Constructing Identity: the role of the watershed organization in bringing meaning to the watershed

A thesis

submitted by

Sarah L. Reich

In partial fulfillment of the degree requirements for the degree of

Master of Arts

in

Urban and Environmental Policy and Planning

TUFTS UNIVERSITY

May 2006

Advisor: Dr. Julian Agyeman
Reader: Robert Russell, J.D.
ABSTRACT

Watershed identity is an elusive concept that is used to describe people's attachment to and sense of a particular kind of place—namely, a watershed. Watershed identity draws together ideas developed in a wide range of disciplines from psychology to human geography. A limited though growing body of research indicates that these ideas—place attachment, sense of place, and by extension, watershed identity—are useful conceptions that may help to explain people's awareness of a watershed and their willingness to change personal behaviors to promote a watershed's environmental integrity. Complex environmental problems exacerbated by human development are impacting watersheds throughout the United States. Watersheds and their advocates—watershed organizations—can benefit from this increased awareness in a variety of ways; when citizens understand and feel a special connection to a place, they may be better positioned to act in ways that improve that place, through volunteering, voting, or simply making more informed choices in their day-to-day lives. In this thesis, a theoretical framework drawn from research into people-place connections is presented to define watershed identity. Four theoretical propositions are introduced to describe the watershed organization’s roles in the development of watershed identity. Two case studies of watershed organizations in the greater Boston area are analyzed to test these propositions. The analysis indicates that watershed organizations play several important roles in constructing and mediating watershed identity, including defining the watershed’s physical space, constructing and communicating the watershed’s symbolic identity, fostering opportunities for individuals to develop functional relationships with the watershed, and connecting individuals who care about the watershed together under common purpose.
ACKNOWLEDGEMENTS

I would like to thank the many people who influenced this thesis, and who supported me through the last two years as I worked towards the completion of this Master’s degree. This thesis would not have materialized without the generous and patient support of my advisor, Dr. Julian Agyeman, who together with Dale Bryan, provided the initial adventures in thought that put a name to a shadowy yet important concept and helped me formulate the present conceptualization of watershed identity. Julian provided me with the essential encouragement to press on when it seemed too bewildering an undertaking to turn vague and whimsical ideas into theoretical frameworks for academic research. I’d also like to acknowledge my fellow student, Chelsea Bardot, who served as an invaluable sounding board as we both worked to puzzle through various aspects of watershed identity. My appreciation also goes to my reader, Rusty Russell, who provided a fresh perspective to this project, as well as several essential contacts, and unwavering support throughout the entire process.

Thanks to the Tufts Institute of the Environment, for generously funding this research, and my fellow students in the Urban and Environmental Policy and Planning Department and the Water: Systems, Science, and Society program, for providing valuable feedback, advice, and commiseration when deadlines loomed.

Finally, I would like to thank my family: my mom and dad and my mother and father in-law for always knowing just when I needed extra encouragement, and for helping me keep things in perspective; my brother for his support as we toiled through the thesis process together; and especially my husband, for being willing to read drafts at midnight, accompany me on rush trips to the library at all hours of the day and night, and mostly, for just being there.
# TABLE OF CONTENTS

- **ABSTRACT** ........................................................................................................................................... II
- **ACKNOWLEDGEMENTS** .......................................................................................................................... III
- **TABLE OF CONTENTS** ............................................................................................................................... IV
- **LIST OF TABLES & FIGURES** ................................................................................................................... VI
- **PREFACE** ................................................................................................................................................... 1
- **INTRODUCTION** ......................................................................................................................................... 3
- **CHAPTER ONE** .......................................................................................................................................... 9
  - **BUILDING A CONCEPTUAL FRAMEWORK FOR WATERSHED IDENTITY** ............................................. 9
    - Defining Watershed Identity ....................................................................................................................... 10
    - The Watershed As Space and Place ........................................................................................................... 11
    - Conceptual Formations of People-Place Connections ............................................................................... 18
    - Who creates watershed identity? .............................................................................................................. 22
    - How does watershed identity develop? ..................................................................................................... 23
      - Place Dependence ................................................................................................................................ 24
      - Place Identity ....................................................................................................................................... 25
      - Collective Identity ................................................................................................................................ 27
- **CHAPTER TWO** .......................................................................................................................................... 29
  - **THE RESEARCH QUESTION AND CASE STUDY RESEARCH DESIGN** ................................................. 29
    - The Research Question and Theoretical Propositions ............................................................................ 29
    - The Case Study Research Design ............................................................................................................. 34
- **CHAPTER THREE** ....................................................................................................................................... 39
  - **CASE STUDY I: THE MYSTIC RIVER WATERSHED ASSOCIATION** ..................................................... 39
    - Landscape of the Mystic River Watershed ................................................................................................... 40
# LIST OF TABLES & FIGURES

**FIGURE 1-1,** Diagram of place as the intersection of social and biophysical forces....................17

**FIGURE 2-1,** Processes influencing the formation of watershed identity ..................................31

**FIGURE 3-1,** Map of the Mystic River Watershed ........................................................................40

**TABLE 3-1,** MyRWA Activities Contributing to Place Definition (P1) ........................................51

**FIGURE 3-3,** Ground Map at the Medford Boat Club on Upper Mystic Lake ..............................54

**TABLE 3-2,** MyRWA Activities Contributing to Place Dependence (P3) .................................55

**TABLE 3-3,** Symbolic Identities (P2) of the MRW identified by the interview subjects ..........59

**TABLE 3-4,** MyRWA Activities Contributing to Collective Identity (P4) ..............................61

**FIGURE 4-1,** Map of the Charles River Watershed ...................................................................65

**TABLE 4-1,** CRWA Activities Contributing to Place Definition (P1) ........................................71

**FIGURE 4-2,** “Run of the River” section in *The Streamer* .......................................................72

**FIGURE 4-3,** A blue or “Safe” Flag from the CRWA’s Flagging Program ...............................75

**TABLE 4-2,** Symbolic Identities (P2) of the CRW identified by the interview subjects ..........76

**TABLE 4-3,** CRWA Activities Contributing to Place Dependence (P3) .................................78

**TABLE 4-4,** CRWA Activities Contributing to Collective Identity (P4) .................................79
PREFACE

This thesis is the culmination of almost a year and a half of discourse, research, thinking, and rethinking, about the wide array of ideas implied by and contained within the phrase “watershed identity.” I was a relative latecomer to this discourse; when I was invited into the conversation, my advisor and others had already begun exploring this enigmatic phrase and its potential applications in the surrounding community. Upon encountering the phrase for the first time, watershed identity immediately resonated with me.

I came to my present undertaking, a master’s degree in Urban and Environmental Policy and Planning, from a background in geography and environmental management. Upon encountering the idea of watershed identity for the first time, I was captivated by its potential; the concept seemed to hold within it an opportunity to capture the essence of a place (a favorite focus of geography) and harness the curiosity that can be built around place to create positive environmental change (a noble goal of modern environmental management). The prospect of exploring watershed identity in more detail excited both aspects of my previous experience, as well as a long-held respect for literature that speaks to the importance of place in life (Aldo Leopold, Wallace Stegner, and Wendell Berry are among the authors who contributed to my early fascination with place). Through this thesis, I set out to pin down the vague concept of watershed identity within an academic framework and explore how watershed organizations may tap into this concept to further their work.

When I came to Tufts University to complete my master’s degree, I planned to direct my studies towards local water resource management. Tufts has offered an amazing array of resources and expertise to this end, as well as a practical forum through
which to begin exploring the ideas driving local water resources management—the Mystic Watershed Collaborative. The Mystic Watershed Collaborative is a group of Tufts faculty, students, and community members who are directing their energies into improving the Mystic River and its watershed. Watershed collaboration—and particularly active citizen engagement in watershed management—is a relatively young subject in academic spheres. Inquiries into various aspects of this phenomenon bring together many disciplines, including geography, engineering, political science, and sociology. The interdisciplinary nature of this topic, and its creative potential to engage people in the world around them, are both exciting to me. It is my hope that the ideas explored within this thesis will feed into the work of the Mystic Watershed Collaborative and the many other watershed partnerships throughout the nation focusing great amounts of energy on improving our water resources.
INTRODUCTION

The concept of “watershed identity” has not been explicitly developed in the academic literature. However, theories of sense of place, place attachment, and place identity are well established across a wide range of disciplines from geography to sociology (Low and Altman 1992), and provide a strong position from which to derive a definition for “watershed identity.” The goal of this thesis is to present a working definition of and conceptual framework for watershed identity drawing on these preexisting threads, and to articulate a role for watershed organizations in the construction, interpretation, and communication of watershed identity to the citizens of a watershed. The usefulness of such an undertaking is manifold.

Over the last fifty years, this nation has focused a significant amount of effort on cleansing and rehabilitating our water resources (Murchison 2005). Regulatory activities like those initiated by the Clean Water Act have contributed to a dramatic improvement in the quality of many streams and rivers (Andreen 2004). However, the greatest challenges in water management still remain: controlling non-point source pollution, confronting growing demand for water supplies, and balancing complicated human and ecological conflicts over limited water resources (Andreen 2004).

In recognizing that solutions to these problems will not come solely from regulatory action, collaborative watershed management is a movement of growing significance across the country (Sabatier, Focht, Lubell, et al. 2005). However, watershed-based management is not a new idea. John Wesley Powell—a celebrated explorer-geographer-bureaucrat of the nineteenth century—is widely credited with bringing watershed science to America’s academic and political communities (de Buys
and Powell 2004; Hutchinson 2000; Smith 1995; Stegner 1954; Worster 2003). In his years of observation of the nature and mechanics of water in the western United States, Powell developed a keen understanding of the significance of this basic ecological unit. He described the watershed as

…that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community. (United States. Environmental Protection Agency 2005)

This eloquent definition articulates not only the geophysical connections of a watershed, but also weaves in life—people and other living things—building a strong foundation in one short sentence for a place-based approach to water management that acknowledges the intrinsic interrelatedness of human and natural systems.

Over the last two decades, watershed planning collaborations have proliferated on state, local, and grass-roots levels, involving a variety of arrangements between public and private entities (Lavigne 2004). Watershed associations, councils, and community organizations rallied around local watersheds from Oregon to Massachusetts, shaping a “new approach” to support ecological health and water quality improvements (Born and Genskow 2001; Brady 1996; Doppelt, Scurlock, Frissell, et al. 1993; Lavigne 2004). The innovative distinction of today’s watershed management movement lies in its emphasis on integrated, multi-objective planning goals, and multi-stakeholder collaboration (Born and Genskow 2001; Sabatier, Focht, Lubell, et al. 2005).

However, not all collaborative watershed planning efforts enjoy equal success. Although failures are not well documented, there is a sense that some collaborative efforts achieve limited results due to lack of participation and community engagement (Born and Genskow 2001; White 2000). Moreover, some kinds of water resource
problems, like non-point source pollution control, overburdened aquifers leading to river draw-down, and loss of watershed infiltration capacity leading to more frequent flooding, may benefit from widespread community cooperation in carrying out effective solutions (Born and Genskow 1999; Born and Genskow 2001; Sabatier, Focht, Lubell, et al. 2005). Watershed collaborations are typically led by local governments and interest groups directly engaged in developing strategies to address specific local problems. For these partnerships to enjoy widespread success, the engagement of the broader community is critical (Lubell 2004).

In a recent report, the Environmental Protection Agency (EPA) addressed the importance of community engagement and local culture in environmental protection efforts. The report, entitled “Community, Culture, and the Environment,” (United States. Environmental Protection Agency. Office of Water 2002) recognizes the necessity of broad community engagement in the success of environmental problem solving: “the belief that holistic, place-based environmental protection efforts will lead to more effective long-term protection is the basis of community-based environmental protection and watershed protection approaches” (p. 2). In further describing the role of community culture in environmental management the report emphasizes that “[c]ommunity cultural assessment can provide insight into the complexity of community life, an essential element in developing carefully crafted…environmental protection strategies that meet the needs of the community” (p. 12). Thus, the EPA and communities across the country are beginning to understand that in order to affect change and maximize the benefits of any collaborative watershed management strategy, an informed and responsive community is a useful precondition.
Although many stakeholders are involved in watershed collaborations, watershed organizations serve as the primary ambassadors of the watershed itself. They accomplish their work with the financial and volunteer support of the public—especially the citizens of the watershed. As the sole advocacy organization conforming to the natural boundaries of the watershed and not to more traditional political boundaries, the watershed organization has the potential to play a significant role in shaping the identity of the watershed. Thus, the larger question that is at the heart of this thesis rests here. What roles may watershed organizations play to nurture the formation of a particular watershed identity among citizens of a watershed?

Chapter one of this thesis builds a conceptual framework around the term “watershed identity” from the diverse threads of scholarship on a broad set of theories related to “people-place connection” and the emerging academic recognition of this concept’s importance in natural resource policy. “People-place connection” is a descriptive term, which is used here to thematically encapsulate a rapidly growing field of ideas that seek to understand and strategically leverage the relationship that humans innately form with their environment. The literature encompasses a wide range of environments in exploring these ideas, but the applications related to environments dominated by natural features are of most interest and usefulness in this thesis. However, the scholarship delving into people-place connection as a driving concept for studying the social dynamics of natural resource management is still in its infancy; thus, a more inclusive analysis of the research to date is not only informative, but essential.

It is no coincidence that the study of place has unfurled rapidly over the last two decades, and with particular enthusiasm for elucidating the connections that communities
and individuals form with natural landscapes. Although still in its infancy, research
designed to investigate these connections has acquired a new respect in research circles
as collaborative environmental management, and “place-based collaborative planning”
approaches in particular, are receiving increased attention from policy makers,
community leaders, and citizens (Adler 1995; Cheng, Kruger and Daniels 2003; Lavigne
2004; Wondolleck and Yaffee 2000). Similar to collaborative environmental
management, place-based collaborations address environmental issues by involving a
broad spectrum of citizen stakeholders and experts in cooperative problem solving.
Place-based management goes one step further, transcending political boundaries to focus
on ecological boundaries that more appropriately recognize the unique qualities of the
natural resource and its surrounding community. This approach presents researchers and
community leaders with a perfect opportunity to apply the findings of place scholarship
in new and practical ways.

Chapter two builds on the conceptual framework introduced in chapter one,
proposing that watershed organizations may be involved in the development of an
individual’s conception of watershed identity. Four theoretical propositions for the
watershed organization’s role in this process are introduced. These theoretical
propositions are tested by two case studies, reported in chapter three and chapter four.
Chapter two concludes by describing the methodology used to identify and analyze these
case studies.

Finally, chapter five this thesis concludes with a discussion of the results of the
case studies. This chapter identifies challenges and possible criticisms of watershed
identity, and highlights common themes that emerge from the case study analysis. It concludes with a few recommendations for further research related to watershed identity.
CHAPTER ONE

Building a Conceptual Framework for Watershed Identity

Before turning attention to the central focus of this thesis—examining the roles that the watershed organization may play in constructing and mediating a conception of watershed identity among citizens of a watershed—this chapter addresses a more basic set of questions regarding the definition and the theoretical underpinnings of watershed identity itself.

