

University of Montana

ScholarWorks at University of Montana

Graduate Student Theses, Dissertations, &
Professional Papers

Graduate School

2005

Recreation on the upper Yellowstone River| A study of use and place

Megan K. McBride

The University of Montana

Follow this and additional works at: <https://scholarworks.umt.edu/etd>

Let us know how access to this document benefits you.

Recommended Citation

McBride, Megan K., "Recreation on the upper Yellowstone River| A study of use and place" (2005).

Graduate Student Theses, Dissertations, & Professional Papers. 3374.

<https://scholarworks.umt.edu/etd/3374>

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.



**Maureen and Mike
MANSFIELD LIBRARY**

The University of
Montana

Permission is granted by the author to reproduce this material in its entirety, provided that this material is used for scholarly purposes and is properly cited in published works and reports.

****Please check "Yes" or "No" and provide signature****

Yes, I grant permission

No, I do not grant permission

Author's Signature: Maureen Mansfield

Date: May 11, 2005

Any copying for commercial purposes or financial gain may be undertaken only with the author's explicit consent.

Recreation on the Upper Yellowstone River: A Study of Use and Place

by

Megan K. McBride

B.A., Knox College, 2001

Presented in partial fulfillment of the requirements

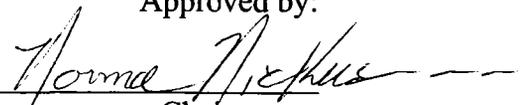
for the degree of

Master of Science
in
Recreation Management

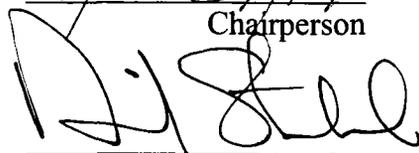
The University of Montana

May 2005

Approved by:



Chairperson



Dean, Graduate School

5-11-05

Date

UMI Number: EP35042

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI EP35042

Published by ProQuest LLC (2012). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

ABSTRACT

McBride, Megan K., M.S., May 2005

Recreation Management

Recreation on the Upper Yellowstone River: A Study of Use and Place

Committee Chair: Norma P. Nickerson ¹¹

The concept of place and how individuals relate to recreation areas has been an aspect of considerable interest within recreation literature. Past research has used this concept to unify groups of people through their attachment to place. However, there is a push within research to recognize that multiple interpretations of space exist, and therefore, how individuals view a particular place may differ from person to person.

The purpose of this study was to gain a better understanding of recreationists' attachment to place, both the shared understandings and the divergent views of a recreation area. Also, this study hopes to shed more light on the concept of special places. Finally, it was the intention of this study to learn more about recreationists using the upper Yellowstone River.

The quantitative survey, looking at individuals' recreation activities, satisfaction levels, attachment to place and level of concern regarding growth along the upper Yellowstone River, was completed by 307 individuals. The analysis of the quantitative section consisted of reporting means and frequencies of activities, satisfaction levels and demographics. A factor analysis was performed in order to determine the dimensions of place attachment along the River. Also, as a means of understanding the concept of place, 20 recreationists participated in in-depth interviews. Interviews were tape-recorded and transcribed and finally analyzed using a hermeneutic theoretical framework. This analysis revealed four important dimensions: descriptions, change, special place and management.

The results show that recreationists participate in a variety of activities and are very satisfied with their recreation experience. The place attachment dimension resulted in two factors: place identity and place dependence. The place identity dimension was stronger than place dependence among recreationists, indicating a strong emotional attachment to the River. Looking at special places revealed the multi-dimensional nature of what makes a place special. Further, analysis revealed concern among recreationists in terms of development. Findings indicated that individuals' emotional connection to the watershed is being changed and challenged through increasing development along the banks of the upper Yellowstone River. This study proposes that the issue of development and its affects on recreationists' attachment to place be further studied.

ACKNOWLEDGEMENTS

What a process this has been. Norma Nickerson, the chair of my committee, has been nothing less than remarkable in her understanding and patience. She is always available to listen to all my ideas (ridiculous as they may have been), and somewhere along the way has become not only my advisor but my friend. I would also like to thank my committee members, Laurie Yung and Neva Hassanein. Their input and ideas added tremendously to this project.

I would like to thank the Montana Water Center for their generous fellowship, especially Sue Higgins. Also, I would like to thank Montana Fish Wildlife and Parks for their support on this project, particularly Jerry Walker and Charlie Sperry. Further, I would like to thank all the individuals who participated in this research project. Their openness and willingness to take time out of their day to talk with me was remarkable, and I hope that this project does indeed give them a voice.

I don't think it would be possible to finish a thesis and have any fun without a great support system both at school and at home. For this, I would like to thank all the ITRR folks for making work enjoyable and allowing for and contributing to the occasional rant session about theses, school, politics and the overall state of the world. I would like to thank all my friends and family, especially William Scheerer for help surveying (any excuse to go fishing, right?).

Finally, I would like to thank my mom for not only being one of the few who will actually read this thesis in full, but for her unwavering love, support and guidance. The encouragement and friendship she has brought to my life continues to exceed my own expectations.

TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
LIST OF FIGURES AND TABLES	vi
CHAPTER ONE: INTRODUCTION	1
PURPOSE	3
RESEARCH QUESTIONS	4
THESIS ORGANIZATION	5
CHAPTER TWO: LITERATURE REVIEW	7
RECREATION	7
River Recreation	8
River Recreation and Place.....	10
PLACE ATTACHMENT	12
Geography	13
Environmental Psychology	16
RECREATION MANAGEMENT AND PLACE ATTACHMENT	17
Dimensions of Place Attachment	18
Holistic Approach	20
Williams' Contribution	23
Place Research to Date	25
Planning	28
SPECIAL PLACE	29
CONTESTED NATURE OF PLACE	33
Social Constructivism	33
Limitations of Social Constructivism	35
Contested Nature	35
THE UPPER YELLOWSTONE RIVER	38
SUMMARY	41
CHAPTER THREE: METHODOLOGY	44
RESEARCH FRAMEWORK	44
RESEARCH APPROACH	46
STUDY AREA	47
SAMPLING FRAME	49
QUANTITATIVE SAMPLING	50
QUALITATIVE SAMPLING	51
INTERCEPT SITES AND SCHEDULE.....	52
QUANTITATIVE AND RESPONSE RATE	53
QUALITATIVE AND RESPONSE RATE	54
ANALYSIS.....	57
LIMITATIONS.....	59

CHAPTER FOUR: RESULTS	61
QUANTITATIVE RESULTS	61
Demographics	61
Recreation River User Profile	64
Place Attachment	70
Concerns	73
QUALITATIVE RESULTS	74
Profile of Interview Participants	75
DIMENSION ONE: DESCRIPTION	77
Aesthetics	77
Physical Properties.....	79
Recreational Opportunities	80
Atmosphere	82
DIMENSION TWO: CHANGE	82
Description of the river	83
Unconcerned about change	84
Positive changes	84
Ecological	85
Growth	86
DIMENSION THREE: SPECIAL PLACES	94
Reasons Places are Special	96
DIMENSION FOUR: MANGEMENT	99
Balance	99
Use	101
Planning	104
Accepting Current Practices	107
SUMMARY	108
CHAPTER FIVE: CONCLUSIONS/IMPLICATIONS	110
RESEARCH QUESTION ONE	110
RESEARCH QUESTION TWO	112
RESEARCH QUESTION THREE	114
RESEARCH QUESTION FOUR	115
MANAGEMENT IMPLICATIONS	118
Future research for river management	121
CONTRIBUTIONS TO RIVER RECREATION MANAGEMENT	123
Future research	127
CONCLUDING REMARKS	127
LITERATURE CITED	129
APPENDIX A: Quantitative Survey	136
APPENDIX B: Interview Guide	141
APPENDIX C: Interview Participant Synopses	142

LIST OF FIGURES AND TABLES

Figure 1: Upper Yellowstone River Study Area.....	49
Table 1: Demographics of River Users	63
Table 2: Repeat Visitation	65
Table 3: Activity Participation	67
Table 4: Satisfaction Levels	68
Table 5: Reasons for Visiting	70
Table 6: Factor Analysis Loading	72
Table 7: Means for Statements Representing the Two Dimensions	73
Table 8: Level of Concern	73
Table 9: Primary Activities of Interview Participants	76
Table 10: Interview Participants' Primary Reason for Visiting	76

CHAPTER 1: INTRODUCTION

Within the last few decades, social science research has gained importance within the field of natural resource management. While it is important to continue the efforts toward comprehensive and detailed understandings of natural systems, there is a growing realization that humans cannot be excluded in an assessment of the natural environment. As Mascia et al. (2003) point out, “The disconnect between our biological knowledge and conservation success has led to a growing sense among scientists and practitioners that social factors are often the primary determinants of success or failure.” Thus, it becomes important to not only study ecological aspects of natural areas, but also look at the social and human dimensions of landscapes.

This human/environment connection cannot be overemphasized with regards to watersheds. The historic and interconnected relationship between humans and waterways is a cornerstone of western settlement; “Throughout the history of the American West, water has been associated with the important political, economic, and community issues” (Cortese 2003, 1). Thus, water’s value as a commodity has increasingly been augmented by the recognition of its social value (Brown & Ingram 1987; Cortese 2003).

Historically, within the American West, human use of water has been primarily for agricultural purposes. In an attempt to encourage the migration of Whites westward, railroads promoted western agriculture (Cortese 2003). However, despite the historic and important connection between agriculture and western waterways, other, increasingly popular, uses of waterways are beginning to emerge and gain social value. Among these is the importance of river recreation. Sun and Walsh (1998) define recreation as “a means by which people achieve desired objectives for their leisure life.” Thus, for the

purposes of this study, river recreation is not limited to physical activity (for example fly-fishing or kayaking), but also includes any use of the watershed (river and surrounding corridor) for leisure purposes (i.e. picnicking, aesthetic appreciation, etc).

However, with the increasing and differing uses of shared waterways, often times conflicts between and within differing, and sometimes competing, user groups arise. This, coupled with the fact that river use is continuously increasing in both a recreational and utilitarian sense, often leads to the problem of contested waters.

A contested watershed is the result of divergent and competing perceptions, understandings, and beliefs over a shared waterway. It is rooted in the concept of sense of place and the on-the-ground reality of divergent understandings of a shared space (Yung 2003; Katlenborn & Williams 2002; Warzecha & Lime 2001). Katlenborn and Williams (2002) state, "Management of resources, and various systems of meaning attributed to resources, inevitably imply some level of conflict among different groups with attachment to the resources."

Differing meanings assigned to the same physical space grow out of individuals' and groups' attachment to place. Many studies have been conducted to measure individuals' place attachment through the dimensions of place identity and place dependence (Williams, Patterson, Roggenbuck & Watson 1992). Beyond this, Bricker and Kerstetter (2002) studied the concept of special place and the meanings kayakers attach to the South Fork of the American River. Their findings indicate that a "person's attachment to a particular place can contribute to our understanding of the quality nature-based tourism experiences" (396). Further, Bricker and Kerstetter advise future studies to "explore whether visitors to natural resources have differences in descriptions of

special places based on the type of activity they are engaged in” (421). Decision-makers understanding this will give consideration to the diversities and similarities among recreation users when policy and regulations are being determined.

Purpose

The overarching purpose of this study was to gain a better understanding of recreationists’ attachment to place, both the shared understandings of a recreation area and the divergent views of this shared recreation space. In addition, the study hoped to shed more light on the concept of special places and their importance within studies of place. Kaltenborn and Williams (2002) identified the growing popularity and importance of incorporating place research into natural resource issues. In addition, they pointed to the necessity of studying not only residents’ senses of place but also recognizing and realizing visitors’ attachments to a specific landscape. Thus, sense of place becomes an important, non-economic tool for understanding users’ attachments to recreation sites, and consequently, helped in shaping the profiles of recreation users. Therefore, based upon a research recommendation of Warzecha and Lime (2001), one of the goals of this study was to identify the importance of place attachment as a means for decision-makers to better understand how river users identify with the watershed.

Thus, this study was intended to begin to address a very important piece of the use issues by focusing on recreationists. However, it was necessary to realize that this is merely a piece of the puzzle. Beyond recreation, the rivers are used in many different ways and all of these uses affect both the ecological dimensions of the river and the users’ perceptions of the ecosystem. Consequently, throughout this study, it is important

to remember that recreationists are an important part of a larger and more complex group of river users.

The purpose of this study was to gain a better understanding of how an important, overarching group (recreationists) is using and identifying with the river. This requires realizing that the importance of the river may differ among users and thus there is an opportunity for dissonance between and within recreation groups. The river chosen for this study was the upper Yellowstone River, the stretch of river within Park County, Montana, from Gardiner to Springdale.

Research Questions

This study of recreationists will address the following research questions:

- R1: Who are upper Yellowstone River recreationists and how are they using the upper Yellowstone River?
- R2: What are the dimensions of sense of place along the upper Yellowstone River?
- R3: Are there commonalities of reported special places between and within specific recreation groups? Where are they similar? Where are they different?
- R4: Are there differing perceptions of the upper Yellowstone River that may lead to future conflict?

The first research question was intended to get a better understanding of recreationists using the upper Yellowstone River. Through direct questions regarding recreationists' activities, satisfaction levels, and demographics, a general profile of river users can be created as a basis for further study of this important group.

The second research question investigated how recreationists identify with the watershed. This included the parameters of place attachment in the sense of recreationists' emotional and activity-based attachment to the resource. It is from these

results that managers can begin to get a sense of how recreationists identify with the watershed.

The third question further explored the concept of place, by realizing and analyzing recreationists' attachment to and description of special places. This question brings to light the unique aspects of individual recreationists' attachment to specific places within the watershed. From this question, themes and patterns were identified regarding special places and related reasons for special place identification based on activities in which recreationists engage.

The final question brought the concept of place attachment into still sharper focus by examining the potential for conflict over the use and management of this shared watershed. This question focused on the potential for recreationists' divergent perceptions and understandings of a shared space.

