community must overcome opposition to extension of the Greenway by participants within the Wildland Dreams-Putting Up a Fight-Personal Connections communities. One of the ways that the Esplanade Visions community could do this is by becoming more aware of the different interpretations of the river and its restoration espoused by these three communities. Those Esplanade Visions participants who are also members of the Neponset Greenway Council could advocate to explicitly include participants from these different interpretive communities, and their interests, into Council meetings and agendas. In addition, six of the participants in the Esplanade Visions community, five of whom are members of the Council, share sentiments over what the Neponset River’s restoration means with the Wildland Dreams-Putting Up a Fight-Personal Connections communities (Table 4), so raising awareness of other interpretations within the Council could begin with a welcoming stance on the part of meeting organizers and attendees towards allowing more time for focusing on concerns and interests (e.g., ecology of the river, neighborhood-initiated river clean-up efforts, etc.) that have not tended to be the main focus of Council meetings. This explicit inclusion of new storylines and interpretive communities could signal to those who have not been involved on the Council that at least some participants in the Esplanade Visions community are open to recognizing that there is a place for ecological, neighborhood-specific, and deep personal connections with the river. In addition to speaking up at Greenway Council meetings about other interpretations of the river’s restoration, participants in the Esplanade Visions community who also share other interpretations of the river’s
restoration could seek out participants with whom they share different interpretations of the river’s restoration than the Esplanade Visions interpretations, and invite them to attend Council meetings. This could include participants in the Wildland Dreams community, many of whom would like to see an on-the-water equivalent to the Greenway by removing the dams at Walter Baker and Tilestone-Hollingsworth allowing for canoe and kayak access the length of the Lower River. It could also include seeking out participants in the Putting Up a Fight community, who have concerns over the Greenway’s extension near their neighborhoods in Milton and Boston. And, it could include participants from the Personal Connections community, who have not been explicitly engaged in current Greenway planning, such as inner-city youth and senior citizens in Mattapan and Dorchester, as well as long-time residents who may have been engaged in planning at one time, but who have lost interest or become disillusioned with State planning processes.

Through purposefully seeking to include these new interpretations, some of which may be contrary and some of which may be similar to their existing interpretations, into the monthly Greenway Council’s agenda, participants in the Esplanade Visions community could play an essential role in brokering agreement and mediating conflicts over not only the Greenway’s expansion, but in other areas (i.e., policy hot-spots) along the existing and proposed Greenway where conflicts exist or are emerging.

The five participants who are on the Neponset Greenway Council and share sentiments with the Esplanade Visions interpretive community have between 10 and 13 years experience on the Greenway Council and are familiar with a broad range of issues facing the Lower Neponset River. In addition, the Neponset Greenway Council as a public citizen forum is well-known by government and political officials at both the State and City levels, and is regularly attended by a mix of public agencies and private interests. If the participants who share Esplanade Visions interpretations of the Neponset River’s restoration, and also share interpretations of the river’s restoration with participants in the Wildland Dreams-Putting Up a Fight-Personal Connections communities, can expand the scope and breadth of the Neponset Greenway Council, there appears to be an opportunity for this citizen forum to leverage political, social, and fiscal capital and make significant progress in recognizing and incorporating diverse local interpretations into the public dialogue over the Lower Neponset River’s restoration – from Port Norfolk to Fowl Meadow.
CHAPTER IX

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

From the advent of citizen organizing and advocacy to protect the Neponset River in the 1960’s, to the Massachusetts Watershed Initiative project to develop an ecosystem-based watershed approach during the 1980’s and 1990’s, to the mid-1990’s State designation of the Neponset Estuary and Fowl Meadow as Areas of Critical Environmental Concern, and to the formation of the Neponset Fish Passage and Habitat Restoration Task Force in 1998, local citizens, State officials, environmental agencies, a variety of non-governmental organizations, politicians, and private corporations have participated in an on-going public dialogue over how to best protect, manage, and restore the Neponset River. The local sense of place meanings, storylines, interpretive environmental communities, and divergences and convergences between those communities identified and analyzed by this research have all emerged, either implicitly or explicitly, from this shared public dialogue.

Interpretive environmental communities are not a phenomenon of the 20th or 21st century. Since at least the 17th century, ever-shifting interpretations of what the Neponset River means to people, both individually and collectively, have been successfully mobilized to produce a sense of identity and opportunity for some (e.g., Israel Stoughton and the early mill owners, recreational enthusiasts, condominium developers, etc.). At the same time, for others (e.g., farmers and fishermen, indigenous Massachuset people, inner-city youth, etc.), actualization of these meanings, and their associated attitudes and values, has an actual loss (or threat of a loss) of their relationship with the river. In addition, it has engendered a sense of disenfranchisement and disconnection from their neighbors and governments.