Watershed identity is derived from a broad field of study that relates to how people connect with place. It is a rich and expressive landscape of scholarship that intertwines a wide range of disciplines. Important influences have arisen from architecture and literature, but the primary theories of people-place connections were formed and are still forming through the work of environmental psychologists and human and cultural geographers. After defining watershed identity and providing a more basic introduction to the concept of place itself, this chapter provides an overview of the geographical and psychological foundations of the study of people-place connections. Recently, scholars from fields related to natural resource policy and management have taken an interest in the geographical and psychological theories of people-place connections, adapting and interpreting them to explore important aspects of natural resource and environmental management that have long been ignored. For example, researchers have studied residents’ sense of place to help guide management decisions in the Lake Superior Basin (Cantrill 1998); they have measured place attachment to map the strength of opposition to a dam in Norway (Vorkinn and Riese 2001); and they have
surveyed volunteers’ sense of place to uncover why they commit to volunteering for watershed organizations (Gooch 2003).

As government policies have shifted to emphasize collaborative planning approaches to solving ecosystem-scale environmental problems, these scholars suggest there are critical reasons why managers should attempt to incorporate into their planning processes people’s affective relationship with the resources they manage:

One of the great and largely unmet challenges associated with ecosystem management is treating people as a rightful part of ecosystems. In many ecosystem models, despite occasional rhetoric to the contrary, there is still a tendency to treat people as autonomous individual agents outside of the ecosystem, at best a source of values to be incorporated into decisions, at worst agents of catastrophic disturbance of an otherwise smoothly running system. (Williams and Stewart 1998, p. 18)

The study of people-place connections in a natural resource policy context, while still in its infancy (Cheng, Kruger and Daniels 2003), seeks to understand how people form bonds with places embedded in natural settings. It is these budding discussions that provide the most fruitful ground to look for a conceptual framework for watershed identity; after describing the early foundations for people-place connections, this chapter will turn to these more specific discussions to assemble this conceptual framework.

**Defining Watershed Identity**

Watershed identity is a deceivingly simple phrase that is packed with a surprising array of meanings and dimensions. It is not original to this thesis, although to my knowledge it has not been formally introduced in the academic literature. It is a descriptive phrase that finds occasional use among practitioners in watershed management and water resource advocacy. It is most often evoked to describe an elusive character, consciously
recognized in some watersheds, which captures the imagination of the average citizen and inspires action on behalf of the environment. Its exact definition in these circumstances is as loose and intangible as the conditions it describes, but so long as one has a basic understanding of a watershed, understanding identity is an obvious extrapolation from common concepts embedded in everyday life, like self-identity, identity politics, and identification—to know or to recognize. In general, intuition adequately serves as a guide for many of us to conjure up a pretty good definition for watershed identity.

However, watershed identity isn’t as simple a concept as it initially appears. Begin to unpack it and you necessarily encounter questions without obvious answers. Consider the following. As used in this thesis, the phrase “watershed identity” describes an assemblage of characteristics ranging from tangible to intangible that can be uniquely identified with a particular hydrological landscape unit, known as a watershed. The existence of a watershed identity implies that the watershed itself has been recognized, and that an affective relationship with the watershed is present, reflecting a particular set of feelings, preferences, and values towards its characteristics. But whose feelings, preferences, and values? Who creates watershed identity? Where does watershed identity come from? Does a watershed have just one identity? How does watershed identity develop? This chapter will revisit these questions, as a conceptual framework around watershed identity is assembled.

The Watershed As Space and Place

The broader field of study exploring people-place connections has expanded in many directions over the last thirty years, but it originates from a pointed academic interest in
the meaning of place. Until recently, discourses on place, space, and landscape, have been the exclusive domain of geographers. Beginning in the late 1970s, the meaning of place was taken up by environmental psychologists and sociologists. Today, the study of place informs fields as wide-ranging as architecture, urban planning, anthropology, and psychology. Ideas that explore the importance of place are manifest in terms like “sense of place,” “place attachment,” and “place identity,” with each bearing a slightly different emphasis, but all attempting to elucidate the relationship that occurs as humans occupy, transform, and interpret space. As this thesis is focused on a particular kind of people-place connection—namely watershed identity, exploring the watershed within the context of place is an important beginning point.

A watershed—the topographically circumscribed area of landscape that contributes water, by seep, drip, and flow, into a particular stream, river, lake, or ocean—is a distinct, although often ill-defined space with significant functional meaning for environmental health. As a space, a watershed may also be transformed into a place—a “physical setting imbued with meaning as a result of human action and interaction” (Cheng and Daniels 2003, p. 842; Low and Altman 1992, p. 5). The distinction between space and place, explored at length by geographers, is an informative underpinning for this thesis: the process of creating a watershed identity is the process of constructing place from space, or reconstructing a new conception of place from a preexisting place.

We all understand the words “space” and “place” on an intuitive level, having experienced both intimately as we go about life from day to day. We occupy space, sitting in a chair or driving on the highway. We share and defend, quest to understand, and seek to make our own, the places in our lives—our homes, town squares, offices, and
corner parks. Space is about volume and geometry, while place is invested with meaning—the details, folds, and corners in our lives that we know or want to know better (Crang 1998; Cresswell 2004). Yi-Fu Tuan, an early and distinguished scholar of the relationship between people, space, and place, emphasized the interrelatedness of the concepts in our lives.

What begins as undifferentiated space becomes place as we get to know it better and endow it with value … The ideas ‘space’ and ‘place’ require each other for definition … Furthermore, if we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place. (1977, p. 6)

Many similarly eloquent words have been dedicated to defining place and expressing its varied and evolving purpose in our lives. The overwhelming commonality among these definitions is meaning—to understand a particular place, one must seek out the specific meanings that define it. Meaning can be understood in a variety of ways. Daniel Williams and Michael Patterson (1999), in a detailed discussion of the meaning of place in ecosystem management, use Fournier’s (1991) framework for structuring place meanings. This framework identifies three characteristics of meaning that can be attached to objects or places: tangibility, commonality, and emotionality. These three characteristics suggest dimensions along which a particular place meaning will fall.

Tangibility refers to a spectrum that ranges from primarily objective and “verifiable through the senses” to subjective and “interpreted through experience and association” (Fournier 1991, p. 738). The more objective a meaning, the more it tends to be inherent with the place, while subjective meanings tend to be bestowed on a place by individual, social, and cultural actors. In the watershed-as-place context, the tangibility characteristic describes a watershed’s objective meanings, which might draw from its
ecological functions like providing habitat for fish, while subjective meanings might include the opportunities the watershed affords to escape the city and connect with nature.

The second dimension of place meaning described by Fournier is commonality. Commonality describes the degree to which place meanings are individualized versus shared (Fournier 1991). A watershed has the potential to offer many shared meanings as it is generally an expansive place with many shared public areas, and serves many functional purposes that meet societal needs. For example, a watershed that provides public drinking water has a meaning that is widely shared among citizens who drink the water and care about its purity. Meanings with less commonality are typically ascribed to specific places within the watershed experienced in a significant way by an individual or small group. A family’s enjoyment of a Sunday canoe paddle, or an individual’s quiet meditation over a fog-filled river valley after a hike might inspire very private and unique meanings of the watershed, not shared by a community as a whole.

Finally, emotionality is the characteristic that addresses the strength and enduring quality of meaning. This characteristic is usually highly individualized and can vary in magnitude from fleeting enjoyment and amazement to deeply rooted passion and an enduring sense of guardianship (Williams and Patterson 1999). Watersheds inspire the entire range of emotionality, from the new resident who has just noticed the murky river, with its trash-strewn banks, flowing a few blocks from his apartment, to the runner who appreciates the shaded and cool jogging path along a stream, to the lifelong resident who has intimately explored a watershed from its headwaters to its mouth and dedicates her personal time to advocating for its long-term health. As suggested by these examples,
emotionality can be heavily influenced by the duration and quality of one’s experience with a place or object. According to Williams and Patterson (1999, p. 143), “emotionality is the most variable and individualized aspect of meaning and consequently a focal point for natural-resource conflict.”

Most authors agree, at least in part, that places—physical locales manifest by meaning—are social constructions (Cheng, Kruger and Daniels 2003; Greider and Garkovich 1994; Tuan 1977; Williams and Patterson 1996). As Greider and Garkovich (1994, p. 1) illustrate, “[e]very river is more than just one river.” Individuals and communities can look at the same resource and see different features, envision different purposes, and ascribe to it very different meanings. When these visions conflict, the resulting tensions lie at the heart of natural resource policy.

The degree to which social construction processes influence place meanings, however, is disputed. To what extent do physical features shape the way places are understood? According to Greider and Garkovich (1994, p. 2), although humans reside in a natural world, “this world is meaningless. Meanings are not inherent in the nature of things.” But some scholars criticize this myopic emphasis on social construction. Stedman (2003) firmly rejects Greider and Garkovich’s argument, suggesting that meanings attributed to place are “at least partially based on some material reality” (p. 673). To underscore his point, Stedman asks rhetorically if we’re “really likely to attribute ‘wilderness’ meanings to a suburban shopping mall?” (p. 673). The answer is plainly, “probably not” and in reality, with few exceptions, scholars recognize that the physical features of a place do influence the meanings ascribed to it (Cheng, Kruger and Daniels 2003; Eisenhauer, Krannich and Blahna 2000; Williams and Patterson 1996).
The more relevant question, to which I’m not sure any definite answer can be found, is to what degree social processes and meanings are important, versus natural features, in shaping place. A view that puts a heavy influence on social and cultural factors can be labeled “social constructionist” while a view that argues natural features dominate place formation is often termed “biologically deterministic.” Stedman emphasizes that he is not advocating determinism (2003, p. 673) but instead a more balanced view of place that appropriately recognizes the contributions of both physical features and socially constructed meaning.

The discipline of human geography, and more recently cultural geography, offers a representation of place that recognizes a role for both natural and social elements in shaping place. The frequently referenced illustrative diagram that depicts this relationship (Figure 1-1) has been attributed to a variety of scholars, but was ultimately refined by geographer Robert Sack (1992) as the “Relational Geographic Framework” (Williams and Patterson 1996). It portrays place as the locus of three forces: social and political processes, social and cultural meanings, and biophysical attributes and processes (Cheng, Kruger and Daniels 2003, p. 90). Without making a judgment of the value or significance of any one force, this depiction emphasizes that each force provides a specific type of information that is processed and integrated in the “meaning-making system” that is the human mind (Williams and Patterson 1999) to create an idea of place. From this point, the understanding of place can be shared and reinforced through social and cultural processes, and can also evolve as the physical elements change; the understanding of place, as the intersection of multiple meaning-influencing forces, is foremost an iterative process.
In summary, amid esoteric academic dissections of place, it can be difficult to remember that we are grounded in them every day. Places make us who we are—they shape our personal and community identities and reciprocally, we shape them. A watershed is a unique species of place. Every speck of ground on earth is contained within one, and yet, their exact shapes and boundaries can be difficult to define. Other, more clearly defined places contained within a watershed often can obscure its distinction, but as its significance in natural resource management is elevated, the watershed becomes a more readily recognizable place in its own right. In this position, it
necessarily becomes the subject of significant political processes, and as Cheng et al. point out, “natural resource politics is, at a fundamental level, the politics of place” (2003, p. 99). Meaning transforms a watershed from a scientifically delineated space, to a place; some of this meaning is new-found as the watershed emerges from the background, and some of it meaning is redirected and repurposed as individuals and communities recognize the watershed was there—a part of life—all along.

**Conceptual Formations of People-Place Connections**

As previously described, the disciplines that contribute perspectives to the field of people-place connections are varied. The terms that are used to describe these connections are equally numerous. As an academic interest, phenomenological scholars first framed people’s experience with place in the 1950s (Low and Altman 1992). Discipline-specific theories of people-place connections were developed over the ensuing decades in geography, psychology, sociology, planning, and architecture, but the subject inherently lends itself to an interdisciplinary approach—place is fundamental to human experience. However, few comprehensive interdisciplinary summaries of people-place connections exist. According to Bruce Janz¹, “Despite the vast amounts of work on place…there has been, until recently, little conversation across disciplinary boundaries about the concept of place….It is as if place has to be discovered anew in each discipline that uses it” (Janz 2005). This may explain why so many different concepts have been constructed to describe essentially the same phenomena.

¹ Bruce Janz, an assistant professor of humanities at the University of Central Florida, maintains an impressive interdisciplinary bibliography of space and place research, available at http://pegasus.cc.ucf.edu/~janzb/place/
In this limited arena, Low and Altman, scholars with backgrounds in the fields of psychology and anthropology, provide one of the best interdisciplinary overviews of people-place connections available in their introductory chapter, “Place Attachment: a conceptual inquiry,” to their edited volume *Place Attachment* (Altman and Low 1992). With at least four decades of research to draw from, *Place Attachment* presents an overview of people-place connections that transcends academic specialty, borrowing concepts from architecture, anthropology, psychology, sociology, planning and geography. The authors use the term “place attachment” to encompass Tuan’s “topophilia,” Proshansky’s “place identity,” Rowles’ “insidedness,” Hufford’s “genres of place,” as well as more widely used phrases including “sense of place,” “rootedness,” “environmental embeddedness,” and “community identity.” They embark on this wide review with the hope that their analysis provides connectivity across the broad fields of study exploring people-place connections.

Low and Altman (1992) begin by outlining three principles that define their conception of place attachment. First, place attachment is fundamentally an integrating concept, making it difficult to study because it does not have individual parts that can be isolated and researched independently. Second, place attachment has varied and complex origins. Finally, place attachment contributes to self-definition and integrity at multiple levels of society, from the single individual to cultural groups. With these assumptions in hand, they go on to identify several important features of place attachment.

The term they have chosen to represent the wider field of related ideas—place attachment—betrays the two most important constituents of the concept. The phrase place attachment can be deconstructed into a wide variety of meanings, providing
flexibility and usefulness in many applications. For instance, “place” refers to environmental settings to which people can recognize and become attached to, and should include the breadth of possible scales—from the universe on down. Place may also be found along more nuanced continuums—from location to object, and tangible to intangible. “Attachment” may similarly be understood broadly. The word “attachment” immediately evokes “feelings,” but the authors emphasize that interplay exists between raw emotion and deliberate cognition; thus attachment should be understood as an amalgam of affect, emotion, knowledge, belief, behavior, and action.