Thesis Organization

The questions were answered using a combination of quantitative and qualitative methods, including a recreation survey and open-ended, in-depth interviews of recreation users. Chapter two consists of a review of previous and relevant literature focusing on recreation literature, specifically river recreation, and place attachment, including dimensions of place attachment, the contested nature of place and the concept of special places. Chapter three presents the conceptual framework underlying this study, and gives the specifics of the study area, study participants, and study instruments used. Chapter four presents the results of the quantitative and qualitative data analysis performed. Finally, chapter five is a discussion of the conclusions from this study, as well as

suggestions of further research questions and the direction of place research within recreation studies.

CHAPTER TWO: LITERATURE REVIEW

This chapter focuses on previous, relevant research pertaining to recreation, place attachment and the intersection of the concept of place within recreation settings. First, the topic of recreation research is discussed, focusing on river recreation. Further, and making up the bulk of the literature review, is a discussion of place research. The topic of place attachment and its historical roots are introduced, followed by the relevance of the concept in the field of recreation and natural resource management. The concept of place attachment is further developed through a review of literature relating to the identification and description of special places within recreation settings. Then, the topic of place is discussed as a contentious and political idea. Finally, the chapter closes with an introduction of the area being studied. The upper Yellowstone River is introduced and the present and pressing circumstances regarding river recreation are discussed.

Recreation

With more people heading to public lands and waters for leisure pursuits, the field of recreation management continues to expand. Sun and Walsh (1998) define recreation as “a means by which people achieve desired objectives for their leisure life.” Beyond this, more research has been done to identify the different aspects of recreation. Sherif, along with other researchers, has focused on the idea of activity involvement within recreation, noting cognitive linkage between an individual and her chosen leisure activity (Sherif & Cantril, 1947; Sherif & Howland, 1961; Sherif, C.W., M. Sherif, & Nebergall, 1965).

Further, relating to leisure pursuits in general, McIntyre and Pigram (1992) suggested that leisure involvement consists of three components: attraction, self-

expression, and centrality to lifestyle. Attraction is defined as combining importance and pleasure, so that high involvement is obtained when an activity is deemed to be pleasurable and important to the individual. Self-expression, then, refers to the impression of oneself individuals wish to convey to others through involvement in a particular activity. Finally, centrality refers to activity involvement in relation to overall lifestyle. “An activity may be considered central if other aspects of an individual’s life are organized around that activity” (Kyle, Bricker, Graefe & Wickham 2004, 125). These three concepts, when considered together, convey the overall meaning of an activity in relation to an individual’s life (Wiley, Shaw & Havitz 2000).

Overall, the body of literature on recreation research is diverse and extensive, and is indeed beyond the scope of this research. However, it is important to note that the extensive collection of recreation literature is imperative to gain a better understanding of how individuals experience the natural world. With a better understanding of recreation activities and recreationists, managers can do a better job of balancing human recreation needs with the ecological needs of the setting. For the purpose of this study, however, the focus is on river recreation. Therefore, what follows is a look at recreation literature dealing with river recreation.

River Recreation

River recreation research has long been a foundation of recreation research at large. Recreation literature is rich with different aspects of river recreation experiences and how the resource and the visitors interact. The foundation of river recreation research was based on a 1979 symposium dealing exclusively with river recreation. Since then river recreation has continued to expand, dealing with more issues of

recreation at large, as well as those specific to recreation on rivers. Taylor and Douglas (1999) integrated economic and social value information as a means of establishing “greater depth of understanding of the resource’s value.” Issues, such as crowding, have been studied in relation to encounter norms among whitewater recreationists (Roggenbuck, Williams, Bange & Dean 1991; Shelby & Vaske 1991).

One of the important aspects, particularly pertaining to river management is the focus on the intricacies of recreation groups, specifically group identification and group size. Heywood (1987) cited the importance of realizing the diversity of social groups involved in recreation activities on the same stretch of river (3). This becomes evident through observing popular river recreation areas. There are a number of different activities happening simultaneously, including, but not limited to, fishing (wade angling, boat angling, bait fishing and bank fishing), rafting (both whitewater and social floating), social bank activities, kayaking, and inner tubing. Heywood (1987) identifies the important characteristics of river recreation groups as their membership or composition, size, and private or commercial group-type. Further, he found that “preferred recreation experiences are related to the size and composition of the social group of participation” (11).

Much of the research on recreation in general and river recreation specifically has focused on the concept of recreation experience. Recreation experience deals with recreationists’ characteristics relating to preferences. Iso-Ahola (1980) said that, “Critical prerequisites of satisfying recreation and leisure experiences are individuals’ perceived freedom and intrinsic motivation in choosing the conditions under which these experiences will take place” (17). Researchers have extended this from individual

recreationists' characteristics related to satisfaction, to studies dealing with the characteristics of different social groups as predictors for the selected recreation setting and experiences being sought (Heywood 1987). Burch's (1969) personal community hypothesis suggests that individuals' social circles define and redirect individuals' psychological drives. Heywood (1987) applies this personal community hypothesis to recreation stating, "Leisure style or desired experience is determined to some extent by the social group of participation. ... The point here is that social groups define leisure places and the activities that are appropriate within them" (2).

A study of recreationists on the Trinity River in northern California noted several different aspects of the experience that recreationists valued. "The overall experience of the Trinity River is highly valued because of the naturalness of the setting, the aesthetic appeal of the area, and the innate value of instream flows" (Taylor & Douglas 1999, 332). Though the aesthetic appeal of an area appears to be important in most recreation experiences, valuing the instream flows is unique to river experiences. It is thus important, when conducting research, to identify and gauge the importance of general aspects of recreation, but also aspects of the experience unique to the area in which individuals are recreating.

River Recreation and Place

It is the purpose of this study to look at the concept of place within a specific watershed. Therefore, it is important to note that the concept of place, which will be presented in depth in the next section, is one that has been studied often within river settings. Warzecha and Lime's (2001) study of place attachment provided information regarding visitor's preferences and attitudes concerning river recreation settings. Further,

Bricker and Kerstetter (2000) focused on recreation specialization in a measure of place attachment to a specific watershed.

Patterson, Watson & Williams (2001) conducted a study to look at how social science research can inform collaborative planning. Studying the Frank Church River of No Return Wilderness (FCRNRW) Patterson et al. suggest that concepts such as sense of place may be useful in collaborative planning. The authors argue for a qualitative approach to studying the concept of place as a means to aid collaborative planning efforts. Further, Williams (1995) suggests that the meanings and interpretations of a shared space differs between individuals, and there must be sensitivity to these differences within research and management practices.

Finally, another aspect within the concept place that will be addressed more in-depth later in this chapter is the importance of special places. Special places have almost exclusively been studied in relation to river settings (Schroeder 1996; Eisenhauer, Krannich & Blahna 2000; Bricker & Kerstetter 2002; Bricker 1998). The results of these studies suggest the importance of individuals emotional attachment to specific places within a larger recreation area, as well as the multi-dimensional nature of explanations of why places are special.

Realizing the importance of the area in which individuals choose to recreate goes well beyond river or land experiences, in that whether explicit or implicit, the choice of the specific place an individual chooses to recreate, regardless of activity, becomes extremely important (Williams 1985). This concept will be further discussed within the section on place attachment.

Place Attachment

From the literature dealing with different aspects of the recreation experience has come the understanding that the space in which individuals choose to recreate may be an important aspect in evaluating recreation experiences and in assisting managers trying to balance ecological health with human desires. Williams (1995) states, “From the human experience, an ecosystem is foremost a place—a place to extract a living, to play, to affiliate, to appreciate, to define self, and to become acquainted with one’s origins be they biological or spiritual” (7). Thus, whether in terms of work or play, the locations where these activities take place are imbued with human meaning, leading to the development of individuals’ attachments to specific places, which hold value and meaning (Warzecha & Lime 2001, 60). This is the basis of the concept of place attachment.

Most analyses of place attachment are rich and varied, focusing “on homes and sacred places, and emphasis[ing] the unique emotional experience and bonds of people with places” (Altman & Low 1992, 2). Altman and Low (1992) dissect the concept, pointing out that the word ‘attachment’ refers to affect and the word ‘place’ focuses on a particular environmental setting to which individuals are emotionally and culturally attached.

The question arises, however, as to what is meant by the word *place*. Place ... refers to space that has been given meaning through personal, group, or cultural processes. ... Places may vary in several ways—scale or size and scope, tangible versus symbolic, known and experienced versus unknown or not experienced. (Altman & Low 1992, 5)

While the different aspects of place vary, be they a couch in one’s living room, a neighborhood, or a continent, or anywhere in between (Williams et al. 1992, 31), the

affective and emotional components of the concept of place attachment are present in most analyses of place (Altman & Low 1992; Williams et al. 1992; Moore & Graefe 1994; Bricker & Kerstetter 2002; Tuan 1974). “A number of writers state that emotional qualities are often accompanied by cognition (thought, knowledge, and belief) and practice (action and behavior). That is, place attachment involves interplay of affect and emotions, knowledge and beliefs, and behaviors and actions in reference to a place” (Altman & Low 1992, 4-5).

The concept of place attachment has become an important one in many differing fields, including geography, landscape architecture, psychology, rural sociology, urban planning, literature, and resource and recreation management (Stokowski 2002, 370). Though all these fields have some similar components, between and within the fields there are different conceptions of place and how humans relate to it. The concept of place attachment originally comes from the field of geography.

Geography

Tuan (1974) originally termed place attachment “geopietty” and defined it as “an emotional or affective bond between an individual and a particular place, [which] may vary in intensity from immediate sensory delight to long-lasting and deeply rooted attachment.” Tuan’s concept of geopietty referred specifically to individuals’ attachment to family and homeland, as well as an overall respect and caring for the Earth and particular places within it. He illustrated the concept of geopietty by associating it with a variety of spiritual figures and ideas, including gods of ancient Greece, Rome, and China, who were believed to protect families and homelands; ancestor worship; “spirits of

nature,” patriotism and a rootedness to places where important events occurred (Moore & Graefe 1994).

Some people may revere the sun, the Earth, spring water, and striking topographic features such as the Black Hills. Others may become strongly attached to a place because it is their native land. Both pastoralists and hunter-gatherers can develop powerful feelings toward place. (Tuan 1976, 31)

Moore and Graefe (1994) point out that Tuan “used this term [geopiety] to convey a broad range of emotional and social bonds between humans and their terrestrial home—a special complex of relations between man and nature” (18). In his later work, Tuan (1977) was first to point out the difference between space and place, noting that, “space becomes place as we get to know it with value” (6).

Today, geographers continue to study the concept of sense of place. Geographer, Edward Relph (1997), notes that though sense of place is an important concept in fields ranging from economics to art, there is a difference in how geographers conceive of the concept as opposed to researchers in many other fields. Relph points out that in most fields, sense of place is seen to be inevitably good, and that focusing on it is better for the environment, individuals’ lives, and communities at large. However, in geography, as well as a few other fields, the contentious nature of place is beginning to be realized.

The geographical view is broader and less idealistic. For geographers, places are aspects of human life that carry with them all the hopes, accomplishments, ambiguities, and even horrors of existence. ... As a form of environmental connection, sense of place is existential and political. (Relph 1997, 208)

To illustrate this, Relph uses an example from his own life, in reporting and reflecting on the dynamic and temporal aspects of place, by focusing on the history of his boyhood home. He begins by describing the town he grew up in as, “barely a village, more a scattering of houses,” with no running water or electricity. However, despite the

hardships, the town itself was an independent and solid community, where all residents knew one another and their lives were intertwined. Relph goes on to report the noticeable shift that began taking place in the community as it became popular for middle-class people to move from the cities to the countryside. “Many of the local residents jumped at the chance to sell their properties and moved to nearby towns” (215). Thus, the once traditional, undeveloped cottages were renovated and modern conveniences were installed, or new developments, “neat subdivisions of big houses with suburban sidewalks and street lights,” were constructed. The new residents traveled long distances, sometimes over 100 miles, to work, while many of the original residents never even left the village. The entire village was transformed. “The village is in the same location where I grew up, but it really is a different place. ... These changes ... have profoundly altered the appearance and the meanings of places” (215). This experience is not unique to Relph, because places continuously change and the meanings and the values people subscribe to them are also dynamic.

The concept of sense of place was initially introduced into academia through geographers, and that field has not abandoned its analysis of the concept. Relph (1997) gives careful advice to further inquire into place, stating “A major task in teaching a geographic sense of place now is to convey what might be called cheerful suspicion” (221). This “cheerful suspicion” is an “unprejudiced” look at places; looking at all the aspects of a place and how these aspects interact and relate to the place as a whole (Relph 1997, 221).

Environmental Psychology

Like geographers, environmental psychologists have also extensively studied the concept of place. Environmental psychologists have noted that there are different ways to experience one's surroundings. Ittelson, Franck & O'Hanlon's (1976) proposed five different ways of experiencing one's surrounding environment: environment as external physical place, as self, as social system, as emotional territory, and as setting for action. The first of these, environment as external space, defines one's surroundings as a physical space that is merely "out there." Conversely, conceiving of one's surroundings as self is understanding place in terms of a deep connection, and as an integral part of self-identity. In this situation, place is more than physical space, but is a holistic look at one's surroundings, wherein the people and experiences within one's surroundings are perceived as part of the place. Next, in experiencing place as a social system, relationships with people are viewed as the most important aspect of the experience, and place is defined as a social landscape. The next mode of experience is the environment as emotional territory, wherein the emotional attributes individuals associate with places are the most important part of the experience. For example, the way in which adults relate to their childhood home is often on an emotional level. Finally, we consider place as a setting for action. In this case, the activity in which individuals engage dominates the experience for them.