Competing claims on what the Neponset River means are not new; they are part of larger and constantly changing socio-cultural, political, economic, and ecological contexts. Therefore, consideration of how to ecologically restore the Lower Neponset River, and all urban rivers, must involve a deeper consideration of how these different socio-cultural contexts, grounded in the river’s ecology, rich history, citizens’ shared
and personal experiences, the regional economy, and local politics, may be influencing the way local citizens interpret the river as a sense of place and as an object of restoration.

Summary

The overarching research question I asked was: What are the various local, everyday interpretations of an urban river and its restoration, and how can the interactions between these local interpretations be used to inform the theory and practice of urban river restoration? This question is important to understanding how people interpret and ascribe meaning to environmental concepts and places in urban environments, how those interpretations differ, and how varying interpretations interact with dynamic environmental and socio-political systems – all important steps in diagnosing and mitigating conflicts over natural resources in complex urban environments. Through the use of a place-based, interpretive, and spatial analysis of local citizens’ narratives about the Neponset River, and what it means to them as a place and object of restoration, I was able to develop insights that allowed me to draw conclusions from this case study that may be applicable to other urban river restorations.

This research identified six separate local, everyday interpretations of the Lower Neponset River and its restoration based on over 500 hours of participant observations in Boston and Milton, Massachusetts, and ethnographic interviews with 27 focal study participants. These interpretations are: Esplanade Visions, History Uncompromised, “Smart” Development, Personal Connections, Putting Up a Fight, and Wildland Dreams. These different interpretations are held by local citizens who share similar storylines, which include symbolic spaces, shared values, and beliefs about how humans should relate to the natural world. These interpretations are often made manifest in formal organizations or social contexts that bind people with shared interpretations together over time. In this way, citizens who share a particular storyline and interpretation can be said to be in a “community of meaning,” or interpretive community.

These six interpretive environmental communities identified in this research were found to diverge in how they regard, or use, symbolic geographic spaces. They also often diverge in their values and beliefs regarding the relationship between humans and nature, and in the different types of organizational and social contexts with which they are most often associated.
Geographic spaces hold symbolic significance to these local interpretive communities, as places where values and beliefs about the natural world are shared and reinforced, and as places of history, development, ecological resources and services, recreation, danger, refuge, visual aesthetics, and remembrance. Comparing the different ways that communities interpret the same space as a “place” is one way of differentiating between interpretive communities. Using a GIS, I showed that these six different interpretive environmental communities can be spatially represented using two layers of interpretive maps. In addition, GIS analysis allowed me to examine how different interpretations of restoration come to be focused on specific locations. The first GIS layer looks at the interpretive communities and distinct geographic features that signify important elements that emerged from each community’s storylines (Appendix E). The second layer looks at policy hot-spots, specific geographic spaces that are important to at least three of the storylines and at which the differences between local interpretive communities over policy statements made by government and political officials regarding the restoration, management, and redevelopment of the Lower Neponset, have caused, and continue to cause, socio-political and environmental conflicts (Appendix F). Through exploratory spatial analysis of these two cartographic representations, various patterns of convergence and divergence between the six interpretive communities emerged (see Conclusions below).

How different interpretive communities view the relationship humans (either themselves or others) have (or should have) with the Lower Neponset River, or “nature” in general, varies from those seeking total human “control” over aspects of the natural environment and those seeking “respect” for the natural environment as an independent entity beyond human manipulation. These different ways of valuing the river and nature serve as both the foundation and glue that keeps interpretive communities together. They are the foundation in that some of these beliefs and values may be the uniting force that originally brought people together, and they are also the glue in that those beliefs and values have kept those people more closely aligned in their policy preferences, even when their values and beliefs are threatened by other interpretive communities, external socio-political actors, or other forces of change.

Organizational and social contexts shared by the members of some of the interpretive communities identified in this research (i.e., Esplanade Visions, History Uncompromised, Putting Up a Fight, and Wildland Dreams) also serves to differentiate them over time through providing a way for interaction
between people that may reinforce shared sentiments towards place, and for meeting other individuals who share common values and beliefs. This may provide an important source of belonging and collective identity that serves to further reinforce distinctions between interpretive communities.

Conclusions

This research provides the type of in-depth, place-based social science information that can serve as the foundation for designing new institutions, public forums, and planning processes that encourage local citizen participation and engagement in environmental problem-solving over the long-term (Fischer 2003). The key message of this research is that different interpretations of an environmental problem lead to different policy preferences and proposed solutions. Failure to identify, understand, and validate those differences may lead to unforeseen or unnecessary conflicts over the solutions both between local citizens and between locals and experts. This message should be of critical importance to those responsible for designing and conducting natural resource public participation processes and community involvement programs such as environmental scientists, public relations firms, community and grass-roots activists, and, especially, government agency staff.