The other features of place attachment that Low and Altman describe help to pin down this elusive concept. First, they discuss the social actor involved in place attachment, highlighting that individuals experience place attachment, but families and communities may also collectively share attachment to places. Second, they underscore that while place attachment may describe the relationship between a person and the environmental setting itself, the process of attachment to place may also incorporate the social relationships related to that place. “Places are,” they write, “repositories and contexts within which interpersonal, community, and cultural relationships occur, and it is to those social relationships, not just to place…which people are attached” (1992, p. 7). Finally, the authors posit that time influences place attachment. Places can reside in the past, the present, or the future; all places change over time, as do all people, suggesting that the nature of place attachment exists as a flow, transforming in nature as its critical actors (people and place) are shaped and reshaped through time.

Low and Altman conclude their synthesis of the literature by exploring the question of how place attachment develops. Scholars have suggested four processes that
influence how place attachments are formed: biological, environmental, psychological, and sociocultural. The biological and environmental explanations emphasize people’s adaptation to their environment as a critical factor in the development of place attachment. Some of the explanations in this vein are aligned closely with environmental determinism, while others simply recognize that the surrounding environment is inevitably incorporated into culture, thereby serving as the major defining factor of place attachment. The psychological and sociocultural processes are most often cited in the literature as major developmental processes. These emphasize individual experiences with place during particular phases of life (childhood, adulthood, significant life changes), and also acknowledge the impact of social norms and ideologies in defining places. While each of these processes can be viewed as singularly shaping the people-place bond, some authors emphasize their interrelatedness; Low and Altman concur with this view, but caution that little research has been done to examine exactly how these process together influence the development of place attachment.

Low and Altman’s overview of place attachment identifies, in broad strokes, the major principles and processes that are critical to the concept of place attachment, and by extension, many of the parallel concepts that have been introduced in other fields of study. Returning to the concept of watershed identity, by understanding it as a particular kind of place attachment, some answers to the questions posed at the beginning of this chapter start to emerge. In light of the preceding discussion, two questions are especially provocative: “Who creates watershed identity?” and “How does watershed identity develop?”
Who creates watershed identity?

Let’s begin with the first question: who creates watershed identity? According to Low and Altman, “many scholars focus on the attachment of individuals to places” (1992, p. 6). They also note that several authors have examined collective attachments, which may include families, neighborhoods, communities, and larger societies: “there are a variety of collective group or cultural place attachments that may transcend the unique experiences of individuals” (p. 6).

Not surprisingly, the discipline of environmental psychology has tended to favor the individual in its investigation of people-place connections. In one of the foundational pieces of research in this vein, Proshansky, Fabian, and Kaminoff (1983) focus on the individual, as they conceptualize the formation of place-identity as a sub-process in the formation of self-identity. Proshansky et al. define place-identity as the set of cognitions related to one’s physical world, including memories, ideas, feelings, attitudes, values, preferences, meanings and conceptions of behavior and experience (p. 59).

Although the authors’ formulation of place-identity is primarily drawn from psychological principles that emphasize the process of personal construction, they also acknowledge an important role for society and groups in defining place-identity. As an individual experiences a place, forming memories, feelings, and interpretations based on their unique personality, background, and place in time, their conception of place-identity is simultaneously being influenced by cultural and group definitions of the place, based on social norms, behaviors, rules, and regulations that dictate appropriate uses and interpretations of the place (pp. 63-64).
Thus, while society and culture play an important role in influencing the way an individual views a particular place, the exact shape and texture that defines a place is uniquely constructed and understood by each individual. There will be as many constructions of watershed identity as there are individuals who know a particular watershed. All of these identities will share common themes because they are similarly influenced by the same landscape of geophysical features, cultural and historical meanings, and societal norms that define the appropriate uses and values of the watershed. There will be significant variation, too, attributable to the individual’s unique personal experiences with the watershed, and the degree to which the individual agrees with the prevailing societal definition and interpretation of the watershed.

Therefore, for the purposes of this thesis, it is the individual’s conception of watershed identity that is most relevant. It is important to note, however, that the research question at hand operates on two levels: the watershed organization itself holds a watershed identity that represents a group attachment, which may influence the individual’s watershed identity in specific ways.

**How does watershed identity develop?**

Recognizing that it is the individual’s conception of watershed identity that we are primarily interested in, we arrive at the second question: how does watershed identity develop? As outlined above, Low and Altman (1992) suggest four different processes that may be influential in the formation of place attachment: biological, environmental, psychological, and socio-cultural. In exploring how people assign meaning to natural landscapes, Williams and Patterson (1999) explore four approaches: inherent/aesthetic, instrumental/goal-directed, cultural/symbolic, and individual/expressive. The
intrinsic/aesthetic and instrumental/goal-directed categories involve the resource’s capacity to satisfy tangible needs and interests of an individual. These approaches roughly correspond to Low and Altman’s biological and environmental processes. The other two approaches, cultural/symbolic and individual/expressive, involve more intangible aspects of place meaning, including both shared and individualized aspects of symbolism and place definition, and align more closely with the psychological and sociocultural processes postulated by Low and Altman.

While these explanations are highly detailed mechanisms and serve as useful dimensions for environmental psychologists, many researchers employ a simplified framework, which recognizes two primary mechanisms for explaining the development of place attachment: place identity, and place dependence (Clark and Stein 2003; Jorgensen and Stedman 2001; Williams and Vaske 2003). To some degree, these mirror the processes identified by Low and Altman (1992) and Williams and Patterson (1999), subsuming the more tangible characteristics of place attachment in place dependence, and the more intangible characteristics in place identity.

**Place Dependence**

Place dependence describes the ability of a place to meet the needs, goals, and interests of an individual (Stokols and Shumaker 1981). Two factors are important in shaping place dependence. It is strengthened when the characteristics of a particular place are well suited to meet the individual’s specific needs or desires. It is also strengthened when a particular place compares favorably over other potential places in quality and location (Shumaker and Taylor 1983). The ability to judge a place is based on an ongoing relationship with that place, and past experience with other places. Place dependence is
also influenced by the kind of activity an individual wishes to pursue (Stokols and Shumaker 1981); general activities like walking and biking can be enjoyed in a variety of locations, while more specific activities like wildlife observation and river rafting may only be satisfied by a few specific places.

Consider the following examples. An individual may develop a watershed identity based in part on his enjoyment of a canoe launch near his home and the diverse wildlife he sees while paddling. Place dependence also influences the watershed identity of an individual who uses a bike path that, while not the most pleasant ride she could hope for, begins nearby her home and takes her all the way to the city center along the river. In the first instance, the place both adequately and conveniently meets the individual’s needs, while in the second instance, a higher-quality place may have been available, but the one chosen was convenient and served a specific purpose for the individual that other places did not offer.

**Place Identity**

Where place dependence is a functional attachment, place identity is based on emotion. It aligns closely, although is not synonymous with, Proshansky, Fabian, and Kaminoff’s (1983) articulation of place-identity as the culmination of the emotional and symbolic meanings assigned to a place by an individual (Clark and Stein 2003). Place identity is different from place dependence in many ways, but perhaps the most important distinction is that an individual can develop place identity without ever needing or using the place in a functional way (Clark and Stein 2003; Proshansky, Fabian and Kaminoff 1983). Most often, however, place identity is developing alongside place dependence, and is the direct result of a prolonged relationship with a place (Giuliani and Feldman...
1993). As a component of one’s self-identity, place identity encapsulates many emotional possibilities—from giving meaning and purpose to life, to enhancing self-esteem, to symbolizing important relationships, to strengthening one’s sense of belonging. Cantrill (1998) suggests that a related concept, “the environmental self” figures heavily in environmental communication and discourse (Williams and Vaske 2003).

Place identity is a difficult concept to readily identify, perhaps because it is so intensely personal and largely invisible; however, researchers have suggested that the emotionality and persistence of many environmental disputes may be traced to the power of place identity (Cheng, Kruger and Daniels 2003). A threat to place-identity (as a component of self-identity) has the potential to undermine and individual’s self-construction (Proshansky, Fabian and Kaminoff 1983). Place identity has many manifestations in watershed identity. Place identity might take the form of an emotional bond to a particular pond or path within the watershed. It might also manifest itself in a more abstract sense, symbolizing ecological wholeness, or the cyclical nature of life in its water cycle. A watershed used as a source of drinking water may elicit a place identity associated with health and purity, while a watershed with its mainstem and tributary rivers dammed to facilitate barge traffic may be seen as the heartbeat of a regional economy. A watershed landscape of industrial development, plumbed with rivers of sewage may symbolize progress in a working economy; it may also symbolize injustice and hopelessness.

To summarize, place attachment, and by extension watershed identity, is conferred on a particular watershed by an individual in two ways: through their direct
experience with it as a need and interest satisfying place, and through their symbolic understanding of it and emotional connection to it, as it contributes to their conception of self-identity.

**Collective Identity**

One final aspect of watershed identity is not addressed by the framework provided by place attachment, but may be important to the understanding of watershed identity: that of collective identity. Where place attachment arises from psychological and geographical scholarship, collective identity is borrowed from sociology and political science. The significance of collective identity emerges in Cheng, Kruger, and Daniels’s (2003) observation about the relationship between places and groups:

> That places inspire collective action is a central theme in the place literature. Individuals who organize around place based collective action essentially seek to impose a social order by assigning certain shared meanings and expectations of appropriate behaviors to a place. In turn, the place-based meanings and expectations of behavior are expressions of the group’s self-identification—a place-based social group identity. (pp. 93-94)

The central research question of this thesis focuses on how the watershed organization influences an individual’s construction of watershed identity. Thus, it is important to understand the extent to which a constructed collective identity can shape an individual’s conception of watershed identity.

A watershed organization is typically the only organization or one of just a handful of organizations that form their identity around the watershed itself. They operate as the ambassador of the place, working for its recognition and influencing its future in a way no other organization can claim to do. Like many similar place-based “friends” organizations, the individuals who are instrumental in managing and doing the
work of watershed organizations usually share similar experiences with the watershed and goals that influence how it is used and cared for (Cheng, Kruger and Daniels 2003). These common meanings and values manifest themselves in a collective identity.

By interacting with members of the political communities within the watershed’s boundaries, the watershed organization’s staff, volunteers, and members attempt to project a collective identity that individuals not already involved with the watershed organization may come to associate with the watershed itself. The identity of the watershed and the collective identity of the watershed organization have the potential to become intertwined, allowing the watershed organization’s definition of social norms that dictate appropriate treatment of the watershed to become the dominant paradigm understood by an individual (Cheng, Kruger and Daniels 2003; Proshansky, Fabian and Kaminoff 1983). This contact may inspire the individual to join the watershed organization and become part of the collective group identity in fact, but the individual may also be content to share this collective identity only in spirit. Either way, uniting with other individuals—who often harbor diverse interests and backgrounds—under common purpose, with the watershed as the central focus, contributes to and reinforces and individual’s personal construction of watershed identity.
CHAPTER TWO

The Research Question and Case Study Research Design

Building on the theoretical framework discussed in the previous chapter, this chapter presents the central research question and describes the methodology used to investigate that question. The first section of this chapter presents a diagrammatic model, which is used illustrate how a watershed organization may influence the development of watershed identity and to place the watershed organization within the broader context of place attachment formation. Following this discussion, the research design is described. Although several researchers have attempted to develop reliable quantitative metrics to study people-place connections (Jorgensen and Stedman 2001; Williams and Vaske 2003), most researchers working in this field gravitate towards qualitative methods (Cheng, Kruger and Daniels 2003). Likewise, the research method employed here is a qualitative case study approach, which draws from interviews and documented sources of information to test four theoretical propositions that arise from the research question.

The Research Question and Theoretical Propositions

The central research question is informed by theories of place and place attachment scholarship, and is set within the context of natural resource management policy. Many research efforts that fold the principles of place attachment into natural resource management strategies approach this task from one direction: they examine various dimensions of the individual’s experience and relationship with place. For example, many research efforts seek to reveal and categorize particular elements of an individual’s attachment to place (Cantrill 1998; Jorgensen and Stedman 2001; Vorkinn and Riese
2001). Other studies attempt to uncover the kinds of connections that exist between people or groups and specific places, and the factors that influence those connections (Brandenburg and Carroll 1995; Eisenhauer, Krannich and Blahna 2000). All of these endeavors ultimately seek to measure and describe individual perceptions in order to enlighten traditional resource management practices and to better inform agency actions and collaborative management strategies (Eisenhauer, Krannich and Blahna 2000; Williams and Stewart 1998).

Based on the theoretical framework outlined in chapter one, this thesis approaches identity formation from a different angle, focusing on organizations engaged in natural resource stewardship activities, and their ability to influence the character and strength of an individual’s attachment to a particular place. While this kind of focus has broad applicability to organizations involved in all kinds of natural resource management and place-based stewardship, this thesis focuses exclusively on watershed organizations. Thus, the primary question guiding of this thesis is

**RQ:** What roles may watershed organizations play in the construction and mediation of watershed identity?

Figure 2-1 provides some context for this question. The diagram suggests a theoretical process by which a watershed organization may contribute to an individual’s formation of watershed identity. Importantly, it acknowledges that watershed identity can form in the absence of a watershed organization, and likely continues to develop independent of the activities of the watershed organization. The right side of the diagram represents this ongoing negotiation of place attachment, which can be understood through the dual dimensions of place identity and place dependence (as described in chapter one).
The left side of the diagram is the focus of the research question. It depicts a second process that operates in tandem with the first, but places the watershed organization in an intermediary position between the watershed and the individual. In this depiction, the watershed organization plays a central role in helping the individual form a conception of watershed identity by interpreting the constituent influences of place—biophysical attributes and processes, social and cultural meanings, and social and political processes—and conveying these through specific mechanisms to influence the individual’s perception and understanding of the watershed. By virtue of its position as
an intermediary, the watershed organization has the opportunity to carefully craft its desired version of watershed identity, infusing it with tones that have the potential to inspire particular (potentially useful) emotions and behaviors among individuals. Along these lines, the model acknowledges that in addition to inherent elements of a watershed, the watershed organization may elect to incorporate elements of a future vision into the watershed identity they wish to nurture among citizens of a watershed.

In Figure 2-1, the arrow between the “watershed organization” box on the left and the “individual” oval on the right outlines the theoretical mechanisms, through which the watershed organization may influence the development of and individual’s conception of watershed identity. These mechanisms, derived from the theoretical framework presented in the preceding chapter, can be reframed as roles the watershed organization plays in the construction and mediation of watershed identity, leading to four theoretical propositions that will guide further investigation of the research question.

The first theoretical proposition deals directly with the issue of place definition, because without a delineated place, it can be difficult for an individual to develop a place attachment. Although a watershed is an important place with significant meaning for geographers, environmental scientists, and the occasional recreational naturalist, it is no secret that a “watershed” is not a pedestrian concept. Even if one happens to be familiar with the term generally, the natural boundaries of a specific watershed are rarely obvious on the landscape. This is especially true in flat topographies where the watershed’s boundaries may be ambiguous to even a drop of water. Identifying a watershed is clearly not as simple as locating a town square by crossing the streets that bound it, knowing a park by its neat and finite patch of green grass, or finding a town by passing signs that
welcome one in. Defining a watershed as a place with importance to the average citizen requires special attention, and this task is usually left to the watershed organization. Therefore, the first theoretical proposition is:

**P1:** The watershed organization identifies and clarifies the boundaries and features of the watershed (place definition).