Since Ittelson et al. (1976) analysis of experiencing place, environmental psychologists have extended particular modes, especially in relation to emotional territory. Prohasnsky, Fabian & Kaminoff (1983) introduced the concept of "place belongingness," which is a strong emotional attachment to place, similar to emotional

territory. Further, in terms of the mode of experiencing place as self, additional studies have explored the ways in which individuals create self-identities, and in this vein, the concept of place identity becomes an important component. In addition to examining the ways in which people relate to one another, it is also interesting and informative to study the ways in which people relate to their surroundings. “Environmental psychologists emphasize the constructed nature of place by describing the human actor as a social agent who seeks and creates meaning in the environment” (Saegert & Winkel 1990). Thus, the many ways in which individuals and groups relate to specific places become important considerations in studying identity formation.

Recreation Management and Place Attachment

Based on the earlier work of geographers and environmental psychologists, researchers began to apply and explore the idea of place attachment in relation to outdoor recreation settings (Moore & Graefe 1994, 19-20). Place attachment has become an important aspect of recreation in exploring how recreation users identify with recreation sites.

The literature on attachment to home and community clearly indicates that emotional bonds are associated with long-term relationships to places. Consequently, variables that quantify the history of association between the person and the place are expected to be good predictors of place attachment. Similarly, community attachment and forced migration literature suggests that strong emotional ties to recreation settings will reduce the willingness to substitute settings and increase the level of concern regarding how a place is used and managed. (Williams et al. 1992, 32-33)

The concept of substitution becomes pivotal to place attachment in regards to recreation settings, because recreation sites, like backyards or native homelands, begin to be recognized as unique settings beyond their ability to facilitate recreation experiences for specific activities.

Dimensions of Place Attachment

Place attachment is increasingly recognized as a useful concept in resource management. Within this framework of an individual's attachment to specific wildland settings, two dimensions have developed from research on place. Early in place attachment research within resource management, Schreyer, Jacob and White (1981) recognized these two dimensions: functional meanings and attachments, and emotional-symbolic meanings and attachments. The first of these relates to the specific activities that a place fosters, and the second relates to the feelings a place fosters. As Moore and Graefe (1994) state, "A place can be valued by a recreationist because it is a 'good' place to undertake a particular activity, or it can be valuable because it is seen as 'special' for emotional or symbolic reasons, or both" (20). These two dimensions have been labeled place dependence (activity related valuation) and place identity (emotional related valuation), and it is one of the goals of this study to look closely at these dimensions within the study area. It is the combination of these dimensions that comprise and define the concept of place attachment, with place identity referring to the conception of a specific place as central to an individual's life, and place dependence being the individual's refusal to substitute another site for participation in his chosen recreation activities (Moore & Graefe 1994, 20).

The fundamental assumption within the dimension of place identity is that places can have emotions intertwined in individuals' perceptions of them. Williams et al. (1992) state, "Thus, in addition to being a resource for satisfying explicitly felt behavioral or experiential goals, a place may be viewed as an essential part of one's self, resulting in strong emotional attachment to places" (32). Place identity is one's emotional connection

to the land, but also may be more abstract and relate to symbolic meanings, such as the way national parks are perceived as symbols of American heritage (Williams et al. 1992; Eisenhauer et al. 2000). “For these types of meanings, a place’s value is assigned by individuals, groups, or society, without necessarily involving a strong correspondence between physical attributes of the place and its meaning” (Williams et al. 1992, 32). In addition, place attachment goes beyond emotions to combine “attitudes, values, thoughts, beliefs, meanings, and behavior tendencies reaching far beyond emotional attachment and belonging to particular places” (Proshansky et al. 1983, 61). Thus, place identity is defined as,

Those dimensions of the self that define the individual’s personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, beliefs, preferences, feelings, values, goals, and behavioral tendencies and skills relevant to this environment. (Proshansky, 1978, 155)

Previous research analyzing the place identity dimension of place attachment has not only expanded the definition of place identity, such as the symbolic, cognitive, and behavioral aspects of attachment, but also has dealt with the different user characteristics and their relation to attachment. Moore and Graefe (1994) found that the most attached users of the study site were the most frequent users and those who lived closest to the trail; “Active, nearby individuals would seem to have a greater opportunity to get to know a local setting” (28). Though greater use and proximity tends to lead to stronger attachment to place, it is important to note that individuals need not have vast experience with a place to be attached to that place (Williams 1995).

The second dimension of place attachment is place dependence. Place dependence refers to how well a setting facilitates particular activities in which users engage (Moore & Graefe 1994, 7). Stokols and Shumaker (1981) identified two

components of place dependence. The first refers to the degree to which a particular place satisfies the needs or goals of users. The second component refers to how a particular place compares to other places that may also satisfy the recreationists' needs and goals.

Researchers have noted the importance of the dimension of place dependence in viewing a setting as a whole, rather than as a collection of different attributes. "Though conceptually similar to the multiattribute view of settings, terms like *dependence* and *specificity* put more emphasis on the overall necessity attached to a specific place for enjoying a leisure pursuit than the suitability of setting attributes" (Williams et al. 1992, 31).

Holistic Approach

Early approaches to resource management focused mostly on commodity-production values of resources and, as a consequence, recreation sites were analyzed based on their economic value. Theoretically, quantifying the value of a forest, for example, would be helpful in finding the optimal balance of tangible and intangible outputs and thus, gaining the net benefits. However, it became more and more evident that this approach ignored many important social and psychological values of recreation settings, which do not necessarily translate into dollar amounts (Schroeder 1996). Sense of place then becomes an attempt to consider, through scientific inquiry, the social and affective values of places (Schroeder 1996, 1). Warzecha and Lime (2001) state,

The importance of place attachment as a potential resource management tool stems from its non-economic approach used to help understand the value of natural places. ... Building a better understanding of the values people attach to places could be a step toward a more integrated approach to resource management. (60)

Multiple-use planning of public lands did not traditionally use only a commodity view to assess the value of lands, but also utilized planning models as a means of understanding public lands. However, like the commodity view, the computerized planning models, such as FORPLAN (Iverson & Alston 1986; Johnson, Stuart & Crim 1986), a forest planning model, assumed the interchangeability of sites. Therefore, sites with similar physical attributes were assumed to have the same values. “In regard to recreation use of sites, this would mean that people are indifferent between alternative sites, as long as the sites have the same kinds of environmental features and support the same kinds of activities” (Schroeder 1996, 1). Thus, both the commodity view and the computerized model approaches to resource management failed to realize the unique properties and histories of specific sites, and a new approach to both the recreation research and the planning being done became a necessity.

Moving from commodity- and model-based approaches to a more integrated and holistic view of resource planning required including people (and their values and feelings) into an analysis of particular resources. Mitchell, Force, Carroll & McLaughlin (1993) stressed this in writing,

At the heart of today’s forest management issues is emotion. The ‘felt’ perceptions of the forest are as real and as important as ‘scientific facts.’ Both should be incorporated into public land management planning. To do this, public land managers need to follow a process that integrates rational, objective science with the ‘felt’ perceptions of the forest. (37)

This shift towards recognizing the holistic value of forests began in the early 1990s, with researchers and resource managers alike realizing that more traditional approaches to resource management, most notably the commodity view, were too restrictive in their views. The idea that recreation settings were interchangeable and reproducible, and the

assumption that recreation was activity driven led to the conclusion that sites with similar attributes which afforded individuals opportunities to participate in a specific recreation activities all had nearly the same value. This view was replaced by one that attempts to recognize the emotional, symbolic and spiritual value of resources in multiple use planning. Thus, place attachment has become an important instrument in realizing the unique benefits of public lands.

Selecting two of the major failures of a commodity approach to wildland planning: failure to indicate specifically where proposed actions are going to take place, and failure to recognize and include the full range of meanings associated with wildland management, Williams et al. (1992) cite a place-based approach as a means of accounting for previous shortcomings.

The place perspective reminds managers of what the commodity approach can only hint at: why people care so passionately about the management of a particular resource. It demonstrates that places are not just the sum of interchangeable attributes, but whole entities, valued in their entirety. It recognized that resources are not only raw materials to be inventoried and molded into a recreation opportunity, but also, and more important, places with histories, place that people care about, place that for many people embody a sense of belonging and purpose that give meaning to life. (42-43)

Today, place attachment is firmly rooted as an important concept in both planning and research, and while the economic value of resources is still assessed, the ecological health of lands remains independently important. While models of recreation sites are still used to understand site value, there is a better understanding of the uniqueness of particular settings, and there are more attempts to include humans (and their emotions, cognitions, and behaviors) into an understanding of public lands.

Williams' Contribution

In the field of resource and recreation management, no individual has contributed more to the theory of place than Dan Williams. As one of the first researchers to bring the concept of place attachment into the field of natural resource management, Williams has published over 20 papers examining and explaining the concept of place attachment and the changing perceptions of place throughout the concept's existence within the field. Williams' 1988 paper outlined the outdoor recreation experience, and delineated three different modes of experience: activities, companions, and settings. Based on these three modes, recreationists' interactions with the setting become foundational in the recreation experience. For some, the setting may only be a backdrop for participating in a specific activity or social gathering with friends and family; however, for others, the setting may be central to the recreation experience. In the latter scenario, it is logical that attachment to place would be stronger for those who focus on the setting (Williams et al. 1992, 33). In addition, it was a Williams and Roggenbuck (1989) study that further defined, categorized, and expanded Proshansky's original concept of place identity, and Schreyer, Jacob, and White's concept of place dependence.

Williams was one of the first to recognize the limitations of the commodity-based approach to resource management and advocate for a different approach. In a 1995 paper, Williams cites a paradigm shift occurring within natural resource management. Spurred by the realization of public land values extending beyond those of tangible commodity production and ecological processes, there was born a demand to consider the emotional and symbolic meanings of public lands as well. Williams (1995) stated that this new paradigm shifts the focus of natural resource management in two distinct ways.

First are the spiritual benefits of natural resources (i.e. forests, rivers, mountains, etc), and second is that the new paradigm “recognize[s] the importance of a broader context or unit of analysis” (Williams 1995, 2-3). In this way, analysis goes past that of a single site or stand of trees and looks at the land from the level of a landscape or ecosystem. Schroeder (1996) refers to this as a more holistic approach of natural resource management, as was discussed in the previous section.

However, Williams’ (1995) introduction of this new paradigm into resource planning goes beyond his pointing out that spiritual and emotional values are attached to places. He additionally asserts that the old paradigm, focusing mostly on commodities, failed to take into consideration spatial and temporal contexts of resources. “The concept of place embeds these resource ‘attributes’ back into the system of which they are a part, reminding managers that resources exist in a meaning-filled spatial (and temporal) context” (3). Here Williams is stressing the necessity of the place approach to consider the value of landscapes (places) not as fixed and frozen in time, but rather, to recognize that there is a broad range of meanings attached to these places, whether by individuals or groups, and that these meanings will change and develop and new ones may even be introduced over time. Thus, the concept of place does not predispose individuals to have shared meanings of a place and does not require that individuals’ feelings remain constant over time. This point is exemplified in a paper by Patterson, Watson and Williams (2001) studying jet boat use on the Salmon River within the Frank Church River Of No Return Wilderness (FCRNRW). In studying relationships to place in a wilderness setting, the authors begin to divulge the sometimes conflicting nature of place

attachment. The authors point out that attachment to FCRNRW may vary due to its designation as wilderness.

Thus, some long-time users may be much attached to a place, yet express little enthusiasm for wilderness. Others' interest in a place may pertain largely to its status as designated wilderness, with little attachment to the place itself. Identifying such varying relationships to a place may help wilderness managers understand conflicting public reactions to wilderness allocation, planning, and management decisions. (Williams et al. 1992, 33)

Williams has continued to focus on the differing and multiple interpretations of place, reiterating that place is a socially constructed idea, imbued with human perceptions and feelings, and that the full range of meanings assigned to places must be taken into consideration in order for a place to be understood and well-managed; "An understanding of how recreationists perceive, choose, and relate to various settings is essential for researchers attempting to understand recreation behavior and managers attempting to provide opportunities for satisfying recreation experiences" (Moore & Graefe 1994, 18).

Place Research to Date

As recent research has concluded, management decisions and actions based solely on the combination of "rational use concerns" and "economic considerations" are not adequate in the eyes of the public; "Instead, these approaches must be supplemented with considerations of sense of place and other social phenomena to better comprehend factors that influence reactions to management actions" (Eisenhaeuer et al. 2000, 423). With place attachment gaining more relevance in recreation research, the concept began to be studied in many different contexts, with various types of recreation sites (city parks, wilderness areas, rivers, forests, and so forth), with the hope that an understanding of how recreationists choose, perceive, think about, and relate to settings would be helpful to both researchers and managers alike, fostering better recreation experiences (Moore &

Graefe 1994; Hull & Michael 1995). Bricker and Kerstetter (2000) assert, “To fully understand values associated with outdoor recreation places, an awareness of the degree to which different types of recreationists are attached to outdoor recreation places is necessary” (234).

Warzecha and Lime’s (2001) study of river users on the Green and Colorado Rivers in Canyonlands National Park, used 12 place attachment statements (regarding place identity and place dependence) as a means of evaluating recreation experience based upon recreationists’ level of agreement with the different statements. Since the authors studied users on two different rivers, they were able to use agreement levels on place attachment statements to segment visitors based on the visitors’ preferences and attitudes; “Results suggest that this analysis provides another useful variable for segmenting visitors with respect to their preferences and attitudes concerning recreation settings” (Warzecha & Lime 2001, 59).

While Warzecha and Lime (2001) focused on visitors’ preferences in regards to their recreation experiences, many other researchers have focused their attention on other user characteristics and place attachment. Among these studies is significant literature on activity involvement and specialization and its relation to attachment to recreation places (Warzecha & Lime 2001; Kyle et al. 2004; Kyle, Graefe, Manning & Bacon 2003). As discussed in the recreation section at the beginning of this chapter, activity involvement “reflects the degree to which a person devotes him or herself to an activity or associated product (Kyle et al. 2004). Kyle et al. (2004) claim, “there is indirect evidence suggesting involvement with activities leads to attachment to settings” (125). There are several different scholars’ research in three main categories that leads to this statement.