Patterns of convergence and divergence between interpretive environmental communities observed in the GIS analysis suggest possible ways to break through existing conflicts using symbolic spaces. People who hold these different meanings, interpretations, and policy preferences often organize themselves into informal networks or formal organizations. These voluntary associations can (and often do) form “coalitions” to advance their interests in the policy process (Harrison and Burgess 2000). In looking at where and how the different interpretive communities and their coalitions converge, both spatially and conceptually, spatial linkages coupled with weak policy preferences on the part of one or more interpretive environmental community may be discovered that offer some alternative forms of coalition-building that have yet to be recognized, at least explicitly.

The Wildland Dreams-Putting Up a Fight-Personal Connections coalition share similar policy preferences when it comes to specific geographic spaces along the Lower Neponset, namely they oppose more residential and commercial development along the river and would prefer that recreational development, such as extension of the Greenway, be minimal. This coalition uses similar narratives of the
river in discussing their preference, namely that the Neponset River is an ecologically important place in its own right that serves a role in making the city feel like “home.” In contrast, the “Smart” Development- Esplanade Visions-History Uncompromised coalition share policy preferences towards specific geographic spaces along the Neponset, although not as strongly as the first coalition. This coalition most strongly shares opposition to removal of the Walter Baker Dam, with various levels of support for various proposals to develop the river for recreation, retail, tourism, and housing. They, in general, share a view of the Lower Neponset River as a highly managed, heavily landscaped environment that will serve as a place for promoting predominately human-centered activities: economic revitalization, recreational amenities, and historic tourism or educational destinations. Spatially, the Neponset Greenway, both as it currently exists and in its proposed extension, is a geographic space symbolically and physically linking all of the geographic spaces where policy preferences differ by coalition. As an existing non-governmental organization that was instrumental in development of the current Neponset Greenway, and as the only citizen forum for discussing current issues facing the entire length 8-miles of the Lower Neponset, the Neponset Greenway Council, like the Greenway itself, could theoretically serve as a link between interpretive communities. It could be the shared organizational and social context for bringing the two diverging coalitions together on a regular basis to discuss conflicts, work through disagreements, and potentially even build new coalitions over policy hot-spots along the river. However, because of the Esplanade Visions close association with the Greenway Council, and their advocacy stance towards the Greenway’s extension, they would first have to either overcome opposition to extension of the Greenway by the Wildland Dreams-Putting Up a Fight-Personal Connections coalition or tone down Esplanade Visions’ advocacy stance towards the Greenway’s extension. Only then would the Greenway Council be able to serve as an honest broker that mediates between competing interpretations of the Neponset River’s restoration.

In seeking to inform the theory of urban river restoration, this research also shows that the local citizens who participated in this project, regardless of their interpretations of the Lower Neponset River as a place or object of restoration, share a broad conceptualization of “restoration” that – although it is talked about in different contexts using different language (i.e., synonyms and linguistic expressions) – refers to the act of maintaining a link with a past state, condition, or quality of a place before there was some form of
decay or damage, and then undertaking some kind of activity that allows for the river’s “restoration” to the
pre-decayed or pre-damaged state, condition, or quality. The implication of such a conceptualization of
“restoration” is a belief, or a hope, that human beings have the ability to fix something that has been
broken. It also implies a feeling of nostalgia for “what once was,” which may be a result of the fact that the
majority of the participants in this particular study have lived in the Neponset River watershed for a long
period of time, with no one residing in the watershed for less than seven years. Local, everyday language
for describing what “restoration” as a concept means is not that different from the language that natural
resource experts use to describe “restoration” – return to a pre-degraded condition by fixing degraded
ecological processes. However, there may be important distinctions in how that language is used, and in
what socio-cultural and political contexts, that are essential for natural resource managers and restoration
professionals to take into consideration when communicating with local citizens.

These linguistic and contextual distinctions between local citizens’ interpretations of the Lower
Neponset River’s restoration deal primarily with differences in how they believe human beings should
exercise this ability to fix what is broken (or even if they should fix it). First, restoration professionals must
recognize that there may be a link between people’s local sense of place and their interpretation of what
needs fixing and how, and most importantly, that not all local citizens have the same “sense of place.”
Second, local citizens may frame how they believe the river should be restored based on a variety of
information sources about the river (e.g., public meetings, discussions with neighbors, local newspapers,
the internet, etc.), each with their own different interpretations of what the Lower Neponset River and its
restoration means. And, third, local citizens may also frame how they believe the river should be restored,
and policy preferences, based on their past negative or positive experiences with economic development
proposals, State budgets, and local politics that may or may not have anything to do with current restoration
efforts.