If the relatively limited body of research into the factors that describe and contribute to the development of place attachment reveal any one consistent finding, it is that the process is highly complex. Generalizations are difficult to make due to variability among both people and places; each relationship between a particular individual and a particular place is just that—particular and unique. Moreover, place attachment develops largely on a subconscious level (Proshansky, Fabian and Kaminoff 1983), and represents the culmination of a series of experiences and impressions that are constantly influenced by overarching and evolving social, cultural, and personal factors. Despite these challenges, both descriptive and quantitative research approaches have consistently validated two dimensions of place attachment: place identity, and place dependence (Williams and Vaske 2003). These two dimensions, which operate on the right side of the diagram in Figure 2-1, also operate on the left side of the diagram, and suggest the next two theoretical propositions:

**P2:** The watershed organization defines and communicates the symbolic identity(ies) of the watershed (place identity).

**P3:** The watershed organization fosters opportunities for individuals to physically connect with the watershed (place dependence).

The final theoretical proposition emerges when one considers that the watershed organization is inherently a place-based organization that represents the interests of the
watershed. Therefore, in a sense, the distinction between the watershed (as a place) and the watershed organization (as an entity) becomes blurred; individuals may begin to associate the place itself with the collection of people who work on its behalf, and the watershed identity becomes not just the identity of the place, but also the identity of the group or the collective. Cheng et al. term this intermingling of place identity and group identity “place-based social group identity.” (2003, p. 94) In elaborating on this phrase, they quote geographer Byron Miller, who wrote, “Individuals who come to share domains of particular places must necessarily confront the meanings of such interactions… Individuals may come to see commonalities in their experience. They may come to consider themselves members of a community and view themselves in collective terms” (Miller 1992, p. 32, as quoted in Cheng, Kruger, and Daniels, 2003, p. 94). When an individual comes to know the watershed in which he or she lives through the watershed organization, the identity of the place may be significantly shaped by the group’s shared meanings and expectations of appropriate uses of a place (Cheng, Kruger and Daniels 2003; Proshansky, Fabian and Kaminoff 1983; Samuelson, Peterson and Putnam 2003). Therefore, the final theoretical proposition is:

**P4:** The watershed organization connects individuals from a common place under common purpose (collective identity).

**The Case Study Research Design**

According to Yin (2003), case study research design is the preferred method of inquiry when a researcher is attempting to elucidate answers to “how” or “why” questions surrounding contemporary phenomena over which the researcher has little control and to which context is fundamentally important. The focus of this thesis clearly conforms to
these criteria: the research question seeks to reveal how (or if) watershed organizations play a role in the formation of watershed identity; the watershed movement in natural resource management represents an important contemporary phenomena with a youthful sense of its own history; and finally, as Cheng et al. (2003) note, studying people-place connections in general is not “amenable to replicable measurement, quantification, and generalization” (p. 90), requiring the researcher to study these relationships and processes empirically through direct observation and interpretation. Moreover, context is key; as Cheng et al. observe, “people-place connections are properties that cannot be readily discerned independently of the places from which they emerge…[requiring] the researcher to experience the places and processes as stakeholders…do” (pp. 99-100).

Guided by the theoretical framework presented in chapter one, and in the preceding section of the present chapter, two cases were investigated in this study. The unit of analysis used as the focus of each case is the watershed organization. Three selection criteria were used to identify two watershed organizations, each the focus of its own case study analysis:

1) That the watershed organization is the dominant stewardship organization within the particular watershed.

2) That the watershed organization plays a role in the management activities of the watershed and has a presence in the greater community.

3) That the two cases must differ along other variables (for example, membership base, access to financial resources, organizational structure, organizational history, etc.) in order to present potentially interesting points of contrast.
These criteria led to the selection of two watershed organizations in the Boston area: the Mystic River Watershed Association (MyRWA), and the Charles River Watershed Association (CRWA). Both watershed organizations meet the first two criteria, and present characteristics based on the variables suggested in the third criteria that differ by orders of magnitude. These include membership (CRWA: 5,000; MyRWA: 600), access to financial resources (CRWA’s Budget: $1,000,000; MyRWA’s Budget: $100,000), and organization structure (CRWA staff members: 12; MyRWA staff members: 3). That these two organizations are associated with watersheds that spread over a significant percent of the geographical area of the greater Boston area (Charles River Watershed: 308 square miles, incorporating 35 communities; Mystic River Watershed: 78 square miles, incorporating 21 communities) is not coincidental; the commonalities shared by virtue of their geographical proximity may present additional useful points of comparison.

Two primary sources of information were used to gather data for the case study analyses: interviews and various types of documentation. The documentation consulted for each case includes contemporary information available on each organization’s website, and archival information: newsletters and reports released by the organization over the period 2003-2006. This time period was established in order to limit the scope of inquiry, while still capturing the comprehensive range of the organization’s activities to contribute to the analysis. Newspaper articles about the organizations and their activities were also consulted, and they were likewise limited to the period 2003-2006. The information collected from these sources contributed to the descriptive background for the cases, and was also analyzed in relation to the four theoretical propositions.
The second major source of information was provided by interviews. Interviews were conducted in person over a period of a month with staff members, board members, and volunteers who had significant knowledge of the watershed organization’s activities. Five interviews were sought for each case, but due to time constraints and lack of response from potential interview candidates, three to four interviews were actually conducted for each case.

The first interview for each case was conducted with a staff member in a significant leadership role in the organization (in each case, the executive director was contacted, but was not necessarily available to be interviewed). A snowball technique was then followed where that individual was asked to recommend 4-5 other potential candidates to be interviewed, consisting of additional staff members, board members, or dedicated volunteers\(^2\). These individuals were then contacted by phone or e-mail (if necessary, several times), and those who responded to the interview request were interviewed. Each interview lasted approximately one hour and consisted of the same set of 12 questions (with minor modifications depending on the role of the interviewee within the organization). These questions are presented in Appendix I. The names of the interviewees and the dates, times, and locations of each interview are presented in Appendix II. The interview responses were then triangulated against contemporary and archival data and analyzed in relation to the four theoretical propositions.

\(^2\) Although many of the recommended individuals happened to be involved in the organization’s outreach activities, this can be attributed to the fact that the person recommending the potential interview candidates was already familiar with the topic of the project; besides having a close relationship with the organization and having knowledge of its activities, no other specific criteria were suggested in the request for additional interview subjects.
Finally, in the category of “a picture is worth a thousand words,” one additional source of information was gathered; however, its purpose is supportive rather than primary. During the course of each interview, interviewees discussed specific activities and projects that the watershed organization has been engaged in. If possible, site visits were conducted and pictures were taken. They are included with each case, to better illustrate the project or activity and its relationship to the theoretical propositions and the research question.
CHAPTER THREE

Case Study I: The Mystic River Watershed Association

The Mystic River Watershed (MRW) is the quintessential urban watershed in the twenty-first century. Located north of Boston, it is densely settled, hard working, and yet hardly noticed by most of its inhabitants. It has experienced waves of productive industry and hardscrabble survival, leaving it poisoned and neglected from its headwaters to its yawning transition into inner Boston Harbor. But, like many other urban watersheds, it is caught up in the shifting priorities and values of the communities within it; as industrial-oriented economic activities have moved away, residential and commercial developments are moving in. To the people drawn by this new development, the long-ignored river and its banks could be an invaluable asset in their day-to-day lives. For those who have long crossed the rivers and streams and seen only garbage, or paid no attention except when floodwaters filled their basements, early improvements in the watershed are beginning to capture attention.

These improvements are thanks in large part to the work of the Mystic River Watershed Association (MyRWA), which has insisted that state and federal regulators give the Mystic River a chance when they might have otherwise settled for minimal restoration. MyRWA serves many leadership roles in the watershed, not the least of which is related to raising the profile of the MRW in the consciousness of its home communities. The problems in the MRW are complicated, and a long road lays ahead of those working for its ecological improvement, but at least one thing is already crystal clear: this watershed is full of opportunity.
Landscape of the Mystic River Watershed

The Mystic River Watershed spreads northward from Boston, covering 76 square miles of industrial, urban, and suburban development (see map, Figure 3-1). The watershed is flat; remnant of the glacial forces that scraped and potholed much of the surrounding region 10,000 years ago. Unlike many watersheds that drain by neat arrangements of tributaries converging into one main channel that flows more or less directly into a larger river or the sea, the MRW is a landscape of meandering streams, channelized creeks, and truncated rivers, punctuated by both connected and visually isolated lakes and ponds.

Figure 3-1, Map of the Mystic River Watershed

Source: (Mystic River Watershed Association 2006b)
Its namesake tributary, the Mystic River, flows through only the lower half of the watershed. In its downstream reaches, as it opens into the harbor, it is broad, tidal, and unrecognizable to most people as a river. Several substantial tributaries dissect the lower watershed, but they disappear abruptly beneath development. A century of culverting has visually amputated tributary after tributary, whittling once-branching streams to stubs. The Malden, Island End, and Chelsea Rivers are, to one degree or another, all examples of this common practice. These lower reaches of the watershed hum with the activity of a working port. A power plant, a liquefied natural gas terminal, a steel recycling operation, road salt piles, docks, rusty bridges, and other vestiges of the area’s industrial economy dominate the landscape of the lower watershed.

The Aberjona River and its tributaries snake through the upper reaches of the watershed. This River has a notorious reputation all of its own, owing to the book and later the movie *A Civil Action*, which centered on the deadly pollution in this part of the watershed. The features of the upper watershed are separated from the lower watershed by the Mystic Lakes; the Aberjona flows in from the north and the Mystic River flows out to the South. Just below Lower Mystic Lake, Alewife Brook, a channelized creek known for its sewage and flooding problems, joins the Mystic River as it flows silently through the City of Medford and on to the Harbor.

Forty-four lakes and ponds are scattered across the watershed, but the largest are concentrated in its central reaches. The most visible of these are the aforementioned Upper and Lower Mystic Lakes, the ponds of the Middlesex Fells Reservation—Spot Pond, and three drinking water reservoirs—and towards the north, Horn Pond. Finally, at
the southwestern edge of the watershed is Fresh Pond, which serves as the drinking water reservoir for the City of Cambridge.

Although the MRW is visually dominated by human development, many of its water features are surrounded by parkland. Adjacent to some of the ponds, streams, and rivers are large tracts of parkland owned by the Massachusetts Department of Conservation and Recreation (DCR). Although suffering from years of disrepair, these parks offer shady grassy areas to recreate and relax, as well as paths, picnic tables, and in many places, access to the water. Towns and private organizations also own land that contributes to the watershed’s publicly accessible recreation and open space, including Horn Pond Conservation Area, and the Great Meadow in the Town of Lexington.

The Mystic River Watershed has long supported industrial activities. By the 1840s, shipbuilding was a booming industry on the Mystic River, with 10 shipyards scattered along its length from Medford to the Harbor. Capitalizing on the system’s tidal currents, tide mills, used to grind grain, saw wood, and process many other products, were built on the shores of the rivers and streams below Lower Mystic Lake. As Medford’s shipbuilding industry waned in the mid-1800s, other industries began to thrive. During the nineteenth century, leather tanning operations and chemical factories were built throughout the watershed, but were particularly concentrated in its upper reaches, along the Aberjona River. These activities released tons of harmful chemicals and heavy metals into the waterways, and by 1898, the contamination required communities to abandon the Mystic Lakes as a source of drinking water. In the early 1900s, modifications to the rivers and streams were well underway to control tidal and seasonal flooding. In the 1950s and 1960s, the construction of the Amelia Earhart Dam
and I-93 dramatically impacted the Mystic River; many of its remaining adjacent wetlands were filled and the once-tidal reaches of the river, from the Dam to the Lower Mystic Lake, were entirely converted to freshwater environments.

There is no question that human development has had a tremendous impact on the watershed, from its headwaters to Boston Harbor. Today, the MRW encompasses less than one-percent of Massachusetts’ land area, but holds eight-percent of its population. More than 500,000 people live in the MRW, in twenty-one separate communities. The MRW is dense, and it is also diverse: according to 2000 Census figures, the Median Household Incomes of its twenty-one communities range from $30,161 to $96,825; five of its communities are home to substantial percentages of non-white residents, as well as immigrant and non-English speaking populations.

The MRW’s toxic environmental history and continuing environmental threats are combined and brought into startling focus in a report by Daniel Faber and Eric Krieg (2005). Looking at the exposure rates to many different kinds of environmental hazards, and aligning these exposures with economic statistics and racial and ethnic compositions for each town, they developed a vivid documentation of environmental justice in Massachusetts. According to their research, ten of the twenty most environmentally overburdened communities in Massachusetts in 2005 are located in the Mystic River Watershed.

3 A more detailed analysis of the demographic characteristics of the MRW can be found in MyRWA’s 2005 Action Plan, available from http://www.mysticriver.org/publications.
4 These communities are Chelsea (3), Charlestown (4), East Boston (5), Cambridge (6), Everett (7), Somerville (8), Watertown (12), Malden (13), Woburn (18), and Medford (19).
The Mystic River Watershed Association

MyRWA’s mission is “to protect and restore clean water and related natural resources in the basin's communities and to promote responsible stewardship of our natural resources through educational initiatives” (Mystic River Watershed Association 2006c). Their overarching goal is to make the Mystic River fishable and swimmable by the year 2010.

MyRWA has a relatively long history, compared with other watershed organizations throughout the country. It was established and incorporated as a non-profit in 1970 to restore the environment throughout the Mystic River Watershed. Its organizational structure has taken several distinct forms over the years, but its most recent incarnation as a staffed non-profit serving as an umbrella organization for many smaller environmental advocacy groups in the MRW began in 1999-2000. Prior to that, it was largely volunteer-driven, working on an issue-by-issue basis.

The MRW is notable in the overwhelming numbers of nonprofit advocacy groups dedicated to particular resources within the watershed. Every major pond, stream, and reservation has its “friends.” Today, MyRWA is the only organization in the MRW operating under a watershed-wide perspective. However, MyRWA has made a significant part of its mission to serve as an umbrella organization, connecting—but not directing—the energy and efforts of these individual organizations. According to MyRWA, “This collaborative approach has created a stronger watershed voice and is helping to attract much-needed public and private resources to the Mystic” (Mystic River Watershed Association 2006c).

MyRWA is membership-based organization staffed by a full-time executive director, and its work is guided by a Board of Directors. In addition to the Executive
Director, MyRWA’s programs are currently guided by two project-based staff members: director of the Mystic Monitoring Network, and director of Community Programs. Until 2005, MyRWA also had a director of Stewardship and Outreach, but that position was eliminated in the spring of 2005 due to budget cuts (Mystic River Watershed Association 2005).