First, the finding of many scholars (Beatty, Kahle & Homer 1988; Bloch, Black & Lichtenstein 1989; Buchanan 1985; Crosby & Taylor 1983; Lastovicka & Gardner 1979) suggests that “involvement plays a formative role in developing psychological commitment to brand, a construct that is conceptually similar to place attachment” (Kyle et al. 2004, 125). In this case, involvement refers to one’s experience with a particular brand, and consequently one’s consistent reliance on a specific brand.

Next, in reference to specialization research, researchers (Bricker & Kerstetter 2000; Mowen, Graefe & Virden 1997; Virden & Schreyer 1988) have shown that specialization is linked to setting preferences, in that more specialized recreationists generally have more specific setting preferences than recreationists who are less-specialized. In addition, Moore and Graefe (1994) found that place identity was in fact significantly affected by activity importance.

Finally, results also indicated that development of attachments to specific settings is influenced by the affective and emotional elements related to activity (Kyle et al. 2003). In a study to analyze the claim of the relationship between activity involvement and place attachment, Kyle et al. (2004) report,

Results indicated that involvement’s influence on place attachment differed by activity and setting type. For each of the samples [hikers, anglers and kayakers] investigated, elements of the activity and setting differed in terms of their personal relevance and, consequently, involvement’s effect on place attachment also differed. (135)

In general, results suggested that leisure involvement and the importance of the chosen leisure activity within a recreationists’ life, are better predictors of place identity than place dependence. Though this finding seems somewhat counterintuitive (because it may be expected that the primary reason recreationists visit certain areas is to participate

in specific activities), these findings suggest that recreationists' participation in specific activities does not necessarily facilitate dependence on the resource, but on an "emotional bond" with the resource. "To manage recreation resources based solely on the activities enjoyed in the setting may be inappropriate if in doing so we ignore the more abstract elements of the experience such as values, beliefs, and feelings about specific recreation settings" (Kyle et al. 2004, 138).

Planning

Much of the research on place attachment not only intends to further build on the extensive body of literature relating to recreation and place attachment, but also serves the purpose of helping to better inform recreation managers and decision makers regarding recreationists' connection to land. Warzecha and Lime advocate unique river management plans based on such things as biological health and sustainability, the human component of place attachment, and the unique aspects of different rivers (Warzecha & Lime 2001, 75). "Building a better understanding of the values that people attach to places could be a step toward a more integrated approach to resource management" (Warzecha and Lime 2001, 60).

Recreation literature produced a major benefit for land managers in helping them identify key stakeholders within a specific recreation setting (Warzecha & Lime 2001, 59). The concept of place attachment becomes very important as it can often reveal deeply committed individuals who may contribute as a stakeholder included in the planning process. As Bricker and Kerstetter (2000) recognize,

Place attachment (as measured by a place attachment scale) could be a relevant tool in understanding how people view selected management alternatives. ... Through an understanding of individuals who are deeply attached and perhaps deeply committed to a particular recreational setting, managers can identify stakeholders that should ultimately be incorporated or accounted for in the planning process. (254)

Warezecha and Lime (2001) also contend that though a study of users' attachment to a specific recreation setting may not eliminate resource/recreation conflicts, it would help to better inform the managers.

Although integrating place attachment into the planning process will not eliminate resource-based conflicts, it may provide a way to discover commonalities that exist between and among opposing stakeholder groups. ... Place attachment also serves as a useful tool to identify individuals or groups who ought to be included in the public involvement process. (Warezecha & Lime 2001, 61)

Thus, the research that has been done regarding the dimensions of recreationists' attachment to place, reveals that this remains a useful and necessary concept for recreation managers and should be incorporated into studies dealing with settings in which recreation conflict may exist.

Special Place

Awareness of the importance of sense of place in recognizing the different values attached to recreation places leads to a need to go beyond looking at a recreation place as an undifferentiated whole. Within the concept of sense of place, there emerges the idea of attachments to specific places. Schroeder's (1996) study wherein participants identified 'special' places, extends the concept of sense of place. The term 'special' denotes something of particular value and therefore allows for a range and degree of interpretation of places people have imbued with meaning (Bricker & Kerstetter 2002 398). The concept of special places adds to the idea of place attachment in that it looks at individuals' connections to the environment on a more detailed level.

Though special place is not a concept that has been researched nearly as much as place attachment, a major focus of previous special place research has been in relation to visitors' emotional attachment to special places within geographically larger recreation places. While engaging in activities within a special place has been identified as necessary for an emotional attachment to form, individuals' establishments of special places are not based upon the utility of these places to allow for engagement in their chosen activities, rather, the connections to landscapes represent "unique ties between people and place, ones in which the connection with the landscape is based on an appreciation for the place that incorporates emotive elements and intense caring for the locale" (Eisenhauer et al. 2000, 423).

Previous research on special places has focused both on the emotional attachment individuals have to special places within the recreation area and the nature of identification of special places. In reporting similarities between two special place studies that Schroeder conducted, he states "In particular, the importance of beauty and serenity in the experience of natural places, and the presence of harmonious blending of natural and human influences were important themes in both studies" (Schroeder 1996, 11). This finding is interesting because the two places Schroeder studied were remarkably different: one was the Black River located in rural Michigan, and the other was the Morton Arboretum, located just outside Chicago (Schroeder 1996, 11).

Underscoring Schroeder's findings, a study by Bricker and Kerstetter's (2000) assessed the special places reported by river recreationists. Findings indicated that special place was a 'multi-dimensional' concept; for some, the importance of their reported special place was based solely on their relationship to the environment or the

social context of the situation, while for others the importance of the combined environmental and social attributes gave special meaning to a specific place. In addition, the meanings that individuals gave to special places were based on a variety of reasons, from the technical-activity based challenge found within a special place, to the more general conception of a specific place as a place to escape from everyday life. Bricker and Kerstetter's findings indicate that while their special place research supports the concept of place attachment, an in-depth look at special place goes further into analyzing the complex relationship individuals have with places, "While findings of this study support the notion of attachment and its attendant dimensions, the special places as described by participants in this study were more likely to reflect the complex concepts of place attachment" (418).

Based on this previous research, the concept of special places has become an important one in recreation management. "Managers should consider giving special consideration to the most resource-dependent users and should recognize that users' attachment to special places may warrant special consideration for these places during planning processes" (Moore & Graefe 1994, 28-29). Here it is stressed that managers be aware of those using the resource and that they take stock of frequent users in recognizing special places within the entire resource and recognizing important users of those special places. This is not to say that one voice should be more important than another, but rather, that managers should utilize and inform recreation users. "Through an analysis of the meanings individuals attach to special places, managers can begin to get a sense of how their users define and value the resource" (Bricker & Kerstetter 2002, 420).

Further Bricker and Kerstetter (2002) point out the importance of managers' understanding of how visitors geographically define places the managers' manage. "Special places were described as the entire community, the river corridor, reaches within the corridor and specific locations. Changes to any one of these special places may have enormous impact on individuals' perceptions of the entire river corridor" (420). Thus, managers gaining a better understanding of how visitors' understand, define, and relate to special places may greatly help in the overall management of a resource.

In their 2002 study, Bricker and Kerstetter examined the idea of 'special place,' and the meanings kayakers attach to the South Fork of the American River. Their findings indicate that a "person's attachment to a particular place can contribute to our understanding of the quality nature-based tourism experiences" (396). Further, Bricker and Kerstetter advise future studies to "explore whether visitors to natural resources have differences in descriptions of special places based on the type of activity they are engaged in" (421). Understanding this will give decision-makers exposure to the diversities and similarities among recreation users.

While future research will not only help managers with their jobs of protecting natural resources and fostering quality recreation experiences, studies of special place also have the ability to inform a growing body of literature.

Attachments to special places are bonds with a locale based on a sense of place that involves sentiments extending beyond the use value of the land. ... And [these] unique place attachments are important considerations for social science researchers seeking to comprehend the wide variety of connections people have with areas of the natural world. (Eisenhauer et al. 2000, 438)

Thus, it becomes necessary to take into consideration the idea that how individuals identify with a place may differ in one or more ways. How individuals connect with a

place may indeed be a unique experience for that individual based on different aspects of that person as well as society at large.

Contested Nature of Place

Social Constructivism

Throughout the research on sense of place, there is an underlying assumption that ideas, values, and understandings of recreation areas are socially constructed.

“Constructivism is premised on the claim that a particular topic, idea or category is socially, culturally, and historically produced, as opposed to being an inevitable, inherent, ‘naturally’ occurring, objective truth” (Yung 2003, 48). Thus, social constructivists argue for multiple realities, or understandings, of a shared space. Bell (1998) gives the following example,

When two people look out on a scene, a scene of any kind, they are unlikely to appreciate it in just the same way. Faced with the same material circumstances, we each see something different. Where my brother Jon saw the beauty of wild nature in that view from Glacier Point, Steph’s grandmother saw wasted resources. Such differences are a part of our individuality. They reflect social differences in the apparatus of understanding that we use to organize our experience. There are larger social and historical patterns in the distinctive mental apparatuses we each bring to bear on the world around us. In a word, there is ideology at work. (145)

Viewed in this way, the concept of place has different meanings for different people, groups, and cultures at different times. The temporal nature of social constructivism becomes a very important aspect in relation to place attachment. “The social constructionist perspective on the development of sense of place inherently asserts that place attachments are processive rather than static, and as such, these unique connections between people and places on public lands should be monitored periodically” (Eisenhauer et al. 2000, 439).

Menning and Field (2000) outline social construction as it applies to outdoor recreation, outlining the roles of both management and recreationists in relation to recreation spaces. “Public sector planners and managers of resource-based recreation seek to understand and guide the interaction between recreationists and natural area. To this end, recreation providers design and develop recreation sites with particular goals in mind” (8). They term these specific sites “recreation places.” In addition, “recreationists, for their part, overlay their own social organization and patterns of leisure behavior on the recreation sites (‘recreation places’) provided by the public sector managers. We call these recreationist-produced sites ‘leisure settings’” (8). For example, recreation managers create fishing access sites as “recreation places;” however, the activities that take place at these sites and subsequently on the river, extend beyond mere boat angling, to include Frisbee, soccer, and rock skipping as a few of the many diverse activities that take place at such sites. “Places, in other words, can be seen as socially constructed entities to which various people experience different degrees of attachment and identification” (Kaltenborn & Williams 2002, 191).

Menning and Field (2000) further point out that while the concept of American Wilderness has been influenced heavily by a social constructivist perspective, recreation areas in general have had a lot less attention paid to them as socially constructed places. “Constructivist perspectives have been widely employed in analysis of the meaning of nature and, more specifically, wilderness in the United States. Less attention has been paid to the social construction of nature within more ordinary outdoor recreation contexts” (Menning & Field 2000, 2). This is an important distinction, as it becomes

necessary for managers, researchers, visitors and locals alike to realize the differing and multiple interpretations that may exist within an area.

Limitations of Social Constructivism

Though social constructivism seems inherent within the concept of sense of place, there are some drawbacks in adopting a strict social constructivist approach. In the social constructivist's view of reality, all issues and ideas are socially created. Thus, the paradigm has been critiqued for ignoring real, biophysical problems existing within the world. For example, from a social constructivist viewpoint, species extinction is only a problem if society decides it is. However, this ignores the reality that many species are extinct, never to exist again, regardless of whether or not we, as a society, acknowledge it.

In addition, extreme social constructivism gives equal value to all constructions. If one accepts the proposition that everything is socially constructed, there exists no way to judge the merit of constructions via an independent reality. Therefore, this paper reflects the position of a moderate social constructivist approach, which recognizes and acknowledges that differences between individuals and groups create natural resource conflicts and issues, but at the same time, acknowledges and recognizes the importance of the biophysical properties of the recreation setting and the importance these play in how an area is used and valued.

Contested Nature

The social constructivist perspective regarding attachment to place generates the idea of contested places. Differing perceptions and values regarding a similar geographic space often exist and these necessitate further investigation of the concept of place and

place attachment. Stokowski (2002) recognizes the limitations of earlier concepts of sense of place,

Despite the assumed positive values that accompany the notion of sense of place, critics have recently emerged from a variety of academic and public contexts. Their analyses suggest that places are more than simply geographic sites with definitive physical and textual characteristics—places are also fluid, changeable, dynamic contexts of social interaction and memory. (370)

Thus, it becomes important to realize that sense of place is a combination of “the meanings, history, memory, values, beliefs, feelings and sense of identity that people associate with particular biophysical locations” (Yung 2003, 62). Too often, especially within recreation management, it was assumed that people’s attachment to place was one of unity, shared meanings and understandings, revealing “common ground.” However, these assessments may have ignored the differences between and within locals, visitors, managers, and agencies. “Places are, therefore, repositories and contexts within which interpersonal, community, and cultural relationships occur, and it is to those social relationships, not just to place qua place, to which people are attached” (Altman & Low 1992, 7).

In first recognizing the importance of differing attachments to place, and moving towards the notion of contested places, it is important to engage in a discussion of the word place. Tuan (1976) was one of the first to make the overt distinction of place and its differentiation from space. Since then many researchers, when investigating the concept of sense of place, are quick to point out the social constructions inherent within the concept of place, that do not exist for mere geographic spaces; “Space becomes place when people create and attach meaning to it” (Williams 1995, 4). Thus, it is important to realize the distinction in that places are imbued with human meaning far beyond that of

their physical, geological attributes. “In its increasingly revitalized form, *place* is often evoked to describe socially constructed space—that is a location that has been imbued with meaning” (Williams 1995, 5).

The acknowledgement that places are imbued with human meaning ultimately leads to questions regarding symbolism, material access, and control of resources. At this point, a focus on the social value of the recreation site becomes important. Within the recreation community there will inevitably be different interpretations of what the resource means to each individual. “The very same setting can mean very different things to different individuals associated with it” (Stokowski 2002, 369). These differences not only exist in relation to individual recreationists, but are common between and within different groups and cultures. Greider and Garkovich (1994) state “The meaning of the landscape is not inherent in the nature of things.” Rather, “cultural groups transform the natural environment into landscapes through the use of different symbols that bestow different meanings on the same physical objects or conditions” (2).