Overall, what this research shows is that conflicts over restoration of the Lower Neponset River, is
more than a technical or bio-physical problem about how to best manage public access, conserve ecological
resources, protect the river from development, and return native flora and fauna to the river. The
restoration of urban rivers is also intricately linked to how local citizens project their personal and
collective meanings and interpretations onto the riverscape and its surrounding landscape. To fully
Understand those projections and be able to use them to inform policy processes and decisions, it is important to recognize the complexity of, and interaction between different place-based sentiments, values, and beliefs regarding the relationship between humans and nature, and other historical, social, cultural, psychological, economic, and political factors from which those meanings and interpretations arise. Urban rivers are a reflection of many things to many people, and their restoration is a complex social and psychological construction based on shared and individual visions and dreams of what could be, and realistic pragmatism born from experiences within economic and political systems that do not always satisfy those visions and dreams.

**Recommendations for Improving Urban River Restoration Projects**

This research suggests that the various local judgments and interpretations of what is broken, damaged, or degraded about a place, and the various ideas about how to fix it, are embedded within the ways in which individuals speak about their connection to and knowledge of a local place. On the one hand, for example, local citizens who share similar “sense of place” interpretations regarding the biophysical, ecological, and human-built aspects of the Lower Neponset River also seem to share interpretations of the problems facing the river and potential solutions to those problems. On the other hand, local citizens who hold different interpretations of the Neponset River as a place may have different ways of framing the problems facing the river, leading to different solutions. Natural resource agencies and restoration experts can use these similarities and differences to develop more “eco-societal” restoration projects that more directly address the difficulties in trying to balance technical practice with societal values in the conceptualization and implementation of river restoration in highly urbanized environments (Cairns 1995; Higgs 1997; Leigh 2004; Light 2004).

“Eco-societal” restorations may pose serious challenges to experts who have been taught to define restoration as the improvement in an ecological system’s form and function. Experts require a recognition and understanding not only of ecology, but also of the specific local human geography and different socio-cultural interpretations and values individuals and groups place on the location that is to be restored. For instance, by taking seriously the shared interpretations of local citizens who believe the Lower Neponset River is a place of danger, and believe that restoration means making the river a safer place so that it can be more a part of people’s everyday lives, restoration experts may find themselves involved in conversations
involving types of fencing rather than only types of native vegetation suitable for a specific riparian area. In this instance, restoration experts may also find themselves in the middle of disagreements between citizens who see the Neponset River as a place of danger and believe that there is a need for safer public access, and the citizens who see the Neponset River as a place of ecological resources and believe that there should be less public access in general. At this point, successfully negotiating between these different interpretations of the river as an object of restoration and as a sense of place becomes paramount. In the end, if handled sincerely, honestly, and openly, such public debate and dialogue among competing interpretations has the potential to encourage greater involvement in and support for river restoration activities, thus creating a broader sense of civic engagement and improvements in the quality of life for city residents. Interpretive environmental communities, as defined and analyzed in this research, and the organizations and coalitions that may represent them, can serve as a framework for incorporating local, place-based “participatory” decision-making and “eco-social” principles (Cairn 1995) into urban river restoration practices, while at the same time developing what Andrew Light has called “natural social capital” (Light 2005).

Some environmental conflicts involving Lower Neponset River restoration are so intractable, they may never be resolved. However, two specific pro-active recommendations related to this research that could assist natural resource agencies and restoration professionals understand different local interpretations, and also could guide them toward a greater appreciation for the “natural social capital” already available within local neighborhoods and towns surrounding the Lower Neponset River, include: 1) support a Neponset storytelling project that would focus on recording and archiving local citizens’ memories and current relationship with the river, and 2) support regular public forums that facilitate social interaction and dialogue among local citizens with different interpretations of the Neponset River (including citizens of different ages, races, ethnicities, homeownership characteristics, and incomes) focused on finding common ground from problem formulation to problem solving.

A storytelling project could involve citizens who live near the Lower Neponset River or have some relationship with the river, either in the past or present, and who have personal stories they would like to share about their experiences and reflections on the river and its surrounding natural and built environment. Such stories amount to accumulated local knowledge regarding the river’s social and cultural
importance and meaning. This could take written or oral form. Either format would give local citizens an official platform to share their personal and collective stories about their past and current relationships with the river.

The written format could be compiled and organized much like The Memoir Project currently underway in the City of Boston, which focuses on getting senior citizens to tell their unique stories and memories and their interpretations of changes they have seen and experienced in their neighborhoods (City of Boston 2008, 2009). And, the oral format could be designed as a series of “public conversations” that invite public officials and experts from every aspect of the Lower Neponset River’s restoration, remediation, and redevelopment (e.g., river, parks, fish and wildlife, property and land development, public health, historical landmarks, etc.). Such a public conversation about the river and all its diverse meanings through time up to the present could even contribute to an understanding of the cultural politics that pervades the river’s restoration, and which must be recognized in order to facilitate cooperative or collective problem-solving and decision-making (Hawkesworth 1988).