MyRWA’s Board of Directors has a total membership of twenty, including both individuals and representatives of place- and resource-specific advocacy organizations within the watershed, which are considered partner or “sister” organizations with MyRWA. Those with representation on the board in 2005 include the Mystic View Task Force, Friends of Winter Pond, Coalition for Alewife, Friends of Middlesex Fells, Charlestown Waterfront Coalition, and the Alewife/Mystic River Advocates.

Finally, and perhaps most importantly, MyRWA is a membership-based organization, with approximately 600 dues-paying members. Members are also closely involved in supporting the activities of the organization, from coordinating and staffing the Herring Run, MyRWA’s primary annual community event, to conducting monthly water quality monitoring at sites throughout the watershed.

**Watershed Identity in the Mystic River Watershed**

Preliminary accounts prior to this research anecdotally suggested that the Mystic River Watershed’s identity is not well defined. It was partly this pretext that made the Mystic River Watershed an intriguing subject of a case study for the present research. Although this research was not designed to evaluate the strength or character of the watershed identity itself, briefly discussing these anecdotal accounts are useful to illustrate the context within which the watershed association does its work.
The subjects interviewed for this study overwhelmingly (yet still anecdotally) validated the preceding presumption—that the Mystic River Watershed does not have a well-defined watershed identity. When asked if it had an existing watershed identity, Nancy Hammett, MyRWA’s executive Director, replied, “No. Parts of it do, but collectively not. I think it’s quite invisible.” John Reinhardt, a member of MyRWA’s Board of Directors said, “it’s pretty unknown,” and Amy Singler, a MyRWA volunteer, summed up her thoughts when she said, “I don’t think many people connect with the watershed.”

State and federal classifications and naming conventions may have helped to obfuscate the Mystic River Watershed’s own identity over the years. At both state and federal levels, the Mystic River Watershed’s regulatory designation is subservient to larger watershed management units. At the state level, the Massachusetts Department of Environmental Quality (2006) and the Massachusetts Executive Office of Environmental Affairs (2005c) classify the MRW as a sub watershed of the Boston Harbor Watershed, which is made up of two disconnected parcels of land located north and south of the Charles River Watershed that drain a combined area of 293 square miles into Boston Harbor (Commonwealth of Massachusetts. Executive Office of Environmental Affairs 2005a). At the federal level, the Environmental Protection Agency’s “Surf Your Watershed” website (United States. Environmental Protection Agency 2006b) lumps most of Eastern Massachusetts into the Charles River Watershed. Although these classifications may not accurately reflect how each agency relates to the watershed on a practical level, they are the public representations that a resident of the MRW will find when they go online to seek out information about their home watershed.
Other factors that may contribute to the MRW’s perceived low public profile may be related to its physical visibility, or, as Nancy Hammett alluded to, its lack thereof. The watershed is topographically unremarkable—unlike some watersheds, which are as clear as the continental divide itself, the MRW’s natural boundaries are imperceptible. Its mainstem namesake tributary is present only in the lower third of the watershed, while many of its other tributaries are stunted and inaccessible before disappearing into culverts beneath present day development.

There are many other sources of anecdotal evidence contributing to the sense that the MRW does not have a strong watershed identity—the watershed’s foreboding industrial landscape, the fact that many towns have built up with their back to the river—but identifying and evaluating the saliency of these myriad factors should be left for the subject of further research.

Although the interview subjects agreed that the present identity of the MRW is largely undefined, they pointed to many characteristics of the watershed that make it ripe for emerging as a valuable community asset. It may be invisible now, but it is also a watershed in transition.

**Evaluating the Theoretical Propositions**

MyRWA engages in an impressive array of activities for an organization of its size and limited resources. Because few people seem to know much about the Mystic River Watershed, many of these activities place MyRWA in a position to play a pivotal role in the initial formation of an individual’s conception of the Mystic River Watershed’s identity. The following pages examine MyRWA’s work through the lens of the theoretical propositions presented in the preceding chapter.
Throughout the course of the interviews conducted for this case study, one of MyRWA’s activities emerged in the discussion again and again. It became apparent that this single event helps to validate all four of the theoretical propositions, neatly illustrating the range of MyRWA’s roles in the construction and mediation of watershed identity. This event is the annual Herring Run, which MyRWA has co-sponsored for at least the last three years (Mystic River Watershed Association 2006c), although the event will enjoy its tenth anniversary this year (Mystic River Watershed Association 2006d).

The Herring Run is named for the Blueback and Alewife Herring, which spawn in the upper reaches of the Mystic River and Alewife Brook. It is timed to correspond with their upstream migration from the ocean, which occurs every year when the water in the river reaches a certain temperature, usually in April or May (Phelps 2004). The event is a community celebration of the fish’s return, and has traditionally centered around a 5K road race and a festival. In recent years, canoe and kayak races have been added to the program. The activity is centered at the Blessing of the Bay Boathouse on the Mystic River, but the road race takes runners on a tour of the paths that snake alongside the River and through its parkways; boat racers traverse three miles of the Mystic River. At the Blessing of the Bay Boathouse, community organizations set up tables to advertise their causes. Other tables offer activities for kids and adults alike to explore various facets of the Mystic River Watershed. For example, in 2005, MyRWA organized a table where kids could make “mystical, magical fish” (Mystic River Watershed Association 2006d).

How does this event contribute to MyRWA’s ability to mediate watershed identity? This event provides an opportune venue to educate community members in the fundamentals of a watershed, addressing the role described in P1. During the event at the
Blessing of the Bay Boathouse, MyRWA’s staff and member volunteers are armed with maps, eager to help visitors locate their house within the watershed. Volunteers embrace this face time with people, helping them identify the features of the watershed—starting with the Mystic River just a few feet away. According to Janey Tallarida, “Any time there’s an event in a community, it’s an opportunity to educate people.” Nancy Hammett highlighted community events as an important chance for MyRWA’s members to educate people about the boundaries and features of the Mystic River Watershed:

Primarily in anything we do, we introduce the concept of the watershed first…. We have maps and we try and draw people’s attention to where the boundaries are at events if people come up to the table….A lot of it is pointing to the map and making connections. The discussion is about what drains to what and what drains to what. A lot of it is introducing things with “here they are, and here you are, and you might want to go see them.”

The contribution that the Herring Run makes to MyRWA’s communication of the watershed’s symbolic identity (P2) is tremendous. The name “Herring Run” is a fabulous double entendre, which describes the event and brings attention to an ecological miracle that would otherwise proceed unnoticed by most people. The migration of the herring holds great potential to animate MyRWA’s mission to protect and restore clean water in the MRW, by connecting people to the underlying ecological benefits that the watershed provides; its environmental quality is vital to the survival of the alewife and blueback herring. John Reinhardt emphasized the symbolic power that the herring migration holds: “[the herring migration] is an exciting visual and emotional event that people can grasp easily. Once you see it, it just takes you away….It’s transforming.”

Perhaps the clearest purpose of the Herring Run is identified by Mark Jacobson, manager of Charles River Canoe & Kayak. Mark has helped to organize the canoe and
kayak races during the event, and emphasizes that they “help remind people what a great recreational resource the river is today and even greater potential it offers in the future.” (Mystic River Watershed Association 2006d). In organizing the Herring Run each year, MyRWA provides an opportunity for people to get out on the river, thus playing a clear role in the formation of place dependence (P3).

The Herring Run provides individuals with a safe and structured introduction to the recreational opportunities that the watershed provides. For example, the 5k road race introduces individuals to the paths that line the river. Many individuals may never have discovered these paths on their own. Likewise, launching a canoe into the Mystic River may never have occurred to people, who might canoe regularly at the region’s wildlife refuges or other more traditionally “natural” locations. Upon seeing what the MRW has to offer, some people may decide its recreation opportunities are closer, more interesting, or better quality experiences than their usual recreation spots, while others may decide to take up walking, running, or canoeing on their own for the first time because of their experiences during the Herring Run. Amy Singler underscores MyRWA’s role in the development of place dependence. Events like the Herring run, she says, help people living in the MRW “understand the recreational potential of where they live...so that...urbanites that own canoes that they take up to New Hampshire...just put the canoe in the water where they are.”

Finally, the Herring Run gives MyRWA an opening to connect community members with its own goals and vision for the watershed, and with other community members already working to realize those goals (P4). The booths set up at the Blessing of the Bay Boathouse during the Herring Run offer ample opportunities for community
members to volunteer or become members of MyRWA (as well as the other partnering organizations in the community). The energy and activities during the event illustrate the connections between people, the watershed’s ecological assets, and the importance of one’s own actions in the restoration of the watershed environment. As Nancy Hammett emphasizes, “the purpose of engaging someone in a local issue is to make them an advocate—to get someone excited about their piece.”

The Herring Run is an activity with great potential to address the development of watershed identity from many different directions, in a highly controlled situation. MyRWA clearly embraces the task during this event. While the Herring Run contributes to the development of watershed identity in an exceptionally integrated, creative, and unusual way, MyRWA engages in many other activities throughout the year that also contribute to the development of watershed identity.

**Table 3-1, MyRWA Activities Contributing to Place Definition (P1)**

<table>
<thead>
<tr>
<th>Speaker Series</th>
<th>Maps at outreach events</th>
<th>Newsletter &amp; Reports</th>
<th>Personal Engagement*</th>
<th>Website</th>
<th>Education in Schools</th>
<th>Newspaper Articles</th>
<th>Watershed Models</th>
<th>Ground Map</th>
<th>Presentations at events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Hammett</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>John Reinhardt</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janey Talarida</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Amy Singler</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

*Help people locate where they live in relation to the watershed, etc.

**Bold** indicates that 3 or more interview subjects mentioned the item.

The interview subjects identified many ways that MyRWA helps to define the watershed for people living within its boundaries. **Table 3-1** illustrates their responses.
This kind of basic education is an important goal for MyRWA, as John Reinhardt notes: “Our objective is really captured by having everyone know their watershed address.” Many of these strategies involved exactly the strategies employed during the Herring Run—face to face education and engagement at all sorts of community events. Janey Tallarida stresses the importance of personal contact in this kind of education: “It’s through outreach events, through our own events, and any time we do a walk or a canoe trip, we’ll have materials on hand that will get people to understand how it all works.” Amy Singler echoed this when she said, “folks don’t know the connections, so maps in that context [during events and activities] are great.” To this end, MyRWA partnered with the National Parks Service to produce a very popular map, which is used and distributed at many of MyRWA’s activities (Figure 3-2). “People love those green maps. They wanted more! It’s very pretty and it’s an easy way to see how things connect in the watershed,” said Amy Singler.
In addition to face-to-face education and maps and brochures distributed during events, MyRWA has partnered with an artist to commission a dramatic ground map of the watershed (Figure 3-3). The map was created in 2001 by artist Anna Shapiro\(^5\), and painted to scale in two locations: Dever Park in Chelsea, and at the Medford Boat Club at

\(^5\) Anna Shapiro has been commissioned by other organizations, including the Somerville Art Council, to paint similar maps of the Mystic River Watershed in other locations. The full collection of works in this ongoing public art project, entitled “You Are Here” can be viewed on her website: [http://artbyannashapiro.com/map_page.html](http://artbyannashapiro.com/map_page.html) (Shapiro Undated).
Upper Mystic Lake in Medford. Janey Tallarida described how she has used the map to familiarize people with the watershed, and their place in it:

The map in the parking lot of the Medford Boat Club is a really cool thing and it’s really helpful. After spending the day touring the watershed, I’ve brought people up there to show them the map so that they can see where they’ve been, and so they can see how it all ties in.

**Figure 3-3, Ground Map at the Medford Boat Club on Upper Mystic Lake**

Source: (Mystic River Watershed Association 2001; Shapiro Undated)

The other activity that the interview subjects overwhelmingly noted as a way MyRWA helps people understand the definition of the watershed is their speaker series. Throughout the year, and especially during the winter months, MyRWA sponsors and co-sponsors with other organizations, talks and lectures on subjects ranging from the history of the MRW, to the wildlife you might see on the Mystic River, to more basic subjects
like “Watershed 101: Getting to Know the Mystic.” While many talks on a particular subject begin with a definition of the watershed and encourage people to think about where they live within it, they also elaborate on particular features of the watershed. The “Watershed 101” talk focuses specifically on educating people about the concept of a watershed and describing its range of assets and challenges (Mystic River Watershed Association 2006e).

Providing opportunities for people to get to know the watershed directly, influencing the development of place dependence (P3), is prolifically accomplished by MyRWA, especially during the summer season when the waterways are especially inviting. Table 3-2 depicts the interview subjects’ suggestions of activities that contribute to MyRWA’s role in P3.

Table 3-2, MyRWA Activities Contributing to Place Dependence (P3)

<table>
<thead>
<tr>
<th>Herring Run</th>
<th>Sponsored Walks</th>
<th>Co-Sponsored Events</th>
<th>Canoe Trips (Fingerling Fling)</th>
<th>Kayak Instruction</th>
<th>Publicizing Events</th>
<th>Bird Walks</th>
<th>Clean-Ups</th>
<th>Speaker Series</th>
<th>Monitoring Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Hammett</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Reinhardt</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janey Tallarida</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Amy Singler</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**Bold** indicates that 3 or more interview subjects mentioned the item.

While the Herring Run has already been described in the context of how it fosters place dependence, MyRWA hosts a twin event in the fall that also gets people out on the water, and helps to complete the herring story. The Fingerling Fling canoe trip is timed
to coincide with the fall migration downstream, as the young fingerlings and the surviving adult herring make their way back to the ocean. This event is just one canoe trip in a series, which MyRWA advertises as its “Mystic Meanders.” In addition to the canoe trips, kayak instruction and a subsequent paddle have been offered. These canoe and kayak adventures are led by volunteers who regularly paddle the river themselves, and are eager to share their knowledge of the river and its banks.

Walks are another significant part of MyRWA’s spring, summer, and fall programming. According to Janey Tallarida, “the Mystic does have great…running paths along a huge part of the lakes and the river, but they’re not used [as much as they could be]. That’s part of the goal of the run and the walks that we do.” Amy Singler pointed out that the walks, which are often co-sponsored with MyRWA’s sister organizations, are “part of an effort to [show people] that there are opportunities to get out there and involved. [People] want to see what the watershed can do for them.” According to Amy, MyRWA tries to hold a walk each month. Recently, one of these walks took people to Horn Pond, where an expert in the flora and fauna of the area led the group around the pond. Amy emphasized the walk’s value in getting people to new areas of the watershed, and seeing the connections within the watershed.