Thus, attachments to a recreation site between differing recreation groups (for example hikers and off-road vehicle users) becomes a discussion not only of different material interests in the physical landscape, but also of different ideas of the symbolic importance of a shared recreation site. In recognizing the differences inherent within place, the symbolic meanings attached to place become important; “symbolic struggles over place are inextricably connected to material struggles over access, use and control of resources. That said, place research can inform policy and management, although better understandings may not always resolve conflict or illuminate common ground” (Yung 2003, 62). In each case, there is the interaction of both the material and the symbolic

representations. Thus, both the hikers and the off-road vehicle users benefit from the presence of undeveloped land within a multiple-use recreation site, but the symbolism of the open land may differ for these different user groups, and often times, this difference translates to conflict. “Management of resources, and the various systems of meaning attributed to resources, inevitably implies some level of conflict among different groups with attachment to the resources” (Kaltenborn & Williams 2002).

Places become contested, when two or more individuals, groups or cultures, ascribe different meanings to the same physical place,

Indeed, it is the values that people attach to places that are often at the heart of natural resource management conflicts. For example, controversy surrounding Devils Tower National Monument in Wyoming centers on symbolic meaning versus visitor use. Conflicts between American Indians, who ascribe sacred value to the geologic formation, and rock climbers, who value the challenge presented by the vertical protrusion, are not an issue until the values of both groups converge in the same place. (Warzecha & Lime 2001, 60)

Through a realization of the contested nature of place, many authors have moved the concept of place into the political realm (Relph 1997; Stokowski 2002; Yung 2003; Healy 1997). Thus, it becomes important to recognize that place becomes a political concept; “an intersection of common ground and political difference” whether it be between or among different recreation groups, property owners, commercial guides or visitors (Yung 2003, 62).

The Upper Yellowstone River

In November of 1997, after 100-year floods in 1996 and in 1997, former Montana Governor Marc Racicot created a task force of diverse stakeholders to develop a set of recommendations for management of the upper Yellowstone River Valley. Over the seven years in which the task force met, the members used information from a variety of

studies on and around the upper Yellowstone River to develop its recommendations. Recommendation VI.d stated, “A study should be funded to identify the current conflicts and potential future conflicts arising from changing uses of the upper Yellowstone River” (Governors 2003, 13). This recommendation points to the need to further study the human dimensions interacting within the upper Yellowstone River Valley.

Currently, most of the studies conducted on the Yellowstone have related to the ecology of the system, focusing on riparian management, fisheries, bank stabilization and river modification. Humans, however, cannot be left out of this equation, as human modifications profoundly impact and change the river. Thus, in order to best manage the upper Yellowstone River, there is a need to understand those using the river.

According to the researchers of a recent socioeconomic assessment, “The beauty of the Upper Yellowstone River is paramount in its contributions to Park County quality of life” (Socioeconomic 2002, 13). Regardless of the group being interviewed in this study (businesses, residents, visitors), there was an underlying acknowledgement of the importance of the upper Yellowstone River. However, and many groups within the study noted, there is quite a bit of conflict regarding how individuals and groups perceive the upper Yellowstone River and what is important to them regarding the river.

The stakeholder interview process and the perceptions gained from it suggest that there are indeed a number of different stakeholder groups within the study area and that they do have different views about use of the Yellowstone River, threats to the river, management viewpoints and underlying basic values. (Socioeconomic 2002, 10)

Despite the divergent views and values expressed by stakeholders from these different entities, there was some agreement between groups.

Stakeholders, residents, businesses and visitors almost universally expressed that recreation was an important component of the quality of life and quality of the visitor experience in Park County. Every stakeholder group, from ranchers to outfitters to realtors, mentioned recreation as some element of the important issues they perceived with regard to use of the river. (Socioeconomic 2002, 1)

From this, recreation is identified as a key value of the upper Yellowstone River. Not only does the ability of residents to recreate on the upper Yellowstone River contribute to their overall quality-of-life, river recreationists are also a substantial contributor to the Park County economy.

The near consensus between stakeholders, businesses, and visitors as to the importance of recreation on the upper Yellowstone River allows for a basis for further investigation. In order to predict future and understand current conflicts on the river, there is a need to understand the different ways the river is being used, how the users identify with the river, and why the river is important to the users. Thus, while the socioeconomic study identified stakeholders on the upper Yellowstone River, it now becomes necessary to learn more about these groups.

The potentially critical state of this watershed is not a new concept for Montana. The Beaverhead and Big Hole Rivers have experienced such increases in recreation use that the Montana Fish, Wildlife and Parks (FWP) Commission enacted special regulations regarding recreation use in 2001 (FWP 2004a) in order to address social conflicts on these rivers. FWP has managed the Smith River through a permit system for many years, and currently, Pennsylvania Power & Light (PPL), the largest electric company in Montana, is leading efforts to develop a recreation management plan for sections of the Missouri River. FWP is now in the process of developing a statewide river recreation policy that will guide how the department addresses social conflicts on

rivers. All these plans and management issues deal with the human dimension of the resources and the effects of this dimension on the ecology of the watersheds. Though the upper Yellowstone River watershed is not considered to be ecologically distressed like other rivers in the state, preliminary indications show that the increased amount of use on the river and the continuous flow of new property owners to the area might be affecting people's river recreation experience. In 2004(b), FWP conducted an internal review on rivers in the state in order to assess the level of social conflicts occurring and determine where the department might need to initiate further analysis and management actions. Although the review was not a rigorous scientific study, the results labeled the Yellowstone as a high conflict area where the department needs to acquire more information on the issues and the amount and types of use that are occurring.

The upper Yellowstone River has been "tagged" as a river where social conflicts are reaching a level that might soon require additional management actions in order to preserve the quality of the recreational experience. It is therefore the intention of this study to utilize the concept of place as a potentially contested idea, having different meanings to different users, as a way of better understanding views of the watershed. In addition, this study attempts to learn more about the upper Yellowstone River through elaborations of special places on and along the River. Finally, there exists the need to learn more about those using the River, including their demographic information and information regarding activities and satisfaction.

Summary

In summary, this chapter began with a broad introduction to recreation, and a discussion of what recreation is, including some of the benefits of recreating. In addition,

recreation literature referring specifically to river recreation was introduced. Further, river recreation and the concept of place were connected through a review of pertinent literature.

Next, the chapter reviewed place attachment literature. The concept of place attachment was initially termed 'geopiety,' and developed from the field of human geography. Since its introduction into academia, the concept of individuals' attachment to places has developed and expanded and is a focus of study in many different disciplines, including art and economics. Place attachment has been a useful concept in recreation management, as it has given managers a new way of analyzing and viewing recreation users' identification with recreation settings beyond the limited consideration of settings as good places to participate in recreation activities. The emotional aspects of attachment to place were introduced as place identity. The other dimension of place attachment, place dependence, refers to how well a setting facilitates particular activities in which users engage.

The concept of sense of place was further discussed through an introduction of special place research. The concept of special places extends place attachment, by focusing on specific places within a larger recreation settings and emphasizing recreationists' identification of these places, as well as evaluating the differing reasons places become special (i.e. emotional attachment, symbolic meaning, or activity based).

After an introduction to place attachment, the concept of place was further developed. Place was introduced not only as common ground, but as a space that has become imbued with human meaning forcing consideration of the fact that individuals'

perceptions of a shared space can differ. These potential differences lead to contested places within a variety of settings, including recreation places.

Finally, the chapter introduced the upper Yellowstone River as a potentially contested watershed. The changing uses of this section of the river, and the increase in river users has led river managers to focus their attention on the upper Yellowstone River in an attempt to proactively deal with some of the surfacing human issues within the watershed. The next chapter outlines how, based on the relevant literature given and specific parameters of the upper Yellowstone River, this study was conceptualized and conducted.

CHAPTER THREE: METHODOLOGY

This chapter begins with an exploration of the nature of science, and situates this research within the specific paradigm of hermeneutics. Further, the study reviews the type of methods used, both qualitative and quantitative. Next, the study area and research participants are described. Then, a discussion of the quantitative survey instrument and qualitative interview guide, outline the specifics of the study. The chapter closes with a review of the data analysis and the limitations and assumptions of this particular study.

Research Framework

For this research project, hermeneutics was chosen as the appropriate research paradigm within which to situate the study. Kvale (1983) defines hermeneutics as the study of “objectifications of human cultural activity as texts with a view to interpreting them, to find out the intended or expressed meaning, in order to establish co-understanding, or even consent.” The ontological commitments of hermeneutics assert the existence of multiple realities. According to hermeneutics, realities vary depending upon culture, time, and the individual (Patterson & Williams 2001, 3). Further the axiological commitments of hermeneutics contend, based on the notion that reality changes, that the goal of hermeneutics is to achieve understanding and communication within these changing realities. Thus, if one agrees to the concept of multiple realities, it makes sense to strive for a richer understanding of a specific research question in regards to individual human experiences, taking context and time into consideration. Finally, in regards to the epistemological assumptions, hermeneutics states that the whole of science is biased and that observations are “tainted” by the researcher’s conceptions (Patterson & Williams 2001, 8). A hermeneutical approach thus reflects the “situational influences,

shared cultural practices, and social ideologies” as influences, recognized or not, within individuals’ responses (Patterson & Williams 2001, 8).

The epistemology of hermeneutics relies upon Heidegger’s “forestructure of understanding” (Patterson & Williams 2001, 13). This refers to the notion that an individual’s understanding is based on what is already known, and it is this forestructure of understanding that differentiates the epistemology of hermeneutics from other, similar paradigms. Hermeneutics argues that researchers cannot set aside their prior knowledge, but rather, examining their interpretation of data with regards to their prior knowledge will allow for a richer and deeper understanding of the individual responses (Patterson & Williams 2002). Arnold and Fischer (1994) refer to this as the researcher’s pre-understanding, contending that each researcher brings his or her prior knowledge, experience, cultural background and expectations to the research (Patterson and Williams 2002).

Thus, one of the major tenets of hermeneutics is that interpretations are nonobjectivist. Based on the ontological commitment of multiple realities and the researcher’s forestructure of understanding, multiple interpretations of the same data are always possible (Aronld & Fischer 1994; Patterson & Williams 2002). Though this approach may make proponents of strict quantitative approaches to research uneasy, it is argued that interpretation is present in both approaches (quantitative and qualitative), in that survey respondents still must interpret the items on the questionnaire and decide how they are “supposed” to answer (Patterson & Williams 2002).

Further along the lines of interpretations of meaning is the concept of the hermeneutic circle. Arnold and Fischer (1994) tell us that the meaning of the whole text

is based on the individual elements of the text, while the meaning of the individual elements of the text can only be understood by referring to the text as a whole. “The hermeneutic circle therefore creates a continuous back and forth process between parts and the whole to achieve an interpretation” of the text (Dvorak 2004, 43).

It is these elements of hermeneutics that underlie this study. The pre-understanding of the researcher is the most important of these, as it is the researcher’s forestructure of understanding, grounded in an extensive review of literature and past experience with concepts of place, which contributes to the execution of this study. While hermeneutics is a paradigm chosen when using strictly qualitative data, it can be used with quantitative data as well. In this study, using both quantitative and qualitative data, it was the researcher’s prior experience through literature review and discussions with local upper Yellowstone River users that allowed for the conception of the quantitative survey. While the analysis of this quantitative survey did not necessarily enlist a hermeneutic interpretation, its combination with the qualitative data allowed for rich and meaningful interpretations of data, in accordance with the tenets of hermeneutics.

Research Approach

This study utilizes both a quantitative and qualitative research approach to investigate use and the attachment to place along the upper Yellowstone River. Both forms of data are used in an attempt to gather the most complete look at the watershed and its users. Quantitative data is used to create a profile of recreation users and their basic attachment to the upper Yellowstone River. A qualitative approach is then introduced to gain a more in-depth look at how the watershed is understood, perceived, and described by its users, as well as to investigate the concept of special places along the

upper Yellowstone River. The decision to use qualitative research was based on its use in other relevant studies (Schroeder 1996; Bricker & Kerstetter 2002; Eisenhauer et al. 2000). “Through qualitative analyses results indicated that different types of place meanings play an important role in an individuals’ preferences for places” (Bricker & Kerstetter 2002, 396).

Using both quantitative and qualitative data was a major strength of this study as it allowed for more information and more depth of information to be generated than using only one method. The quantitative approach allowed for generalizability of river users because of the number of users sampled, while the qualitative method allowed for a more in-depth look at the concepts being studied. Using both methods together provided the opportunity for triangulation of the data, wherein the different data sets built off and reinforced one another to add to the strength and legitimacy of the findings.