In addition, on-going public forums where individual citizens of different ages, races, ethnicities, homeownership characteristics, and incomes can converge to learn about and share their problems and solutions regarding the restoration of the Lower Neponset River should be organized and facilitated. Building on the results of this research and existing organizational contexts, one specific example would be to encourage the Neponset Greenway Council to focus on recruiting even more types of citizens to join the already fairly diverse Council, from teenagers to artists to religious leaders to bird watchers to fishermen to new homeowners. In some cases this could involve forming sub-groups of the larger Council. For example, one sub-group could include a “youth-only” component where teenagers would meet as a Neponset youth council on a regular basis at a place and time convenient for them during which they would make their own Council agendas, come up with what’s important to them about the Neponset and the Greenway, and then come together once every couple of months with the Neponset Greenway Council to discuss their ideas and plans. Whatever their organizational context, the purpose of such forums should not only be obtaining actionable items for the State, City, or Town related to the river’s restoration, remediation, or redevelopment, but also to incorporate the different local socio-cultural interpretations of the river as a sense of place and as an object of restoration. By explicitly recognizing, listening to, and
accounting for the different points of view surrounding the Lower Neponset River and its restoration, the goal is for public conversations and deliberations over the river’s current management and future restoration, remediation, and redevelopment to be more inclusive and accountable to all local citizens, and, in the process, find understandings that can move beyond conflict.

Finally, one of the key informants in this study, who has fought to clean up and make the river a well-managed, user-friendly landscape for the past 40 years, shared with me a sentiment during our first interview in 2005 that stuck with me throughout the course of my fieldwork in 2006-2008: people whose job description it is to protect, educate about, or do whatever they do for the Neponset River are not the right people to understand, educate, and inform the majority of the public. Instead, her belief, and perhaps wish, is that understanding of and raising awareness about the Lower Neponset River, instead of being completely implemented by “professionals,” should start and stay at the local, neighborhood level where people do it because they care about the river and the river’s place in the lives of their neighbors, not just because “they care about a paycheck.” Or, as another participant put it:

the real information, the real lay of the land comes from the mud-scratchers [river rats], not your biologists, not your people who are seeking funds, or people who are doing water quality studies, it’s the people who are experienced with what goes on in that river or any body of water, every single day, that’s where your basic information comes from.

Clearly, privileging local knowledge equally with that of outside experts should always be considered when implementing complex urban river restoration projects.

Directions for Future Research

As an exploratory project, this research not only sought to answer its research questions, but it also raised important new research questions, grounded in the everyday beliefs, values, feelings, and perceptions of local citizens living in an urban environment. These questions are beyond the scope of this project and will require further investigation. In addition, this research provides some of the ground-work

141 ID22Interview-070705
142 Ibid.
143 ID5Interview-2005
and a conceptual framework for more specific, long-term studies of the Lower Neponset River or various other urban river restoration projects.

While this study found that local citizens with similar senses of place tend to characterize what is broken about the Neponset River, although not necessarily how to fix it, in similar ways, this does not mean that this is a direct cause-and-effect relationship, or that this apparent relationship between sense of place and restoration interpretations holds true for all citizens. The type of qualitative and interpretive methodologies I used in this study do not lead themselves to establishing, or proving, a direct causal relationship between individual participants’ sense of place sentiments and their specific judgments about how the Lower Neponset River should be restored. In fact, one important caveat that must be kept in mind while interpreting and drawing conclusions from this research is the fairly uniform characteristics of the study participants and the way in which they were selected for participation. They were all primarily long-time residents with a strongly developed sense of place and an existing connection to the Neponset River. A different sample would possibly produce somewhat different results. For example, residents living in the area for a shorter period of time and without an established connection to the Neponset River are likely to have a less developed sense of place that is grounded in the current location (e.g., their sense of place may still be bound up in previous locales where they have lived).

These caveats pose important questions for further research. First, does length of residency in a particular place impact a local citizens’ judgments about restoration of that place, and, if so, how? And, second, does this apparent relationship between local citizens’ senses of place and judgments about restoration hold true in a larger, more diverse segment of the population? These are questions that could be further investigated using a longer ethnographic field study that would provide ample time for researcher-participant trust to be built, an ethnographic study with more than one researcher, or alternate sociological and social psychological data collection and analysis methods that involve sampling a larger, more diverse population that includes both new and long-time residents from a variety of socio-demographic backgrounds.