MyRWA plays an active role in introducing people to the recreational paths and paddling opportunities throughout the watershed. Their advocacy work also influences the formation of place dependence, but in a more indirect way. MyRWA has long advocated for a more connected system of paths throughout the watershed. Although many miles of paths exist, they are often hidden from view, and lead to nowhere. In its 2005 Action Plan, MyRWA identified several opportunities for improving the
recreational potential of the MRW, including providing pedestrian and bike access across Amelia Earhart Dam and through other properties that prevent expanded connectivity among the watershed's paths, identifying new locations for canoe and kayak access, and improving upkeep and maintenance in the DCR parks. By advocating for the recreational amenities of the watershed, MyRWA has the ability to increase their usability and improve their appearance. This is a significant contribution to fostering place dependence on a broad scale. A tidy and safe system of paths that are widely connected with other regional paths will undoubted draw more people to the shores of the Mystic, and may even serve multiple functions, for daily commuting and for leisure recreation. Likewise, increasing the number of canoe and kayak launches may make boating the Mystic a more attractive or convenient choice for someone who would normally go to the Charles River, or another waterway.

Although they are not usually conducted outside, the speaker series also helps MyRWA to advertise the recreational resources of the watershed. By describing the features of the region, people may be inspired to get out and explore on their own. The diverse topics of the speaker series may introduce people to a new area of the watershed, or a new way that they might enjoy it, like bird watching, or investigating the remnants of its long history.

Finally, although they did not rise to the prominence of the others, two additional activities were highlighted by a few of the interview subjects, and deserve brief attention: clean-ups, and volunteer monitoring. These are non-recreational opportunities sponsored by MyRWA to introduce people to different areas of the watershed. Just as the recreational activities do, these have the potential to promote place dependence.
The ways in which MyRWA defines and communicates a symbolic identity (P2) are harder to pin down than the roles it plays in defining the watershed (P1) and contributing to the development of place dependence (P3). However, MyRWA is actively engaged in this task as well. Symbolic identity is an abstract concept. Untangling a particular symbolic identity from the diverse web of symbols and characteristics that might represent the MRW is a subjective task, and even the interview subjects appeared challenged to put the MRW’s symbolic identity into words. However, one captivating theme emerged: the symbolic identity of the MRW, through MyRWA’s view, might be a place of ecological rebirth. Although the watershed has long been battered and neglected, it is beginning to reemerge through the efforts of MyRWA and its partners. John Reinhardt hinted at this when he said, “With industry gone, there’s an opportunity to make use of the resource for this incredibly dense population that’s right here. People are just beginning to realize that.”

Many of the activities that MyRWA focuses on embody this transition/opportunity/rebirth symbolism, from the Herring Run and the Fingerling Fling, to its organized clean-ups, and its advocacy work. The clean-ups bring this symbolic identity to the community, engaging individuals in active restoration of the watershed’s resources. Janey Tallarida captured this purpose when she said, “Getting people to come to clean-ups is another opportunity to connect with people, because we can get them out there on the river, doing something that feels like it’s helping.”

Communicating symbolic identity involves defining which activities are appropriate and which aren’t for a place. This part of MyRWA’s role in constructing and communicating symbolic identity is highlighted by Janey Tallarida when she notes that
“the watershed association is looking closely at creating stewards for the future. In order to do that, they need to use it appropriately. Getting people canoeing, kayaking, walking, swimming, and fishing is part of that picture.” In everything that MyRWA does, it has the chance to communicate a symbolic identity that embodies its overarching goals and vision for the watershed.

The interview subjects identified a range of potential symbolic identities that people may associate with the MRW and its waterways, shown in Table 3-3.

Some of these identities suggest the polluted vision of the watershed dominates the way some people understand it today, but many of the themes that recurred time and again fall into a more positive realm. This indicates that symbolic identity for MyRWA may be more closely related to the organization’s future vision and current goals for the watershed than the present and historical conditions of the watershed.

Table 3-3, Symbolic Identities (P2) of the MRW identified by the interview subjects

<table>
<thead>
<tr>
<th></th>
<th>Dirty</th>
<th>Flooding</th>
<th>Working Port</th>
<th>Recreation</th>
<th>No Single Identity</th>
<th>Herring/Awife</th>
<th>Industrial History</th>
<th>Glorified Toilet</th>
<th>Transition/Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Hammett</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Reinhardt</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janey Tallarida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Amy Singler</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Bold indicates that 3 or more interview subjects mentioned the item.

The overwhelming initial response to the interview questions that were designed to explore symbolic identity was along the lines of Janey Tallarida’s comment, “I think it
varies a lot, depending on what community you’re talking about.” This is indisputably the case when one considers the range of individual conceptions of symbolic identity in the MRW. Watershed identity in general and symbolic identity in particular is influenced to a large degree by the small part of the watershed that an individual encounters in daily life. The landscape of the MRW is definitely not homogenous, so it is not surprising that the interviewees’ impressions of symbolic identity are not homogenous either. Individual understanding of symbolic identity will reflect the watershed wherever they are.

However, while individual conceptions of symbolic identity are interesting, because this research is attempting to uncover the roles that the watershed organization plays in constructing and mediating watershed identity, it is the symbolic identity that the watershed organization communicates or wishes to communicate that is most relevant.

It should be clear by now that many of MyRWA’s activities serve multiple purposes in fostering watershed identity. As with P3, many of the activities already described were also given mention in MyRWA’s efforts to bring about collective identity (P4), as shown in Table 3-4. Here, MyRWA’s collaborative approach to creating change in the MRW rises to the surface among its other efforts. MyRWA recently spearheaded the creation of the 2005 Action Plan, which was the end product of an extensive process that brought together the perspectives from groups and individuals throughout the MRW. Nancy Hammett identified the launch of the plan as a way in which MyRWA connected people throughout the watershed under common purpose. She said, “launching [the action plan] encouraged people to look at issues from a watershed perspective.” A MyRWA board member who attended the launch of the plan echoed this view, and elaborated, writing in the MyRWA’s newsletter:
Attendees reported that they appreciated the chance to meet folks from other parts of the watershed who share their goals and struggles, and the energy and commitment of everyone there was inspirational. (Boland 2006)

Table 3-4, MyRWA Activities Contributing to Collective Identity (P4)

<table>
<thead>
<tr>
<th></th>
<th>Collaboration with other groups</th>
<th>Newsletter</th>
<th>Action Plan</th>
<th>Speaker Series</th>
<th>Advocacy Letters</th>
<th>Newspaper Articles</th>
<th>Monitoring Program</th>
<th>Presence at Local Events</th>
<th>Clean-Ups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Hammett</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Reinhardt</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janey Tallarida</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amy Singler</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bold** indicates that 3 or more interview subjects mentioned the item.

MyRWA’s newsletter was also identified by interviewees as one of the organization’s efforts contributing to P4. Although it is available to anyone on MyRWA’s website, the newsletter is only mailed to members, which points to the most obvious way that MyRWA might connect individuals within the watershed together under common purpose: by promoting individuals to become members. Membership allows people to associate themselves officially with a particular group that embodies their personal values, beliefs, and aspirations. Alternately, membership with an organization might help an individual to actually shape and define their values and beliefs about something they don’t know much about (like a watershed, for instance). A membership organization inherently accomplishes the roles described in P4.
Analysis

The Mystic River Watershed Association’s broad range of activities clearly demonstrates that it plays an active role in the construction and mediation of watershed identity in the Mystic River Watershed. It has its share of challenges in this endeavor, influenced by the history and present day landscape of the Mystic River Watershed itself. However, the raw materials appear to be in place to foster ever more vivid conceptions of watershed identity among the members of the watershed’s communities.

Scholars working to understand people-place connections have identified time as a critical factor in the development of place attachments. Time might refer to the number of days a year one spends enjoying a particular resource, or to the number of years one has lived in a particular location. For the Mystic River Watershed, time may be an important factor in a broader sense: it has taken time for the river to recover to its present condition, and it has taken time for people to realize that these changes have occurred. If recovery continues along its current trajectory, the more time passes, the cleaner and more accessible the river will become, and the more opportunities its residents will have to come to know the watershed in a new way.
CHAPTER FOUR

Case Study II: The Charles River Watershed Association

Max Hall (1986), author of an award-winning article and later a book by the same name, entitled “The People’s River,” wrote that the Charles River “may be the best example anywhere of an urban river that has been radically reshaped and controlled in the service of the public.” Meticulously designed in the late nineteenth century by landscape architect Charles Eliot, the lower basin of the Charles River is world renowned as an urban water park. According to the Environmental Protection Agency (2006a), the Charles River “is one of the busiest recreational rivers in the world.” It is the setting of the famed Head of the Charles Regatta, and it serves as a picturesque backdrop to some of the world’s most well regarded universities. The Charles River, the setting for to countless movies, is recognizable not just to its residents, but also to millions of others around the world who have visited it or seen it on the screen.

The Charles River Watershed Association, working diligently for this high profile waterway, has skipped from milestone to milestone over the last decade in its effort to make the Charles River fishable and swimmable again. Every new milestone reached on the road to full recovery is heralded throughout the watershed and beyond. High visibility and an entrenched sense of recreational values are key to the Charles River Watershed Association’s mediation of watershed identity in the Charles River Watershed, and its ongoing success in its broader mission, which is respected locally and nationally.
Landscape of the Charles River Watershed

The Native Americans who lived along its banks called it the Quinobequin, or winding river (Mulvoy Jr. 2005). The Boston Globe (Preer 2004) has described it as “a reluctant river.” It takes a drop of water eighty miles to flow from Echo Lake in Hopkinton to Boston Harbor; runners in the Boston Marathon go the distance in just twenty-six miles. With six broad turns, and many smaller crooks and curves, the Charles River dampens a lot of ground and flows past a lot of backyards as it drains its 308 square-mile watershed stretching southwest of Boston (see map, Figure 4-1). It is the longest river with its entire length in Massachusetts (Commonwealth of Massachusetts. Executive Office of Environmental Affairs 2005b).

Unlike the Mystic River, the Charles is so named from its headwaters in Hopkinton to its confluence into Boston Harbor. Along its eighty-mile length, it is joined by eighty creeks and streams. Its waters pool behind twenty dams, including its largest and most visible, the Charles River Dam, which alternately with the tides holds it back from the Harbor, and holds the Harbor back from it. Since 1910, the Charles River Dam has controlled tidal flooding and maintained a freshwater environment in the river’s historically estuarine lower basin.

The CRWA has conceptually divided the CRW into three sections. The upper watershed, draining into the first forty miles of the Charles River is mostly suburban, and includes some of the fastest growing communities in Massachusetts (Commonwealth of Massachusetts. Executive Office of Environmental Affairs 2005b). The middle watershed, also known as the “lakes region” because of the high concentration of dams, that turn the river into a series of broad, flat pools, includes thirty river miles from the
south Natick Dam to the Watertown Dam. In parts of the upper and middle sections of the watershed, the U.S. Army Corps of Engineers plays steward to several large tracts of wetlands, which form the 8,000-acre Charles Natural Valley Storage Area. This area was preserved in the 1980s to prevent downstream flooding; it also provides valuable wildlife habitat, groundwater recharge, and helps to filter out pollutants for storm water runoff.

Figure 4-1, Map of the Charles River Watershed
The lower watershed is what most people picture when they think about the Charles. This section covers less than ten river miles from the Watertown Dam to the Charles River Dam. Parks line the entire length of this stretch of the river, and an extensive network of paths provide enviable biking, walking, and running routes. The lower basin—the wide stretch of the river from the Boston University Bridge to the Charles River Dam—provides the classical view of Boston, with the city rising above sailboats skimming blue water on a clear sunny day.

The Charles River flows through twenty-three communities, and its watershed includes thirty-five. Nearly 1,000,000 people inhabit the Charles River Watershed (CRW). A long-settled urban environment, pollution has been and continues to be a problem throughout the watershed. While it does not support a working port or heavy industrial district, mills have lined the river’s banks since the nineteenth century. These mills, usually associated with a dam, tapped the river to turn their works and assimilate their wastes. The Charles River and its tributaries have also served as the receiving waters for municipal wastes from cities and towns throughout the watershed for centuries. Although discharge of untreated sewage was officially curbed decades ago, raw sewage continues to spill into rivers and streams after heavy rainstorms from CSOs and aging city sewage pipe systems.

Today, most of the point-sources of pollution have been curtailed, which has improved the Charles River water quality markedly in the last decade—the river is actually clean enough for boating and swimming most of the time during dry weather (Ebbert 2005). One of last great challenges throughout the watershed is controlling storm water runoff (Baskin 2003). An additional growing challenge yet to be sufficiently
addressed is the increase in groundwater withdrawals in the upper watershed, which decreases the quantity of water flowing in the River and exacerbates water quality problems (Brodkin 2006).

**The Charles River Watershed Association**

In the mid-1960s, despite sporadic efforts by city and state officials to improve the water quality of the ailing Charles River, it continued to deteriorate. There were days when the river ran pink and orange, and fish die-offs were common. To keep people from dipping in the river, the Metropolitan District Commission (MDC) installed swimming pools yards from once-popular swimming beaches. Amid a widespread sense of defeat, the Charles River Watershed Association (CRWA) was formed in 1965 (Charles River Watershed Association Undated-b). It was one of the first watershed associations in the nation (Charles River Watershed Association Undated-c).

The mission of the CRWA is “to use science, advocacy and the law to protect, preserve, and enhance the Charles River and its watershed” (Charles River Watershed Association Undated-c). Working closely with federal and state regulators and smaller advocacy organizations within the watershed, the CRWA plays a prominent role in a broad range of initiatives currently in place to help restore and protect the Charles River, including the EPA’s Clean Charles 2005 effort, which sought to make the Charles fishable and swimmable by Earth Day 2005. Recognizing its pivotal role in the ongoing restoration of the CRW, other watershed organizations turn to the CRWA for support and advice; the CRWA actively offers up its expertise nation-wide.

The CRWA is staffed by twelve employees. Its operations are guided by a Board of Directors of sixteen, consisting of leaders in the region’s business and environmental
sectors. It has a membership base of approximately 5,000, which continues to grow annually.

**Watershed Identity in the Charles River Watershed**

Unlike the Mystic River, which is often described as “invisible,” (Samburg 2003) the Charles has always enjoyed the center-stage of the greater Boston region. Despite its notorious pollution problems, the Massachusetts Executive Office of Environmental Affairs (2005b) estimates that “The Lower Charles River Basin and the extensive park system along its banks host the highest number of boaters and recreational visitors of any other urban river system in the country.” Millions of additional visitors attend over seventy events at the Hatch Shell—the famous event venue on the Charles River Esplanade—each year, including the Boston Pop’s Fourth of July celebration, which draws an average of 500,000 attendees alone (Commonwealth of Massachusetts. Department of Conservation and Recreation Undated). The Head of the Charles Regatta draws an additional 300,000 spectators to the banks of the Charles River each October (Head of the Charles Regatta 2005). There is no question that the Charles River Watershed is well-noticed and appreciated for its recreational value, but this perception seems to be shaped solely by the lower basin of the Charles River.