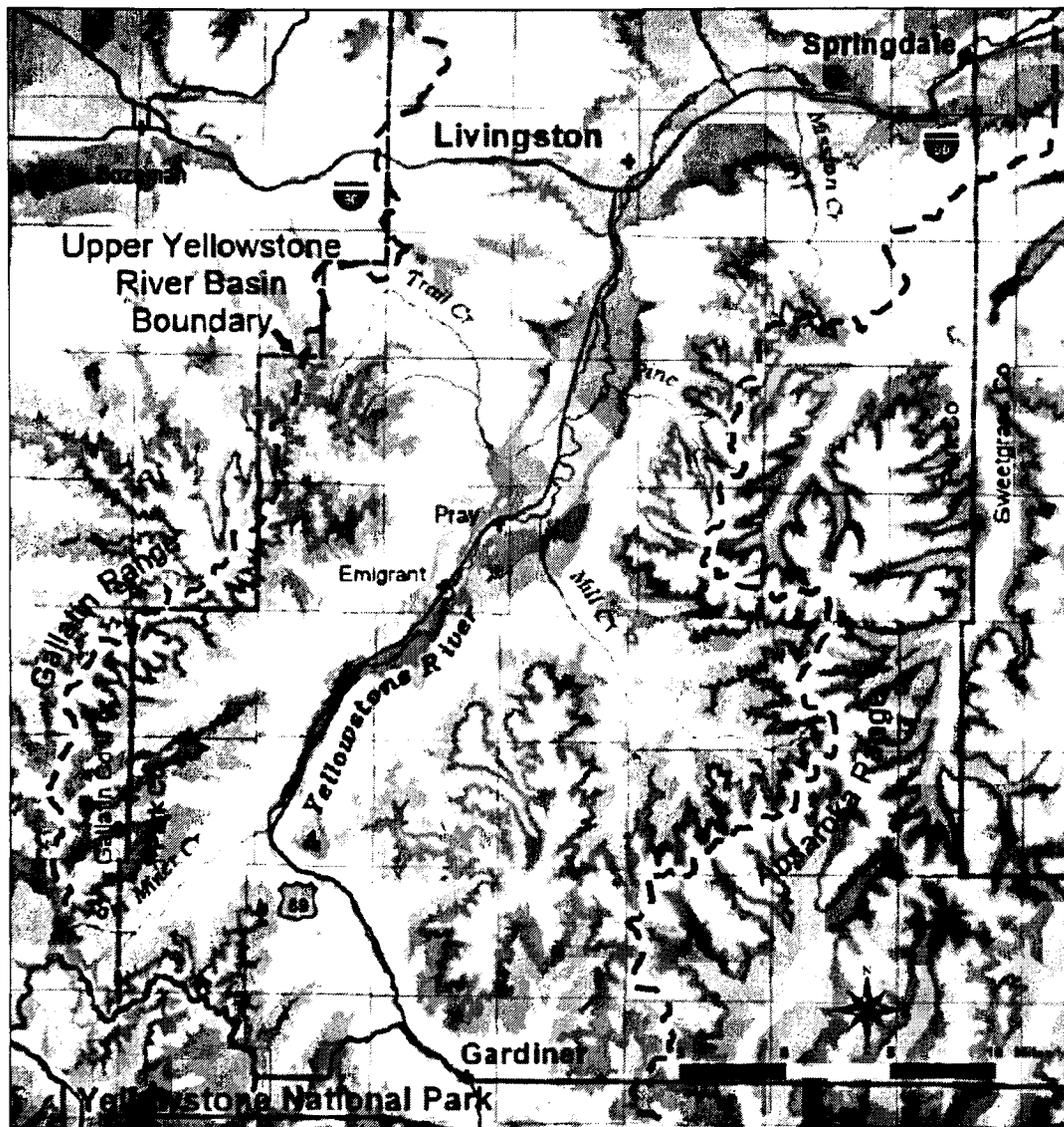
Study Area

The section of river chosen for this study was based on the boundaries identified by the Task Force, the diverse group of stakeholders who developed recommendations for the future management of the upper Yellowstone River. This included the upper Yellowstone River corridor within the boundaries of Park County, Montana, beginning at the northern boundary of Yellowstone National Park and extending to the Springdale Bridge, approximately 20 miles east of Livingston, Montana. The section of the river is surrounded by Yellowstone National Park to the south, the Gallatin Mountain Range to the west, the Absaroka Range to the east, and the Crazy and Bridger Ranges to the north (reference Figure 1). The section of the Yellowstone River included in the study is approximately 85 miles long, within a 2,930 square-mile basin (Governor’s 2003, 55).

The Yellowstone River is the longest free flowing river in the lower 48 states and is habitat for diverse wildlife and fish populations. Approximately 90 percent of the land adjacent to the River within the study site is privately owned. Along this section of river there are 23 public fishing access sites and numerous rest and picnic areas. The upper Yellowstone River cuts through the heart of Park County and the city of Livingston, Montana, as the river “dissects the city from south to north” (Governor’s 2003, 56).

Though the proposed boundary is a large area, it was important to sample from this area because of the traditionally different recreation activities that take place within specific portions of this large watershed.

Figure 1: Upper Yellowstone River Study Area



Note: From Governor's upper Yellowstone River Task Force: Final Report. (2003, December 15). www.upperyellowstonerivertaskforce.com

Sampling Frame

The purpose of sampling has been explained as a means of representing a phenomenon too large to be considered in its entirety (Patterson & Williams 2002). In light of this, a major concern of sampling is representativeness. It has been argued that representativeness can be conceived of in different ways (Patterson & Williams 2002).

“It may be a question of obtaining results that are statistically generalizable or obtaining an unbiased estimator of the population” (Dvorak 2004, 47).

The hermeneutic approach does not outline a specific sampling approach; it only encourages that the “researcher recognize that a sampling approach must consider the multiple competing goals in respect to representativeness” (Dvorak 2004, 47). For the purpose of this study, representativeness is conceived of as how thoroughly and richly the data represents the individuals participating in the study and the concept of attachment to place and special places.

Quantitative Sampling

In sampling for the quantitative survey, the goal of the researcher was to get activity representation. This was accomplished by sectioning the river into different activity sections and sampling each section equally. By the nature of the upper Yellowstone River and the surrounding landscape, certain activities occur in certain areas. The upper portion of the upper Yellowstone River, coming right out of Yellowstone National Park, is quick and narrow with sections of rapids. It is in this section that most of the rafters and kayakers are observed. Following this, the river spreads out and becomes wider and begins to braid. This section is between the towns of Gardiner and Livingston and is where most of the fishing (boat, wade, and bank fishing) and leisure floating takes place. Next is the section that runs through Livingston. This section of the river sees a lot of activity on and within the river corridor. Activities along the riverbank include walking along the river on the path, and walking dogs at the dog park adjacent to the river. On the river there are various activities including: fishing and leisure floating; beginners learning to kayak; and groups inner-tubing down the river.

Beyond the town stretch, the river continues to be open and wide with braids. Individuals using this stretch are usually participating in boat angling. While these activities are typical in specific areas, it is important to realize that no activity is limited to a specific area, for example, individuals may kayak in the section that runs between Gardiner and Livingston and others may fish in the narrow section right outside of Yellowstone National Park.

Once the river had been divided into activity sections, the strategy used to gain survey participants within each section was the passer-by method. Using the passer-by strategy allowed the researcher to sample all individuals present at sampling sites. Sampling sites for this project were 23 designated fishing access sites, and attempts were made to sample all recreationists encountered at all of these sites. Recreationists were defined as anyone who was engaged in a leisure activity, such as sitting by the water, rafting, bank fishing, or socializing. With the exception of guides, everyone encountered at the sampling sites was participating in a recreation activity. Guides were not specifically asked to participate in the study, since they were engaging in work-related activities, however, many guides requested to participate, considering their profession a recreation activity as well. All individuals encountered at the fishing access sites were asked to participate in the questionnaire portion of the study

Qualitative Sampling

The qualitative method of sampling was used in conjunction with that of the quantitative. However, participation in the open-ended interview portion of the study was reserved for individuals who had prior substantial experience with the study area. Therefore, only individuals who had been recreating on the upper Yellowstone River for

five or more years, four or more days a year were asked to participate. This was done because the interview was primarily based on the respondents' current and prior experiences with the river. Before asking intercepted individuals to fill out the quantitative survey, the researcher asked how long they had been using the river. If individuals had not used the river for five or more years, they were then asked to fill out the quantitative portion. If individuals had used the river for five or more years, they were asked to participate in the qualitative interview and then asked to fill out the survey. In many cases, individuals who had prior experience using the river, but did not have the time to participate in the interview, were still asked to fill out the quantitative survey.

It is important to realize that only a portion of the results from this study are statistically generalizable, those being the results from the quantitative portion of the study. The results of the open-ended interview portion of the study are not statistically generalizable. It is important to note, however, that the aim of the qualitative portion of the study was to better understand the concepts being studied and the individual experiences of the interview participants rather than to be statistically generalizable.

Intercept Sites and Schedule

A rotational, random sampling schedule was designated prior to data collection beginning. The schedule included sampling at 23 different fishing access sites selected because they include all the public river access sites within the boundaries of this study; in order for recreationists to access the river, they must do so from one of these fishing access sites.

Sampling occurred in the summer of 2004, from June 21st through September 6th. The sampling schedule was designed based on a random selection of dates and times for

each site so that each site was visited at least six times, for at least an hour each time, throughout the study. Each site was sampled at least two times during weekend days, which were anticipated to be the busiest times. After initially sampling from 6 am through 8 pm to determine when the sites were busiest, three different time schedules were created and written into the sampling schedule on a rotating basis: 8 am until 4 pm; 10 am until 6 pm; and 12 pm until 8 pm.

This study utilized two forms of data collection: a close-ended, 2-page questionnaire (quantitative) and an open-ended, semi-structured, in-depth interview (qualitative). As stated earlier, these two approaches were used to gather the richest and most useful data possible.

Quantitative and Response Rate

The first portion of this study was a two-page, 19-item questionnaire (Appendix A). The purpose of this questionnaire was to gain a basic understanding of the ways in which recreationists are using the river (i.e. the activities in which they are participating): why they chose the upper Yellowstone River; whether or not they hired guides for their river experiences; their overall levels of satisfaction regarding their river experience; the number of times and how long they visited the study area; and general demographics of the river users. Further, the study used an updated version of the traditional place attachment scale to gauge recreationists' attachment to the upper Yellowstone River. The chosen place attachment statements were based on a Williams and Vaske (2003) study, the focus of which was to evaluate the effectiveness of historically used (Williams & Roggenbuck 1989) place attachment statements. The survey consisted of statements referring to dimensions of place identity and statements measuring place dependence

adapted to reflect the study area. Respondents replied on a six-point Likert scale referring to their level of agreement to each place attachment statement. In addition, a section of the survey was devoted to potential concerns of recreationists. This section was adapted from survey instruments used on various Montana rivers and reservoirs (Dvorak, Nickerson & Wilton 2004; Dvorak, Nickerson, Wilton & McBride 2004; Glaspell, Nickerson, Dillon & McMahon 2000). Seven identified issues that could be a source of conflict or concern were highlighted, including development along the river corridor and feelings of crowding while on the river. Respondents answered based on a six-point Likert scale relating to their levels of concern.

In order to get as many recreationists as possible to fill out the questionnaire portion of the study, questionnaires were done both on-site and as mail-backs. Recreationists were encouraged to fill the surveys out on-site, however, since the survey asked questions regarding the recreationists experience for the particular visit during which they were intercepted, many visitors had to be given a survey to mail-back since their recreation experience was just beginning. The mail-back response rate was quite low (28%) with 32 out of the 111 surveys given out being mailed-back. However, the on-site response rate was much higher (98%) with only nine rejections. A total of 307 surveys were collected.

Qualitative and Response Rate

When approached, recreationists were first asked some introductory questions: what activities they normally participate in when using the river and how long they had been using the river. If the recreationists reported using the upper Yellowstone River for five or more years, they were first asked if they would participate in an open-ended

interview (Appendix B) and then fill out the survey. Recreationists who did not have time to participate in the interview, or did not have a history of river use, were asked to fill out the questionnaire, but did not participate in the interview portion.

The interview portion of the study consisted of in-depth personal interviews. As mentioned earlier, the researcher brings her own forestructure of understanding or prejudice to the study. In this case, this consisted of the researcher's own knowledge of the upper Yellowstone River and some of the social circumstances occurring within the study area. Thus, the researcher's prior discussions with task force members, agency members and community members established a prior level of understanding of the area and personal experiences with local stakeholders.

In the hermeneutic philosophy, the researcher adopts the role of "self as instrument," ultimately leading to a discourse between the researcher and respondent (Patterson et al. 1998). In a sense, the interviewer becomes co-creator with the interviewee, as the two negotiate interpretations (Kvale 1983). "The role of the interviewer is therefore to lead respondents to certain themes and to clarify ambiguities in responses without directing them to express specific meanings" (Dvorak 2004, 53). In order for this to happen an interview guide must first be established.

The interview guide is a semi-structured set of questions, and as such, it is neither a free conversation nor a structured questionnaire (Kvale 1983). This semi-structured interview is based on a set of pre-arranged questions, but is also "open to new and unexpected phenomenon," as well as further clarification and probing (Dvorak 2004, 53). It is this openness that allows for insight gained from earlier interviews to be used (Patterson and Williams 2002).

This interview guide was based on the interview guide of Bricker's (1998) study of boaters on the South Fork of the American River, and on Schroeder's (1996) special place study. In the latter study, participants were asked, through an open-ended, mail-back questionnaire, to identify special places along the Black River, to describe the places, and to explain thoughts, feelings, memories, and associations that came to mind when the individual thought of the identified place" (Schroeder 1996, 3-4). The interview guide for this study consisted of four questions, and additional probing questions were added to clarify or develop responses, as well as to improve on future interviews. The four questions within the interview guide were asked in the same order for all interviews. The only questions that changed were the probing questions.

For the interview portion of the study, a total of 20 interviews were conducted (reference Appendix C for a description of interview participants). The interviews ranged from approximately six to fifteen minutes in length, most averaging around eight minutes. A total of three recreationists refused to participate in the interview and refused to fill out a survey, while one agreed to fill out the survey, but refused to do the interview when asked. Most of the interviewees had extensive recreation experience on the upper Yellowstone River, only one had the minimum five years. Out of the 20-person sample, eleven respondents were female, while nine were male.

It is important to note that there was no strict number of interviews predetermined for this study. Rather, as Gold (1997) argued, it is the depth and understanding of the phenomenon that is the goal of the study, not the number of responses obtained. Thus, when the researcher felt that the meaning of the topic had been sufficiently covered, data

collection concluded. As with previous studies, this decision was made when it appeared that no new themes or topics were being presented in the interviews.

Analysis

The quantitative data was analyzed using the quantitative data analysis software package SPSS. Descriptive statistical analysis was used to examine the questionnaire portion of the study. Frequencies were reported to achieve the goal of the quantitative section of data analysis of the first research question, creating a profile of upper Yellowstone River recreation users. The place attachment statements were analyzed using factor analysis to determine the dimensions of place attachment along the upper Yellowstone River as was the goal of the second research question. Further, the mean of the responses to each of the place attachment dimensions were used to calculate the overall mean response for both the dimensions of place attachment. Similarly, the mean of each of the concern statements were generated in order to gain an overall understanding of the level of concern of upper Yellowstone River recreationists.