In addition, as an interpretive, exploratory project this research offers insight into how to design and operationalize a more directed social science survey instrument that would be representative of the entire population or specific subsets of the population living, working, or recreating along the Lower
Neponset. For instance, each interpretive environmental community identified in this study could be hypothesized as describing different groups within the larger population and a survey instrument and methodology could be designed to test for the occurrence of these communities within that population based on values, beliefs, attitudes, demographic characteristics, political affiliations, social networks, or other factors. In addition, the interpretive communities identified in this study and the various conclusions about their sense of place, values, beliefs, and organizational contexts could be used to operationalize or analyze “willingness to pay” economic evaluations of dam removals and to assist in the creation of agent-based models for ecological-human impact analyses and public policy assessments (Lewis et al. 2008).

One or two of the interpretive environmental communities identified and explored through this ethnographic, interpretive study could be used to design entirely different ethnographic studies that seek to further explore additional aspects of the analysis and conclusions, or even ask different questions. For instance, what appeared to be a minimal association between the “Smart” Development storyline and the Lower Neponset River’s restoration could be explored through a more specific ethnographic study that focuses on the relationship between economic and political claims-makers and how they directly or indirectly impact local citizens’ interpretations of the river and its restoration. One research question such a study could ask would be: Does the “Smart” Development storyline represent a single interpretive environmental community collectively united around one way of interpreting the river’s restoration, or an interpretive economic community of individuals united around a strategy for using a “new” public amenity (i.e., the restored and remediated Lower Neponset River) for purely economic gain?

There are also many more avenues for exploring the spatial and GIS dimensions of this project. One way would be through putting the mapping into the hands of local citizens and asking them to create cartographic representations of their interpretations of the river and its restoration. Comparing such citizen-based mapping, composed of cognitive-meaning maps of both pictures and words, to the maps generated by myself in GIS, composed of my own interpretations of interviews and participant observations, may yield a different, and more grounded cartographic representation and spatial analysis (Gould 1972; Brody 1982; Herlihy 2003). In addition, much more could be explored in GIS using the data from this project, including mapping demographic characteristics or property values and analyzing how they spatially relate to the geographic features of importance to the different interpretive environmental
communities, as well as policy hot-spot locations. A GIS could also be used to analyze the political
districting maps from the City of Boston, State of Massachusetts, or federal government to explore if, or
how, the boundaries between districts surrounding the Lower Neponset River may influence the
development of various policy statements and claims by government and political officials, or how this
districting may in turn overlap with citizen policy preferences.

The GIS from this project could also be used to help design a sampling strategy for a totally
different study that asks questions from various disciplines using a variety of methods. A behavioral
economist might use the data to create a sampling regime that asks: How much are residents in Milton
versus residents in Mattapan willing to pay to remove the Walter Baker Dam? Or, alternatively, how much
are people willing to pay to install a fishway and, thus, retain the dam? An epidemiologist may want to
select interviewees to find out rates of different types of cancer surrounding the former Lewis Chemical
Company. Another, more natural-resource and risk-assessment based research question might be: What is
the actual versus perceived risk of flooding if the Lower Neponset River’s dams are removed? This would
involve bringing into the current database digital elevation models for the area surrounding the Lower
Neponset River and assessing the flood risk with and without dams and then comparing those risk models
to local citizen’s “perceived” risks of flooding as ascertained through survey or interview data (Novotny et
al. 2001).

Underlying all of these conclusions and recommendations is my vision of a local citizenry that is
engaged and empowered to fully participate in the Lower Neponset River’s restoration, and my hope that
natural resource agencies and experts will incorporate an increased awareness of the complex historical,
psychological, economic, political, and socio-cultural context surrounding all urban river restoration
projects into their design of public participation and decision-making processes.
APPENDIX A

NEPONSET RIVER MAPS
AppenDix B

ethnographic interview guide

Oral and written consent to audio-tape and write notes will be obtained during the first meeting. A satellite map of the study area will be brought to each session for reference to specific locations mentioned during the course of the interview.

Meeting #1

Interviewer Script: The overall research goal of this project is to describe local knowledge and interpretations of the lower Neponset River and estuary and efforts to restore this environment. The purpose is to document how local people currently use, talk, think, feel, and organize themselves with regards to the river and to communicate this to managers, planners, and organizers. I will be interested in learning about what you know, who you know, and how you feel about the river and its surroundings and current efforts to restore it. This first meeting is a chance for us to get to know each other better, for you to ask questions about the project, and for you to share with me what is of most importance to you about the Neponset.

(Note: An informal conversation will be encouraged during this first meeting, using the personal history and grand tour type questions below, but letting the interviewee lead the conversation and asking probing questions when topics directly related to the river and its restoration come up. I will most keenly be listening for references to local interpretations already documented: history, recreation, economic development, ecological resources and services, and specific issue areas related to the river’s restoration such as crime, PCB contamination, and dams. This meeting may not be audio-recorded, but if possible notes will be taken during the meeting, and a complete account and impressions of the meeting will be written up immediately following.)