The image of the lower basin is so strong that it dominates the identity of the Charles River Watershed as a whole. According to Anna Eleria, project manager for the

---

6 As noted in the preceding Case Study of the Mystic River Watershed Association, this research was not designed to evaluate the strength or character of watershed identity itself. However, a brief discussion of the anecdotal accounts of the Charles River Watershed’s identity is useful to illustrate the context within which the Charles River Watershed Association does its work.
CRWA, “the lower part of the Charles…from the Watertown Dam to Boston Harbor…[is the] feature that really defines the watershed and people recognize most.” Margaret Van Deusen, Deputy Director of the Charles River Watershed Association, also emphasized the prominence of the lower basin in the overall identity of the CRW. “I think everyone knows that the Charles is this amazing resource…the lower basin [is] so much a part of Boston…I think people take it for granted and enjoy it.” Roger Frymire, a volunteer for the CRWA who spends a lot of time on the River, suggested that even those living in other parts of the watershed identify their watershed most with the lower Charles River: “After all,” he says, “it’s on TV with the pops on the Fourth of July every year. Every time you watch the news, the Zakim Bridge is the iconic symbol.”

Pollution has also long been a part of the Charles River Watershed’s identity. Anna Eleria points out “the river is perceived and has been perceived as a pretty dirty waterway.” She suggests that many people still remember the popular song, written by the Standells in 1966, which celebrated the Charles’ dirty water. “Some of those same sentiments [expressed in the song “I Love that Dirty Water, Boston You’re My Home”] are still felt about the Charles.” Roger Frymire also believes “Love that Dirty Water” continues to haunt the perceptions of the Charles. “It was so polluted for so long,” he notes, “that’s the first thing most people think about [the Charles River Watershed].”

Split personalities seem to dominate the public’s identity of the Charles River Watershed. Its distinctiveness as a world-class recreational playground and its enduring notoriety (even if most people recognize that it is improving) as a river of dirty water are similarly celebrated locally and known throughout the world.
Evaluating the Theoretical Propositions

As the preceding discussion suggests, most people are probably already aware of the Charles River and the amenities that it offers. Thus, the Charles River Watershed Association is situated to build upon these existing conceptions and to expand them beyond the lower Charles River to bring about an understanding of the greater Charles River Watershed. Advocacy and science figure most prominently in the CRWA’s work. According to Margaret Van Deusen, “We’ve consciously decided not to run an educational program out of CRWA. You have to make a choice to do that kind of thing or do the science. While we’re happy to speak to groups and we always do, we don’t want to make it a stand-alone component.” An education and outreach program is the obvious mechanism through which a watershed organization may realize its role in constructing watershed identity. However, even though the CRWA has consciously omitted this component from their primary mission, the following discussion will show that they still play a role in the construction and mediation of watershed identity in the Charles River Watershed.

Printed and electronically available materials are the predominant tools that the CRWA uses to help define the physical space of the watershed for its residents (P1). Presentations and public meetings also figure into their strategies. Table 4-1 shows these and other strategies identified by interview subjects as contributing to P1, that the watershed organization plays a role in defining the physical space and characteristics of the watershed for its citizens.

Newspaper articles, which were cited by several interview subjects as a strategy CRWA uses to define the watershed (P1), are often the first introduction an individual
will have to the concept of a watershed and the existence of the CRWA. The CRWA lists fifty articles on its website from 2005 alone that appeared in local and regional newspapers and referred to the CRW. Many of those articles were likely prompted by one of fifteen press releases CRWA issued during that year. A newspaper article (or perhaps the third or fourth newspaper article an individual reads) referencing the CRW may bring about a general awareness of the watershed. It may prompt some people to investigate the CRWA or the CRW in other sources, or to pay more attention the next time they encounter other information about the CRW. But newspaper articles don’t usually do a particularly focused job of defining the physical space of the watershed.

**Table 4-1, CRWA Activities Contributing to Place Definition (P1)**

<table>
<thead>
<tr>
<th></th>
<th>Website</th>
<th>Newsletter</th>
<th>Members &amp; Volunteers</th>
<th>Publications &amp; Reports</th>
<th>Newspaper Articles</th>
<th>Presentations</th>
<th>Kid’s Festival</th>
<th>Public Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margaret Van Deusen</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Roger Frymire</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anna Eleria</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Bold indicates that 3 or more interview subjects mentioned the item.

A second strategy that CRWA uses to define the physical space of the watershed (P1) is its newsletter, *The Streamer*, which is published quarterly and is mailed to all of its members. It is also available in electronic form on the CRWA website (Charles River Watershed Association Undated-e). Organizational newsletters typically include descriptions of what the organization is doing, and highlight ways that its members can get involved. In a general sense, these kinds of short articles aren’t really designed to
help someone understand the boundaries and physical definition of the watershed, and are often written with the presumption that the reader already knows what a watershed is. However, one recurring section in *The Streamer* stands apart, and may actually deepen an individual’s conceptualization of the physical watershed. Titled “Run of the River,” (Figure 4-2) this two-page spread centered around a map of the watershed geographically embeds current events and important issues within the space of the watershed. Because town boundaries are included in the maps, a reader can pinpoint their home location, and directly relate that location to the highlighted areas of interest within the watershed.

**Figure 4-2, “Run of the River” section in *The Streamer***

![Image of the streamer report](image)

Source: (Charles River Watershed Association 2005)
The CRWA’s website was also mentioned by the interview subjects in the context of P1. According to Anna Eleria, “The website is something we use quite a bit. We’ve got a map of our watershed there. We have a description of what a watershed is. The physical characteristics are all on our website.” Indeed, all of this information is easily accessible from the front page of CRWA’s website. In 2002, American Rivers honored the CRWA’s website with an Eddy Award. This award was established by American Rivers to recognize that “the internet is now a critical tool in the fight to save America’s rivers” (Charles River Watershed Association 2003).

Finally, although the CRWA does not officially incorporate an educational component into its program, it often gives presentations throughout the community. Margaret Van Deusen said that CRWA “gets lots of requests to speak to schools and we always honor them.” Anna Eleria also highlighted these presentations as a way that CRWA helps people understand what the CRW is: “CRWA gives talks and presentations to school groups. At least once a month we’re going out and talking to groups like universities, high school classes, even elementary schools. Also, we go out to garden clubs, and neighborhood organizations ask us to present at their meetings.”

Several activities that CRWA engages in were not touched upon by the interview subjects in a significant way, but were detailed in the newsletter and on the CRWA website. First, CRWA has a storm drain stenciling campaign that helps to alert people that street drains lead directly into the Charles River and its tributaries. Although these street markings are an important contribution to a community’s awareness that their waste does not simply go “away,” these efforts do not explicitly help people understand the concept of a watershed. However, the CRW stenciling program itself relies on
citizens and groups—particularly youth organizations—to identify and paint the stencils on the street throughout all of its communities (Charles River Watershed Association Undated-d). This engagement is an opening to explain the workings of the watershed and the impact human activity has on its water quality.

Finally, in recent years, the CRWA has hosted a members-only education fair, called “Take me to the River.” This event encouraged kids and their families to learn about the watershed through activities like “The Ever Changing River,” which teaches people about the river’s course through time, and “Where the Water Goes,” a hands-on model showing how streams and rivers drain watersheds (Hall 2003).

The symbolic identity (P2) of the Charles River Watershed is exemplified in the widespread appreciation of its many parks and recreational opportunities. This is a watershed to play in. Margaret Van Deusen describes how each part of the watershed draws a different kind of recreation:

[T]he lower part of the basin gets extensively used for rowing and sailing, whereas the lakes district gets much more canoes, kayakers and recreational boaters. There’s fishing in all parts of the river…people walk along the whole length of the river. Those paths are pretty extensive now and there’s lots of efforts in the upper part of the watershed to connect it to the lower part of the watershed with some greenway work.

Alongside the identity of recreation, the image of pollution is pervasive in the public’s eye. “I think the river is perceived and has been perceived as pretty dirty water,” explained Anna Eleria. The CRWA meets a challenge in mediating these dual identities; projecting a message that the CRW’s waterways are not perfectly clean, but that they are improving and are safe much of the time for all kinds of recreation. Anna Eleria goes on to point out that “people are learning that the river is getting cleaner, based on our work
to get the message out, writing newspaper articles, through the newsletter…[we’re] informing the public that the river is getting there.”

Because the river is used so extensively for boating of all kinds, one of the ways that the CRWA tries to reinforce that the river is safe for recreation most of the time—that despite its pollution problems some of the time, it is still an appropriate place to enjoy—is through their water quality flagging program. This program translates the scientific information gathered through CRWA’s extensive volunteer monitoring program into visual signals that boaters can use to decide whether they want to venture into the water or not. A blue flag (depicted in Figure 4-3) at one of its eight flagging sites along the river indicates the water is low in bacteria and probably does not present a health risk; a red flag indicates that bacteria levels are high, and contact with the water may be harmful. Over time, the incidence of blue versus red flags help people to better understand how clean the water really is, training perceptions away from the notion that the river is always clean, or always dirty.

**Figure 4-3, A Blue or “Safe” Flag from the CRWA’s Flagging Program**

Source: (Charles River Watershed Association Undated-a)
Along side its science programs advocacy largely defines the day-to-day work of the CRWA. The influence this work has on shaping the symbolic identity of the watershed should not be underestimated. For example, through several budding pieces of advocacy work, the CRWA may in the future further transform the symbolic identity (P2) of the CRW by adding fishing and swimming to boating and running as appropriate activities to enjoy in the CRW. Margaret Van Deusen highlighted some of these future initiatives: “with the state, we’re going to be embarking on a Shad restocking of the Charles, and we would love that to become a much more dominant feature of the river…We’re trying to bring back bathing beaches in West Roxbury because that would be quite neat. It would drive the goals for the Charles being fishable and swimmable.”

Although the water quality in the Charles is good enough to allow swimming during parts of the year, there is a dearth of beaches available for swimming due to toxic sediments and a lack of infrastructure, which was abandoned in the 1950s when the river’s water quality got so bad. Bringing even a few swimming beaches back to the banks of the Charles could have the potential to further transform the identity of the Charles in the
community from a dirty river (boating is one thing, swimming is quite another) to a healthy amenity.

Considering the prominence of recreation in the CRW, it should be no surprise that the CRWA hosts events that introduce people to the river and give them an opportunity to spend time developing a relationship with different parts of the watershed (P3) (see Table 4-3 for a list).

For members, the CRWA offers guided canoe trips during certain times of the year. But their main event is the annual Run of the Charles, which, according to Anna Eleria, is the largest recreational canoe and kayak race in the country. Over 1500 people participate in five separate races (each with several entry categories). The longest race is twenty-four miles and includes five portages around dams and other obstacles in the river. In describing the event, Margaret Van Deusen pointed out that “it gets people all over the watershed.” Roger Frymire, who participated in the race himself noted how it incorporates all manner of people, from professionals, to amateurs, to the elderly, to kids barely old enough to manage a paddle.

Associated with the Run of the Charles is the annual Earth Day clean up, also organized by CRWA. This event is unique among most watershed organization-sponsored clean-ups in that it is watershed-wide, emphasizing the connections between people and communities along the Charles River and throughout the CRW. Although only in its seventh year, according to Roger Frymire, “it’s been such a good model, it’s been duplicated throughout the country and the region.” Anna Eleria emphasizes its importance to the CRWA: “it’s probably where we get the greatest participation from the community within our watershed.” According to Eleria,
[W]e have 1500 volunteers that go to forty different sites along the river. Last year we had ninety different groups participating in the event…it’s one way we get the public involved and seeing the watershed and the river firsthand. It’s a way to see that their actions do make a difference in the watershed. And they see they contribute to the pollution to, as they’re picking up Dunkin Donuts cups and other recognizable trash.

These events reach a broad spectrum of people, and give them a reason to travel to all corners of the watershed—and especially beyond the lower Charles River Basin. In doing this, the CRWA provides excellent exposure to the watershed as a whole, potentially introducing individuals to new experiences and places within the watershed. Some may decide to incorporate the Charles River into their lives through recreational boating, or even just finding a new favorite park to picnic in, or a new trail to walk along. It is this exposure to the watershed that is key to the development of place dependence (P3).

Table 4-3, CRWA Activities Contributing to Place Dependence (P3)

<table>
<thead>
<tr>
<th></th>
<th>Run of the Charles</th>
<th>Earth Day Clean-Up</th>
<th>Volunteer Monitoring</th>
<th>Shoreline Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margaret Van Deusen</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Roger Frymire</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Anna Eleria</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

**Bold** indicates that 3 or more interview subjects mentioned the item.

Finally, elements of collective identity operate throughout each of the activities discussed in the context of the other theoretical propositions: the sense of common purpose that comes with knowing that you are one of 1500 other
people working at the same time throughout the watershed to clean up past abuses; the connectivity and empowerment that comes with receiving a regular newsletter detailing the programs your dollar helps to support. But the interview subjects identified several other activities that have not been discussed already, and factor importantly in the CRWA’s ability to foster collective identity (P4) (see table 4-4).

**Table 4-4, CRWA Activities Contributing to Collective Identity (P4)**

<table>
<thead>
<tr>
<th></th>
<th>Connecting with other groups</th>
<th>Electronic Newsletter</th>
<th>Website</th>
<th>Letter Writing Campaigns/Petitions</th>
<th>Annual Meeting/Public Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margaret Van Deusen</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Roger Frymire</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Anna Eleria</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

**Bold** indicates that 3 or more interview subjects mentioned the item.

In its work, the CRWA places a tremendous emphasis on affecting policies that have an impact on the CRW. To this end, the CRWA relies heavily on its members and partner organizations to write letters and get involved in important issues at just the right time. Margaret Van Deusen describes this process: “We develop a position, and materials on that position, and then we reach out to other environmental groups or stakeholders on the issue. Sometimes we reach out to the public at large, because it’s an issue that affects the entire watershed.” To spread the word quickly, she says, “We have an electronic newsletter…we are clear about the action item and what we are asking people to
do. We try to link back to our website, so if something’s up, you can get a lot of information about something quite quickly.” This kind of mobilization is only possible when people care about a resource and share a strong vision for its future. By engaging individuals in its cause, the CRWA is defining its vision and helping people understand what is required to realize that vision.

The electronic newsletter and website are important tools for the CRWA in this effort. Public meetings are another forum the CRWA uses to engage people in its vision for the CRW. As Anna Eleria says, “the public meeting piece is an important strategy we take to get people connected to and involved in a certain issue.” Unlike the alerts that go out through the electronic newsletter and the involvement people feel by writing a letter or signing a petition, the public meetings are interactive. People can connect with others around common issues of concern, and they can also have the opportunity to more directly influence the group’s stance on an issue by discussing different angles and alternatives relative to the issue at hand.