The interviews for this study were tape recorded. Interviews were then transcribed verbatim by the researcher. By transcribing the tapes, the researcher was able to come up with a consistent and personal system of notation, which led to the transcriptions being easily understood upon subsequent readings and analysis. Upon completion of the transcription process, the interviews were listened to while reading the transcription in order to clean up the data and correct any errors in transcription.

Hermeneutic data analysis is based on the development of an organizing system that is used to identify reoccurring themes present throughout interviews and subsequently to organize and interpret these themes (Patterson & Williams 2002).

Instrumental within the philosophy of hermeneutics is the recognition of the richness and diversity of qualitative data. Therefore, the point of the analysis is not to reduce the data in order to represent it quantitatively, but rather to achieve a holistic interpretation of the data, focusing on relationships among the various themes found within the data (Patterson & Williams 2002).

QSR NVivo, a qualitative analysis software program, was used to evaluate the qualitative data in this study. The individual interviews were entered into the program and then explored through the program. The software allows the researcher to give unique codes to phrases and sentences within the data, and the codes can subsequently be structured into categories. NVivo does not perform the analysis, as SPSS does with quantitative data, but rather it acts as an organizing system to assist the researcher.

The researcher began the qualitative analysis of this study by focusing on individual interviews. Meaning units or understandable groups of sentences were identified within individual interviews. In this process, known as the idiographic analysis stage, each of the 20 interviews was looked at separately and meaning units were identified separately throughout all the interviews (Patterson & Williams 2002). Patterson and Williams (1998) state, “Hermeneutic analysis begins with in-depth exploration of individual interviews (idiographic level) to identify predominant themes through which narrative accounts of specific experiential situations can be meaningfully organized, interpreted, and presented.”

Based on the identified meaning units, thematic labels were created by the researcher to allow for the grouping of like meaning units (Patterson & Williams 2002). It is important to note that while the meaning units were taken straight from the text of

the interviews, the thematic labels were a creation of the researcher to describe the meaning units.

Following the idiographic level of analysis, a similar style of analysis was used (nomothetic), which developed an understanding of the data across respondents. The nomothetic analysis was performed in the hopes of identifying themes that were important beyond the unique experiences of a single individual (Patterson & Williams 1998). Within this analysis, the researcher used the themes created for individuals in order to make comparisons between them. In this way, the researcher examined the inter-relationships of the recreationists interviewed within the study in order to identify relationships, correlations, and differences among the recreationists. These comparisons provided overlying themes within the research.

The product of these two separate analyses within the hermeneutic approach is the development of an organizing system that explores recreationists' perceptions of the upper Yellowstone River, what the place means, what places are special, and how the river is changing. Finally, it is important to realize that the interpretations presented based on the collected qualitative data are unique to the presenter. One of the purposes of the results section that follows is to give the researcher an opportunity to present and justify the interpretation, as well as provide an opportunity for the identified themes and meaning units to be peer-reviewed.

Limitations

Earlier it was stated that one strength of this study was that both quantitative and qualitative methods were utilized, which allowed for triangulation of the data. However, while realizing the strengths of this study, it is also important to point out its limitations.

A major limitation of this study is that it is an initial-stage inquiry. Even though data was gathered from as many individuals recreationally using the river as possible, there were still many users left out of this assessment. Most notably, these are the outfitters and property owners who aren't found recreating along the upper Yellowstone River Valley. The uses and values of these groups is important, but could not be covered within the scope of this study. Further investigations are proposed in order to produce a more complete view of all river users.

In addition, the importance of the river reaches beyond those who are visitors or residents to Park County. The upper Yellowstone River is an immense river that cuts through Yellowstone National Park, the first of America's National Parks. Being a connected and interrelated water system, the quality and usage of the upper Yellowstone River is important on local, national, and international levels. However, this study is only designed to reflect the interactions of recreationists using the River within the Park County boundaries.

CHAPTER FOUR: RESULTS

This chapter presents the findings from both the quantitative and qualitative portions of the study. The results for the quantitative section are presented first, followed by the results from the interviews. Appendix A provides the quantitative survey and Appendix B provides the interview guide.

Quantitative Results

The software package SPSS was used to determine the results from the quantitative data collected. The survey was designed as a means of gaining more information about as many individuals recreating on the upper Yellowstone River as possible over the course of one summer. The intention of the survey was to give baseline data about upper Yellowstone River recreationists; therefore, the analysis was provided in frequencies and percentages.

Demographics

In order to create a brief sketch of recreationists on the upper Yellowstone River, a presentation of the results of the demographic data follows (Table 1). The age range of recreationists on the upper Yellowstone River during the course of this research was 17-81 years. The mean age was 39.88 years. Over 50 percent of respondents were males (56%), while 44 percent were females. Of the 307 respondents, 63 percent were from Montana, followed by four percent from California, and four percent from Colorado. Beyond this, there were recreationists from at least 29 other U.S. states and one Canadian province. Thirty percent of those surveyed indicated that they had lived in Park County, while 19 percent reported a Park County zip code at the time of the survey. In addition, 27 percent of respondents reported a Gallatin County, MT zip code. However, only 17

percent of respondents owned property in Park County, MT, and only six of those 52 property owners reported owning property adjacent to the upper Yellowstone River.

In terms of recreation groups regarding their day's particular recreation visit, 35 percent of respondents indicated that they were recreating with friends, while 29 percent of those surveyed were recreating with family, and 17 percent were recreating with both friends and family. Fifteen percent of the respondents reported being part of a guided group. Only five percent of individuals responding reported recreating alone. Recreation group size ranged from solo recreationists to recreation groups of up to 30 individuals. The mean recreation group size was 6.3 (with a median of 4).

Over three-fourths of the respondents had attended college; 45 percent of individuals reported being college graduates and 24 percent were post graduates. Thirteen percent of those surveyed reported annual household incomes below \$20,000. Twenty-one percent reported an annual household income between \$20,000 and \$39,999. Nineteen percent of respondents reported a household income between \$40,000 and \$59,999. Annual household incomes between \$60,000 and \$79,999 were reported by 15 percent of the respondents, and 10 percent reported household incomes between \$80,000 and \$99,999. Finally, 22 percent of individuals surveyed reported household incomes of \$100,000 or more.

Table 1: Demographics of River Users

	n	%
<u>Gender</u>		
Male	170	56%
Female	132	44%
<u>Age</u>		
Mean	39.9	
17-24	49	16%
25-34	71	24%
35-44	64	21%
45-54	66	22%
55-64	40	13%
65-81	9	3%
<u>Residence of Respondents</u>		
CA	13	4%
CO	11	4%
MT	193	63%
Gallatin County, MT	83	27%
Park County, MT	58	19%
own property adjacent to River	6	2%
<u>Group Type</u>		
Friends	105	35%
Family	87	29%
friends & family	50	17%
guided group	45	15%
Self	16	5%
<u>Group Size</u>		
Mean	6.3	
Median	4.0	
1	18	6%
2	50	17%
3	64	21%
4	31	10%
5	21	7%
6-10	57	19%
11-20	58	19%
21-30	4	1%
<u>Education</u>		
college graduate	136	45%
post graduate	73	24%
some college	60	20%
high school	27	9%
technical school	7	2%
<u>Income</u>		
< \$20,000	38	13%
\$20,000-\$39,999	59	21%
\$40,000-\$59,999	54	19%
\$60,000-\$79,999	42	15%
\$80,000-\$99,999	28	10%
≥ \$100,000	63	22%

Note: Numbers have been rounded.

Recreation River User Profile

The following section will present results of data relating to recreation use, including activity involvement, satisfaction rating, reasons for choosing the upper Yellowstone River, and amount of experience using the upper Yellowstone River. Of the 307 individuals surveyed, the majority of respondents (78%) had visited the river at least once before the visit upon which they were reporting (reference Table 2). Repeat recreationists reported visiting the river for an average of 13.28 years, years of use ranged from 3 months up to 64 years. On average, these repeat recreationists reported using the river 3.97 days per year. Of the 238 respondents indicating they had used the river before, nine percent reported using the river only one day per year, 11 percent reported using the river two days per year. Twenty percent of respondents reported using the river between three-to five-days per year. Fourteen percent of those surveyed reported using the river six- to ten-days per year, and 15 percent reportedly used the river 11- to 20-days per year. The group comprising recreationists using the river more than 20-days a year is the largest, comprising 30 percent of those surveyed.

Table 2: Repeat Visitation			
		n	%
Visited previously...	Yes	238	78%
# of years visiting river	mean (years)	13.28	
	≤ 1 year	16	7%
	2-5 years	64	28%
	6-10 years	49	22%
	11-20 years	44	19%
	21-64	54	24%
# of days/year visiting	mean (days)	3.97	
	1 day	22	9%
	2 days	26	11%
	3-5 days	46	20%
	6-10 days	33	14%
	11-20 days	36	15%
	> 20 days	72	30%

Note: Numbers have been rounded.

The upper Yellowstone River has a reputation for a being an exceptionally good river on which to fly-fish. However, according to survey results, there were many other activities in which individuals participated while visiting the upper Yellowstone River, ranging from fishing and kayaking to rock hounding and socializing. Table 3 contains a list of all the activities and the number and percentage of people who participated in these activities. Respondents were asked to identify the activities in which they participated during that specific visit to the river. Thus, even if the respondent was a frequent fisherwoman on the upper Yellowstone River, if she was not fishing on the particular visit when she was intercepted, she did not mark fishing down as an activity in which she participated. Respondents were asked to check all the activities in which they participated on that visit (thus, multiple activities were often marked for a single respondent). Of the 307 recreationists surveyed, the majority reported participating in both nature and wildlife viewing (62% and 56% respectively). Further, 48 percent of individuals reported participating in rafting. Forty-three percent reported they had

participated in boat angling on the day of the survey, 31 percent participated in wade angling. Of those surveyed, 29 percent reported having a picnic on or near the river. Twenty-seven percent reported they had participated in bank angling. Twenty-three percent of individuals reported tent camping as one of their activities during their visit. Twenty-two percent of individuals surveyed reported driving next to the river for pleasure. Those participating in nature photography were a reported 19 percent. Seventeen percent reported day-hiking for pleasure. Further, respondents were asked to list activities in which they may have participated, but which were not listed on the survey itself. Seventeen percent of the individuals wrote an activity in the “other” column on the survey. There were a total of 15 other activities listed by respondents. The most common of these were those who reported having gone swimming (4%), and two percent who reported participating in activities with their dogs (walking their dogs, taking their dogs swimming, or having their dogs fetch). Sixteen percent of those surveyed reported canoeing during their visit. Those participating in birding were a reported 15 percent. Of those surveyed, 13 percent went tubing during their visit. Thirteen percent reported walking or jogging next to the river. Those who participated in kayaking were a reported 12 percent. A relatively small number of people participated in auto/RV camping (8%). Finally, three percent of those surveyed went biking.

After being asked to identify all the activities in which they participated while on the upper Yellowstone River, respondents were then asked to identify their primary activity during their visit (Table 3). The top primary activity showed an equal number of people boat angling and rafting (29%). This was followed by 10 percent selecting their write-in activity (other) as their primary activity. Seven percent of respondents identified

kayaking as their primary activity. Finally, another tie occurred when the same number of individuals, five percent, each identified canoeing and wade angling as their primary activity.

Table 3: Activity Participation

All Activities	n	%	Primary Activity	n	%
Viewing nature	187	62%	Boat angling	83	29%
Viewing wildlife	167	56%	Rafting	83	29%
Rafting	145	48%	Other (write-in)	28	10%
Boat angling	128	43%	Kayaking	19	7%
Wade angling	92	31%	Canoeing	15	5%
Picnicking	86	29%	Wade angling	15	5%
Bank angling	80	27%	Bank angling	8	3%
Tent camping	70	23%	Tubing	7	2%
Driving for pleasure	66	22%	Viewing nature	7	2%
Nature photography	56	19%	Day hiking	6	2%
Other	52	17%	Driving for pleasure	6	2%
Swimming	13	4%	Viewing wildlife	4	1%
activities with dogs	7	2%	Walking/jogging	3	1%
Day hiking	51	17%	Auto/RV camping	3	1%
Canoeing	49	16%	Tent camping	2	1%
Birding	44	14%	Nature photographer	1	0%
Tubing	40	13%	Birding	1	0%
Walking/jogging	39	13%	Biking	0	0%
Kayaking	36	12%	Picnicking	0	0%
Auto/RV camping	23	8%			
Biking	10	3%			

Note: Numbers have been rounded.

Next, respondents were asked to evaluate their satisfaction level with both their primary activity experience and their overall recreation experience. These two satisfaction levels were solicited based on the idea that individuals may or may not be satisfied with one aspect of their experience and this does not predispose overall satisfaction. This could work in a variety of ways; for example, a recreationist's primary activity could be rafting, however, if the raft flips in a rapid, the individual may not be very satisfied with the primary activity, but may be moderately satisfied with the rest of the experience (i.e. getting to visit with friends/family, enjoying the scenery, etc.). Respondents were asked to rate their satisfaction levels with regards to these two

experiences on a six-point Likert scale, with one being not at all satisfied and six being extremely satisfied. The majority of those surveyed were moderately to extremely satisfied with both their primary activity experience, as well as their overall river experience. Table 4 displays the percentage of respondents' replies on the two six-point Likert scales for satisfaction with their primary activity experience and satisfaction with their overall river experience. In addition, Table 4 includes the mean responses to the Likert scales.

In response to their satisfaction with their identified primary activity, the majority (66%) of respondents reported being extremely satisfied. Thirty-one percent reported being moderately satisfied; 22 percent of individuals marked a five on the Likert scale and nine percent of individuals marked a four. Two percent of individuals reported being slightly satisfied. Finally, only two individuals (1%) reported being not at all satisfied.