1. How long have you lived in the Boston area? (where? how far from river?)
2. What do you do for a living? (specific occupation? still working or retired? how long?)
3. What are your main interests in the Neponset River? (probe for narrative...sources of information about interests? participation in activities? participation alone or with others? Who? Probe for hypothesized thematic areas: history, recreation, economic development, ecological resources and services, and for hypothesized factors influencing interpretations of the river: crime, contamination, “wilderness” in the city, Charles River comparisons, etc.)
5. Any recommendations for other people interested and involved in the Neponset River that I should speak with?

Meeting #2

Interviewer Script: As we discussed in our first meeting, this project is concerned primarily with understanding in detail how people understand and relate to the lower Neponset River and estuary and its restoration. Today I’d like to ask you some questions that could help me learn more about what the Neponset means to you personally now and in the future. Part of this will involve asking questions about your experiences, knowledge, and the other people you know who are interested in the Neponset River. Please let me know at any time if my questions are unclear or if you think other information would be
helpful to my understanding.

1. How did you get involved in X organization/activity? (how long? level of involvement? who else is involved? what do you do with them? how often do you participate?)

2. What other organizations/activities related to the Neponset River and its environment are you involved in? (what does the organization do? level of involvement? who else is involved? If I were to attend an event or meeting of this organization where would it most likely be held and what would I hear and see?)

3. What do you know about any (or specifically X) plans for changes along the Neponset River and its estuary? (protections or management actions? developments?)

4. How do you know about X plans? (news media? organization publications? meetings or events? word-of-mouth?)

5. Have you been to any meetings on these plans? (where? when? organizers? who else attended? what happened?)

6. Do you recall if the term “restoration” is ever used in discussing such plans?
   If Yes-- What does the term mean to you? (probe for narrative)
   Would you describe the same thing in another way or with another word? (synonyms?)

   If No-- Were there other terms used? (redevelopment? revitalization? renewal? remediation?)

7. How do you feel about those plans? (good? bad? personally? for the neighborhoods and towns? Why do you feel this way? do you want more or less input? are local people being included in plans?)

8. Based on your experience, what are some of the barriers that may prevent X plans from happening?

9. What would you like the Neponset River and its surrounding environment to be like in the future? (probe for narrative: what would it look like? how would it be valued or used? how is this different than currently? what period of time or number of years could you envision this occurring within? How does this relate to “restoration” or synonym discussed in 6)

10. What do your friends or relatives think of your interest and involvement in the Neponset River? (are any of them involved in similar activities?)

11. Who are several other people you know who share your interests in the Neponset River and its environment? (how do you know them? would it be alright if I contacted them for this project?)

12. Are there things you feel about the river that we did not already discuss?

13. Is there anything you’d care to add or to tell me about the river and developments along it that I haven’t thought to ask you today?

Interviewer Script: I’ve certainly learned a lot today, but I also realize that you know so much more than we’ve had time to discuss. We didn’t get to talk about some of the details of things you raised and there may be more that I didn’t even ask about. If you think of other details that you think are important please contact me. I look forward to seeing you again. Thank you for your time today and all the thought you’ve put into answering my questions. Please feel free to contact me if you have any questions at all about the things we discussed today.
APPENDIX C

UNIVERSITY INFORMED CONSENT DOCUMENT

Social Science Investigation of the Lower Neponset River and Estuary

Introduction to the study: I am inviting you to be in a social science study to better understand the history and current social dynamics of the lower Neponset River and estuary. This includes documenting resident perceptions regarding the history of the river and plans for the river’s future in the vicinity of southern Boston, Milton and Quincy. I hope to use what I learn from the study to better inform urban river restoration and management in cities across New England and the United States. The results of this study will be used as part of my doctoral dissertation in the Department of Natural Resources Conservation at the University of Massachusetts, Amherst.

What will happen during the study: This study is taking place throughout the lower Neponset River watershed and involves listening and talking to residents who are involved and interested in some aspect of the river’s protection, management or development. This includes residents in Dorchester, Mattapan, Hyde Park, Milton, Quincy as well as other concerned citizens in the Boston Metro area. I will ask you to answer a series of questions about yourself, the Neponset River, and your participation in activities along or in this urban river. These questions may include where you were born, how long you’ve lived or participated in activities along the Neponset River, thoughts you have about the river, etc. Participation in the initial interview will take about an hour. It is possible that you will be contacted for a follow-up interview if there are additional questions or clarifications that come up in the course of reviewing the interview. These interviews will take place between June and September 2007, so if you agree to participate you could be contacted anytime during that period.

Who to go to with questions: If you have any questions or concerns about being in this study you should contact Simona Perry by phone at 617-830-9821 or 301-802-0904, or by email at slperry@forwild.umass.edu.