**Analysis**

Although it does not emphasize an educational or outreach strategy, the Charles River Watershed Association plays a substantial role in the construction and mediation of watershed identity in the Charles River Watershed. Perhaps because the Charles River Watershed has a long and proud identity associated with recreation, the CRWA seems to emphasize this preexisting theme in its activities. In this way the CRWA is mediating and tempering an existing identity that already positively highlights its continuing work toward its restoration and preservation objectives.
CHAPTER FIVE
Discussion and Conclusions
The case studies of the Mystic River Watershed Association and the Charles River Watershed Association demonstrate that watershed organizations can and do play several roles in constructing and mediating watershed identity. They do this (intentionally or unintentionally) because the results of such activities help them to accomplish ambitious objectives that relate to the recovery of rivers and streams impacted by historical and contemporary human disturbances. A community of individuals who see a watershed as a place of ecological connections and have a relationship with the special places it provides is a community of potential: potential to change the way they, as individuals, water and fertilize their lawn; potential to vote for bond measures to replace outmoded CSOs; potential to plant a tree, pick up trash, join a committee, write a letter, or just spread the word when something needs to get done. As people-place connection research has demonstrated, a close relationship with place materializes from and contributes to a deeper understanding of that place.

Place-based collaborative management strategies involving multi-level governmental and non-governmental stakeholders in environmental management continue to proliferate, especially as federal environmental policies encourage management decisions to devolve to local scales (Sabatier, Focht, Lubell, et al. 2005; Wondolleck and Yaffee 2000). Wondolleck and Yaffee (2000) stress that a culture of ownership and sense of place are critical to the success of any collaborative management endeavor:

Collaborative resource management has its roots in age-old notions of neighborhood and community…it recognizes the need to ground decision-
making and management in good science but understand that technical factors are only one of many important considerations in making wise public choices. The new style of management helps to build a sense of shared ownership and responsibility for natural resources. (p. 5)

It is easier to understand the importance of stakeholder ownership and responsibility in fostering effective watershed-based collaborations in rural settings like a national forest, where the stakeholders are relatively few. In an urban environment, stakeholders at the table of collaborative management initiatives are usually government organizations, prominent businesses, and citizen advocacy groups like watershed organizations. But every individual in an urban setting is a stakeholder in that they have the potential to make an impact, positive or negative, on the watershed, and they enjoy the resources provided by the watershed. The collective potential of all of the individual actions in a watershed could possibly add up to more significant change than any single government agency’s action, especially when we are faced with a need for water conservation and non-point source pollution problems. Of course, it would be impossible (and counterproductive) to involve every citizen in a meaningful role in the mechanics of collaborative management, but public education and awareness—the end result of fostering watershed identity—has been identified as a key to the success of such efforts (Wondolleck and Yaffee 2000).

**Challenges Surrounding Watershed Identity**

Two primary challenges cloud the process of constructing and communicating watershed identity. These related concerns surface from the case studies as common themes identified by many of the interview subjects.
People Don’t Naturally Relate to Watersheds

Both watershed organizations studied here built their activities primarily around a science-based approach to advocating for the watershed. It’s easy to conduct science around a watershed perspective. It is vastly more difficult to incorporate the watershed perspective into the public consciousness, because humans are natural reductionists—we learn and understand by breaking complex concepts into their constituent parts. We are programmed to gravitate toward the river (the object), rather than the system (the watershed).

For example, historically (and to some extent still today), the river was the focus of advocacy. It wasn’t until more recently that the watershed unit gained favor. The names of high-profile national water resource protection organizations, like Riverkeeper and American Rivers, harkens back to the days before the watershed focus became widespread. Despite all of the science and common sense that points to the watershed as the ideal unit of management, there was a simple and practical reason why river-based advocacy emerged first, and persists in certain organizations today: people can understand rivers.

The Center for Watershed Protection stumbles into this watershed/river problem in their presentation of the definition of a watershed. After describing the purpose of a watershed, the definition concludes with the following sentence: “Small streams are an important element of our local geography, and confer a strong sense of place to a community” (Center for Watershed Protection Undated). In other words, it is not the watershed to which people develop an attachment; it is the streams that they cross each day that have meaning. Chris Brown (1997), a past vice-president of American Rivers,
explored this tension as he wrote about the historical shift from managing a river to managing a watershed. “People identify with their local river, their creek, bayou, brook, slough, arroyo, krill, or run. Unlike watersheds, rivers have familiar names…River corridors have familiar boundaries, unlike the amorphous land mass—in fact all the land—that a watershed encompasses” (p. 4). Watersheds, he says, “do not ‘sing’; they have none of the place-specific poetry, legend and beauty that have inspired generations of American to become activists for saving rivers.”

Many of the interview subjects for this research, when asked how the community perceives their watershed, separated the watershed from the river in their response:

“The Charles River has very much of an identity. The watershed is a different matter by far.”

“I think if you’re near the river, it has an identity. I’m not so sure if you’re further away that it does.”

“I don’t think many people connect with the watershed…it’s going to be a feature, like the Mystic Lakes or the River.”

“People who don’t live next to the Mystic don’t associate themselves with the watershed.”

Chris Brown is perhaps correct—if a watershed organization successfully germinates a widespread understanding of what a watershed is in the first place, they may ultimately find difficulty making it sing. Is this a challenge to the underlying concept of watershed identity? I don’t think so. The watershed focus—and the main benefit of developing a watershed identity as opposed to a river identity—helps to remind people that the river extends beyond its banks. Its tributary streams, and the parks and ponds that surround it, are integrally a part of it, and share many elements of its identity. Organizations should, obviously, capitalize on the existing identity of the river, if there is
one, and use that to draw in the features of the surrounding landscape, emphasizing the importance of the ground beneath people’s feet wherever they are because it’s connected to the river they care about.

**Localization and Parochialism is Pervasive**

This challenge is closely related to the previous challenge, but is different enough to merit its own brief discussion. Among the interview subjects for the MyRWA case study, and to a lesser degree those interviewed for the CRWA case study, localization within the watershed was identified as a significant fact of life—sometimes characterized positively and sometimes characterized as an obstacle to their work. The subject of localization or parochialism emerged in answers to questions related to the existing watershed identity, and was used as an example of why identity wasn’t really present, or how it varied significantly depending on location within the watershed. For example:

“Trying to galvanize people around the watershed is an abstract concept. Their loyalty is for their piece of it.”

“This state is so parochial. It’s one of its biggest strengths, and its biggest faults. That’s not new to the Mystic, that’s the way it is everywhere.”

“Ignorance is very pervasive. Fresh Pond is hydrologically connected to the watershed and [people extensively enjoy it]. It’s great. Are they aware of what’s going on [more broadly]? We try, but they’re interested in their pond. So, what’s interesting is the parochialism around the resource.”

“I think [identity] varies a lot depending on what community you’re talking about. Their vision is the closest waterway to them.”

“[Watershed identity] depends on where you live in the watershed. It depends on what’s in your backyard.”
Nancy Hammett expressed the strongest opinions about how localization impacts the work of MyRWA, and sees it as less of a challenge and more of an opportunity. To her, it’s important for people to engage with their piece of the watershed. “My thought is,” she says, “to engage people with the river…whatever river it is where they are and the parks that go along with it. They become an advocate for that piece.” When regional issues emerge that can benefit from people looking at the problem from a watershed perspective, then the parochialism becomes problematic.

**Working Around the Challenges**

As highlighted by both challenges, the dominance of more narrow place-based identities within a watershed—whether a river-centered identity or identities attached to particular ponds, streams, and parks—seems to be a fact of life in watershed management. It is intuitive that people will develop attachments to places near to where they spend their time. But several strategies offered by the interview respondents, and otherwise identified in the course of this research, offer a few ways to view these challenges as opportunities.

First, the extent to which localized or mainstem-based identities pervade a watershed community may depend on the physical features of the watershed itself. Amy Singler suggests that, depending on the scale of the watershed and the shape of its primary features, the strength and number of different identities might be more or less prevalent:

There are some watersheds that it’s easy to understand that you’re in a watershed because there’s a main stem of the river… In the Mystic you don’t have that. It’s a smaller watershed and it’s really dense. You don’t have a visible mainstem going through the whole watershed… [getting
people to understand that they live in the watershed] is a hard task in a place like the Mystic.

This would be an interesting angle through which to pursue further research on watershed identity. Although the Charles River Watershed exhibits a clearer mainstem tributary than the Mystic River Watershed, it is unclear from these case studies how this impacts the identities of the respective watersheds.

The presence of preexisting relationships and bonds with specific places within the watershed may actually present itself as an opportunity for fostering a broader watershed identity. If a particular pond or stream or park already has a community strongly connected to it, it becomes potentially easier to make connections between the smaller feature and the larger watershed. If people are paying attention, then they might be interested in the relationship between the place they care about and its surrounding landscape. Drawing an apparently isolated feature into a larger environment by showing that it shares history, natural characteristics, and use values with the entire watershed might help to broaden people’s identity of the smaller place into an understanding of watershed identity.

For dealing with both a river-centric focus and a community more engaged in a localized perspective, one strategy in particular may help to increase the visibility of the watershed. This strategy is signage, and it may be one of the most direct ways to help people understand the boundaries of their own watershed and connect the smaller places they connect with to the larger watershed. Some watershed organizations have begun to partner with cities and towns within the watershed to post signs on roadways where one enters and leaves the watershed, and on bridges that cross waterways within the watershed. Signs have also been used at popular parks and water features within the
watershed to explain how these seemingly isolated features are connected to the larger system—not only hydrologically, but also historically and culturally. The Johnson Creek Watershed in Portland, Oregon, certain counties in northern California (Breitler 2005), the City of Austin, Texas (Undated), and Acton, Massachusetts (Acton Stream Teams Undated) are just a few of the places where signs have been put to use in these ways. Looking to these communities to study how signs impact watershed identity would be another interesting avenue for future research on the subject.

The interview subjects proposed a few additional ideas playing with this same theme. Amy Singler mused about placing signs along Alewife Brook Parkway with captivating messages meant for people sitting in their cars during heavy traffic, directing their attention to the creek flowing next to them, and the fish within it moving faster upstream than the traffic. Roger Frymire shared two of his ideas. The first involves painting lines on the streets in Cambridge to represent the boundaries between the Mystic River Watershed and the Charles River Watershed. His second idea is a vision for a detailed interpretive system along the Minuteman Bikeway to guide people through the many watersheds and subwatersheds that it crosses in its distance between Somerville and Bedford. All of these ideas graphically draw attention to the watershed’s existence for average people going about their day-to-day lives. Their strength comes from their ability to reach many more people than a single volunteer at a watershed-related event; the message may not be as focused, but its sheer repetition, in conjunction with the other efforts of the watershed organization, might make an impact.
Conclusion

Watershed identity is a complex phenomenon to grapple with. Dissecting how people develop relationships with places is at once theoretical, and intensely practical. Touching the experience of 500,000 or 1,000,000 individuals who live in a watershed is a seemingly insurmountable goal, and yet each individual resident of the watershed leaves his or her mark on the landscape and interacts with the watershed system on a daily basis. Watershed organizations, as ambassadors to the watershed, face a tremendous challenge in defining their realm; but through the newspaper, public signs, advocacy opportunities, and community celebrations, watershed organizations have plentiful opportunities to imprint a particular construct of watershed identity on each individual, fostering notions of place identity, place dependence, and collective identity. This thesis suggests that thinking intentionally about this process may further the goals of the watershed organization.

The Mystic River Watershed Association’s Herring Run demonstrates nicely how integrating the watershed organization’s four broad roles that foster watershed identity into a single event can be advantageous. By understanding how watershed identity develops, a watershed organization may be able to target multiple aspects of identity development more often, creating synergy and using limited resources more efficiently. This happens to a strong degree already, as was demonstrated by how many strategies already employed by watershed organizations helped to validate multiple theoretical propositions. But this integration could be more carefully constructed.

Every connection between the public—an individual—and a watershed organization has the potential to influence the individual’s conception of watershed
identity, but to what extent? There are many possible avenues of research that should be explored to better understand watershed identity itself and the watershed organization’s role in its development. For instance, what kinds of variables in a community, an individual, and a watershed are relevant to the development of watershed identity? How can watershed identity be measured and more accurately described among individuals or in a community? How do socio-economic differences influence the development of watershed identity? What happens when competing watershed identities come together in this process? What kinds of individual experiences impede or enhance the watershed organization’s efforts? How does the shape and scale of the watershed itself influence watershed identity? For its part, this thesis provides a small inroad to begin to explore these questions, and a few examples that demonstrate the potential capacity that the watershed organization holds for shaping watershed identity.
BIBLIOGRAPHY


APPENDIX I: Interview Questions

1. How long have you (worked for/been active in) the organization?

2. What is your background? How did you come to find yourself (working for/volunteering for) the watershed organization?

3. Do you live in the watershed?

4. What do you understand to be the main objectives of the organization?

5. How does the organization help people understand what a watershed is, and where the watershed’s boundaries fall? How does the organization identify the primary features of the watershed?

6. What kinds of activities does the organization offer or advertise that give people opportunities to experience and know the watershed directly?

7. What strategies does the organization use to reach out to residents living in the watershed? How does the organization network people around watershed issues?

8. How do you think the watershed is perceived in the surrounding community? In other words, do you think it has an existing identity?

9. Is there any one dominant feature that frames people’s perception of this watershed?

10. Are there any other symbols, features, or elements that help to frame the watershed along side the dominant feature? (Probe: Examples of these could include natural features or creatures, historical landmarks or events, contemporary cultural landmarks or events.)

11. Are there any elements that aren’t currently a part of the watershed, but which the organization would like to incorporate into the watershed’s identity?

12. Are there any other questions that you think I should have asked, or is there any other information that you think would help me understand watershed identity or the organization’s role in constructing identity?
APPENDIX II: Interviewee Information and Dates of Interviews

Mystic River Watershed Association

Nancy Hammett  
Executive Director, Mystic River Watershed Association  
February 15, 2006, 5:00 p.m.  
Brown & Brew Café, Medford, MA

John Reinhardt  
Director, Mystic River Watershed Association Board of Directors  
Past President, Mystic River Watershed Association Board of Directors  
Past Executive Director (1980s), Mystic River Watershed Association  
February 21, 2006, 6:00 p.m.  
Diesel Café, Somerville, MA

Janey Tallarida  
Director, Mystic River Watershed Association Board of Directors  
Chair, Mystic River Watershed Association Outreach Committee  
March 3, 2006, 9:00 a.m.  
Danish Pastry House, Medford, MA

Amy Singler  
Member, Mystic River Watershed Association Outreach Committee  
March 7, 2006, 9:00 a.m.  
Diesel Café, Somerville, MA

Charles River Watershed Association

Margaret Van Deusen  
Deputy Director, Charles River Watershed Association  
March 9, 2006, 10:00 a.m.  
Charles River Watershed Association Offices, Weston, MA

Roger Frymire  
Volunteer, Charles River Watershed Association  
March 15, 2006, 10:00 a.m.  
Carberry’s Café, Cambridge, MA

Anna Eleria  
Project Manager/Engineer, Charles River Watershed Association  
March 17, 2006, 2:00 p.m.  
Charles River Watershed Association Offices, Weston, MA