How participants’ privacy is protected: I will make every effort to protect your privacy. I will not use your name in any of the information I get from this study or in any of my published or unpublished research reports without your prior written consent. Any information I get in the study that lets me know who you are will be recorded with a code. During the study the key that tells me which code goes with your information will be kept in a password protected computer hard drive. When the study is finished I will destroy the key that can link information to you personally.

Risks and discomforts: I do not know of any personal risk or discomfort from being in this study. I do not know of any way you will personally benefit from participating in this study. The study will provide valuable knowledge that can be used in managing urban rivers and aquatic natural resources that equitably and fairly take into account both human communities and the environment.

Your rights: You should decide on your own whether or not you want to be in this study. You will not be treated any differently if you decide not to be in the study. If you do decide to be in the study, you have the right to tell me you do not want to continue with the study and stop being in the study at any time.

Review Board approval and contact information: The Institutional Review Board at the University of Massachusetts, Amherst has approved this study. If you have any concerns about your rights as a participant in this study you may contact the Human Research Protection Office via email (humansubjects@ora.umass.edu); telephone (413-545-3428); or mail (Office of Research Affairs, 108 Research Administration Building, University of Massachusetts, 70 Butterfield Terrace, Amherst, MA 01003-9242).
PLEASE READ THE FOLLOWING STATEMENT AND SIGN BELOW IF YOU AGREE

I have had the chance to read the project description provided to me and ask any questions I have about this study and my questions have been answered. I have read the information in the project description and consent information page and I agree to be in this study. There are two copies of this form. I will keep one copy and return the other to Simona L. Perry.

_____________________________________________  _______________

Signature          Date


Anon. 1667. Copy of a statement that Josiah Chickatabut appeared before the selectmen of the town of Dorchester asking that the town give him a deed for the 6000 acres of land in Punkapoag. Vol. 030: 136, Series 2043, 1667/06/14.


Belding, David L. 1920. *A report upon the alewife fisheries of Massachusetts*. Boston: Commonwealth of Massachusetts, Department of Conservation, Division of Fisheries and Game.


---. 1877a. The General Court: What its members did on the hill yesterday, April 4.


---. 1878. Page 1, April 21.


---. 1884a. Alewives, suckers, chubs: Annual report of the Inland Fish Commissioners, January 21.

---. 1884b. Home and foreign markets: Large increase in shipment of live cattle this week, September 7.

---. 1887a. Destructive elements, January 27.

---. 1887b. The Bird-Lewis case, April 30.

---. 1887c. The pollution of the Neponset River, May 7.

--- 1888. Oar and shell, July 5.
--- 1890a. Hard pressed, July 5.
--- 1890b. Prayer not granted, August 4.
--- 1891b. Shattered by Murphy, July 5.
--- 1892b. In their shells, July 5.
--- 1895. Neponset River denounced: Board of Health listens to complaints of foul odors that are said to have caused malarial fever, December 14.
--- 1899. Opening day at Readville, August 22.
--- 1903. Page 6, February 8.


Brooks, Charles. 1855. History of the town of Medford, Middlesex County, Massachusetts from its settlement, in 1630, to the present time, 1855. Boston: James M. Usher.


---. 2009. *My legacy is simply this: Charlestown, Chinatown, East Boston, Mattapan*. Boston: Grub Street, Inc.


Danforth, Nina. 2003. River recovery: how wild species can be the catalyst for activism.  


DCR (Massachusetts Department of Conservation and Recreation). 2006. Neponset River master plan phase II.  
http://www.mass.gov/dcr/pe/neponset.htm


DeCosta, Benjamin Franklin, Arthur Barlowe, and Jean Alfonce. 1880. *Verrazano the explorer: Being a vindication of his letter and voyage, with an examination of the map of Hieronimo da Verrazano. And a dissertation upon the globe of Vlpius.* A.S. Barnes & Company.


---. 1997b. News from the watershed. *Massachusetts Riverways Newsletter* (Spring), 12-17


Feldman, Lawrence. n/d. MGL Chapter 21E and the MCP: Dealing with hazardous waste sites in a privatized system. GZA GeoEnvironmental, Inc.


Fish, Stanley E. 1980. Is there a text in this class? The authority of interpretive communities. Harvard University Press.


Leigh, P. 2004. The ecological challenge, the human condition, and community restoration as an instrument for the cure. Save America’s Estuaries Conference. Seattle, WA.


Massachusetts Environmental Protection Act. Section 301 CMR 11.00 and 12.00.


221


Norfolk County Gazette. 1875. September 4.

---. 1890. July 5-12.

---. 1894. September 22.


Secretary of the Commonwealth. 1915. Special acts and resolves passed by the General Court of Massachusetts in the year 1915. Boston: Wright & Potter Printing Co.