In terms of satisfaction levels with the overall river experience, no individuals reported being not at all satisfied. Only one percent of those surveyed reported being slightly satisfied. A fair number, 32 percent, reported being moderately satisfied; eight percent of individuals marked four on the Likert scale and 24 percent of individuals marked five. Finally, 67 percent of individuals reported being extremely satisfied with their overall river experience.

Table 4: Satisfaction Levels							
	not at all satisfied	slightly satisfied		moderately satisfied		Extremely satisfied	MEAN
	1	2	3	4	5	6	
Primary activity	1%	0%	2%	9%	22%	66%	5.49
Overall river experience	0%	0%	1%	8%	24%	67%	5.57

Note: Numbers have been rounded.

Respondents also answered questions regarding why they chose to recreate on the upper Yellowstone River. Table 5 displays individual responses regarding their reasons for visiting the River. Just as with the questions regarding activity involvement, respondents were instructed to select all the reasons that influenced their choice to visit the upper Yellowstone River, and then, to identify their primary reason for choosing the upper Yellowstone. Many individuals, 59 percent, reported one of the reasons they chose to recreate on the upper Yellowstone River was because it was close to their homes. Nearly three-fifths of the respondents, 59 percent, reported that one of their reasons for visiting the River was the scenic beauty of the upper Yellowstone River. The fishing opportunities on the upper Yellowstone River were identified by 40 percent of respondents as a reason for visiting. Thirty-four percent identified their ability to access the river as a reason for visiting the upper Yellowstone. Twenty percent of individuals identified the water level/water flow as a reason for visiting. Further, a fair number of respondents, 18 percent, indicated that one of the reasons they chose the upper Yellowstone River was because of its proximity to Yellowstone National Park (YNP). In addition, the whitewater that is present within a stretch of the upper Yellowstone River was at least one of the reasons for 16% of the individuals who chose to visit the River. The water temperature for fishing was identified by eight percent as a reason for visiting. A small number of respondents, six percent, indicated that they visited the upper Yellowstone River because other rivers were too crowded, and the facilities along the upper Yellowstone River were identified by five percent of those surveyed as a reason for visiting.

In terms of primary reason for visiting, 36 percent of individuals identified their primary reason for visiting the upper Yellowstone was its proximity to their homes. Twenty-two percent identified fishing as the primary reason for visiting the upper Yellowstone River. Finally, 19 percent of respondents' primary reason for visiting the upper Yellowstone River was its scenic beauty (reference Table 5).

Table 5: Reasons for Visiting

All reasons	n	%	Primary reason	n	%
Close to home	180	59%	Close to home	103	36%
Scenic beauty	179	59%	Fishing	65	22%
Fishing	120	40%	Scenic beauty	54	19%
River access	102	34%	Close to YNP	18	6%
Water level/water flow	59	20%	Whitewater	17	6%
Close to YNP	54	18%	River access	16	6%
Whitewater	49	16%	Water level/water flow	9	3%
Water temp for fishing	25	8%	Other rivers too crowded	4	1%
Other rivers too crowded	18	6%	Water temp for fishing	3	1%
Facilities	14	5%	Facilities	1	0%

Note: Numbers have been rounded.

Place Attachment

The analysis of the sense of place portion of the survey used factor analysis to determine dimensions and mean scores of Likert scale responses to place attachment statements. Within this section, responses to the 11 place attachment statements were analyzed to better understand the dimensions of place attachment that exist on the upper Yellowstone River. An exploratory factor analysis was used to test the previous assumption of place attachment having two dimensions: place identity and place dependence (Williams and Vaske 2003). SPSS's FACTOR procedure was used to perform a principal component factor analysis with varimax rotation. In addition, Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) statistic were used to determine the appropriateness of factor analysis. According to Kass and Tinsley (1979), "Bartlett's test for the significance of the correlation matrix represents the minimum

necessary requirement for factor analysis but does not, by itself, indicate a sufficient justification for factor analysis.” Therefore, the KMO measure of sampling adequacy was also used to determine the appropriateness of factor analysis. “The [KMO] is an index for comparing the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients. ...Small values for the KMO measure indicate that a factor analysis of the variables may not be a good idea, since correlations between pairs of variables cannot be explained by other variables” (Norusis, 1985, 129). A KMO measure close to one is ideal, a KMO measure below .5 is unacceptable (Norusis, 1985, 129). Factor analysis was found to be appropriate in that the Bartlett’s test of sphericity produced a highly significant (.000) correlation matrix and the KMO was .93.

The factor analysis produced two factors with eigenvalues greater than 1.0. In addition, 75 percent of the total variance was explained, with the first factor explaining 65 percent of the variance and 10 percent of the variance being explained by the second factor. Table 6 displays the place attachment statements with their corresponding factor loading scores. The items were assigned to each factor based on a factor loading of .50 or greater. The statement, “Doing what I do on the upper Yellowstone River is more important to me than doing it any other place,” loaded above .50 on each factor, and thus, the statement was not included in the analysis. Displayed in Table 6 are the loading results for each of the remaining 10-place attachment statements, as well as the eigenvalues and the variance explained by each factor.

Table 6: Factor Analysis Loading

	Identity	Dependence
The upper Yellowstone River means a lot to me.	0.814	0.316
I feel the upper Yellowstone River is a part of me.	0.816	0.212
The upper Yellowstone River is very special to me.	0.795	0.379
I identify strongly with the upper Yellowstone River.	0.793	0.355
I am very attached to the upper Yellowstone River.	0.743	0.449
Visiting the upper Yellowstone River says a lot about who I am.	0.708	0.301
I wouldn't substitute any other area for doing the types of things I do on the upper Yellowstone River.	0.257	0.855
No other place can compare to the upper Yellowstone River.	0.341	0.819
I get more satisfaction out of visiting the upper Yellowstone River than any other river.	0.326	0.832
The upper Yellowstone River is the best place for what I like to do.	0.477	0.720
<i>Eigenvalues</i>	<i>6.45</i>	<i>1.03</i>
<i>Explained Variance</i>	<i>64.5%</i>	<i>10.3%</i>

Factor 1: Place Identity: This dimension refers to emotional or affective attachment to the upper Yellowstone River. As shown in Table 7, this factor was the most important of the two, with an overall mean of 4.34. Further, the dimension had an eigenvalue of 6.45 and accounted for 65 percent of the variance explained.

Factor 2: Place Dependence: Place dependence refers to how well a setting facilitates particular activities in which users engage (Moore & Graefe 1994, 7). A mean of 3.52 was exhibited for the place dependence dimension, therefore, it appears to be a less important dimension than that of place identity among upper Yellowstone River recreationists (Table 7). The dimension had an eigenvalue of 1.03 and accounted for 10 percent of the variance explained.

The overall place attachment mean of those surveyed was 4.01.

Table 7: Means for the statements representing the two dimensions

IDENTITY	Mean
The upper Yellowstone River means a lot to me.	4.66
The upper Yellowstone River is very special to me.	4.56
I feel the upper Yellowstone River is a part of me.	4.41
I identify strongly with the upper Yellowstone River.	4.21
I am very attached to the upper Yellowstone River.	4.17
Visiting the upper Yellowstone River says a lot about who I am.	4.02
<i>Mean Identity</i>	<i>4.34</i>
DEPENDENCE	
The upper Yellowstone River is the best place for what I like to do.	3.80
No other place can compare to the upper Yellowstone River.	3.52
I get more satisfaction out of visiting the upper Yellowstone River than any other river.	3.49
I wouldn't substitute any other area for doing the types of things I do on the upper Yellowstone River.	3.26
<i>Mean Dependence</i>	<i>3.52</i>
Overall Mean	4.01

Note: Scale: 1=strongly disagree; 6=strongly agree

Concerns

Further, analysis was conducted on recreationists' level of concern to different aspects dealing with development, growth and access within the upper Yellowstone River corridor. Similar to the place attachment statements, in order to gauge concern levels to growth and development, individuals responded to a six-point Likert scale for seven different statements regarding potential concerns (presented in Table 8). The mean for respondents' replies to the Likert scale are listed in Table 8. The overall level of concern was 4.09.

Table 8: Level of concern

	Mean
Appropriateness of development along the River.	4.55
Amount of development along the River.	4.52
Residential development visible from the River	4.52
Ability to access the River.	4.11
Feeling crowded on the River.	3.98
Number of River users observed	3.49
Number of watercraft observed.	3.46
Overall	4.09

Note: Scale: 1=not at all concerned; 6=extremely concerned

Qualitative Results

This section presents results from the qualitative data analyses, both the idiographic and the nomothetic analyses of the interviews. The focus of the qualitative analysis was to go beyond the surface-level survey data in order to facilitate an understanding of how recreationists perceive the upper Yellowstone River through an organizing system. Through this process, the richness and diversity within the data was expressed through the emergent themes that arose.

The development of the organizing system began at the idiographic level of analysis, in which meaning units were assigned to passages within each of the interviews. Meaning units were marked with phrases such as “development,” “proactive planning,” and “freedom.” These meaning unit labels were then placed on text that was identified as having similar meanings.

Upon completion of meaning unit identification and label assignment, the nomothetic analysis began. The purpose of the nomothetic analysis was to develop dimensions or themes upon which the data could be grouped, understood and analyzed. Since the interview guide (see Appendix B) was based on the initial research questions, the developed dimensions within the nomothetic analysis represented the questions asked. The four dimensions of recreationists’ perceptions of the upper Yellowstone River included: description, change, special places, and management.

It was these four dimensions that framed the analysis, and related meaning units were assigned to each dimension. The created thematic labels used to group meaning units under each of the dimensions are presented in this chapter as a means of organizing the topics raised during interviews.

The dimensions of river recreationists' perceptions of the upper Yellowstone River are presented in this next section through the organization of overlying themes. Each theme is presented and explained; further quotations from the interviews relating to the themes is presented in the text as a means of supporting the researcher's interpretations.

Profile of Interview Participants

Individuals who were interviewed also filled out the quantitative survey and from those, information about these individuals was extracted (Appendix C). There were 11 females and nine males interviewed for this study. The mean age of those interviewed was 40.6-years, ranging from 23-years old to 81-years old. All those interviewed were living in Montana, three individuals did not report a zip code, while 12 individuals reported living in Park County, MT., four individuals reported living in Gallatin County, MT., and one individual reported living in Missoula County, MT.

As shown in Table 9, of those interviewed, angling was most frequently reported as one's primary activity, four individuals reported boat fishing as their primary activity, two individuals reported wade angling as their primary activity and one individual reported bank angling as his primary activity. Rafting was the next most popular activity with six individuals reporting it as their primary activity. Five people identified the activity that they wrote-in as their primary activity. One person reported canoeing as her primary activity.

Table 9: Primary activities of interview participants

Activity	N
Rafting	6
Other	5
Boat angling	4
Wade angling	2
Bank angling	1
Canoeing	1
No response	1

Individuals who were interviewed reported a variety of primary reasons for visiting the upper Yellowstone River (reference Table 10). The most popular reason was because of the upper Yellowstone River’s proximity to home; six individuals reported this as being their primary reason. Following the reason of the River’s proximity to home, four individuals reported the scenic beauty of the River as their primary reason for visiting. Fishing was reported by three people as being their primary reason for visiting the River. Two individuals reported river access as their primary reason for visiting. Finally, one person each reported water temperature and other rivers being too crowded as their primary reason for visiting.

Table 10: Interview participants’ primary reason for visiting

Activity	n
Close to home	6
Scenic beauty	5
Fishing	3
River access	2
Water temperature	1
Other rivers too crowded	1
No response	2

Regarding place attachment, those interviewed had a stronger attachment to place than the overall place attachment mean for all the individuals who were surveyed. The mean of place attachment responses for those individuals who were interviewed was 4.96 (compared to 4.01 of all respondents). The mean response for the place identity

component of place attachment was 5.30 (compared to 4.34 of all respondents), which is greater than that of the dependence dimension having a mean of 4.46 (compared to 3.52 of all respondents).

In terms of concerns, the mean level of concern of those interviewed was also higher than that of the overall mean level of concern for all those who filled out the survey. The mean concern level of those interviewed was 4.62, compared to 4.09 of all respondents.

Dimension 1: Description

The description visitors gave of the upper Yellowstone River is an important dimension to understanding how visitors perceive and interact with the River, and what visitors associate with the River.

In describing the upper Yellowstone River, respondents focused on five main aspects: aesthetics, physical properties, recreational opportunities, atmosphere, and development. Often descriptions would contain one or more than one of these categories.

Aesthetics

Aesthetic descriptions of the River focused primarily on the beautiful features of the upper Yellowstone River viewshed. The majority of those interviewed discussed the River in terms of its aesthetic appeal. Respondents frequently had trouble describing the upper Yellowstone River. They stumbled to find words to explain the River, but most described it by using the word “beautiful” or attempted to convey the beauty of the River and the surrounding mountains.

Chuck: It’s gorgeous; they gotta be on it to enjoy it.

Carol: It’s beautiful!

Jessica: I guess the thing that comes to mind the most is just its pristine beauty.

Jody: It's just a beautiful thing. There's definitely places where people have littered and things, but for the most part it's just a beautiful River that's been taken pretty good care of.

Melanie: It just goes through a beautiful valley with beautiful mountain scenery. It's great!

When describing the aesthetic appeal of the upper Yellowstone River, many individuals focused on the uniqueness of the river. These descriptions of the River center on the valley, specifically the unique scenery and beauty of Paradise Valley and the unique characteristics of the River itself.

Beth: Well, close to a Valley named Paradise Valley and I think it is well named. Between two mountain ranges, and the River is... it has a personality with its own quirks.

Corey: One of the most beautiful valleys in the state of MT. I don't know... it's not over-populated by any means; it's... gosh... it's one of the last great places in the state of Montana definitely.

Drew: Sort-of perfect, I guess. In a way it's really... characteristic of Montana in that it has an amazing mountain range that kind of defines the valley and a nice, wide open beautiful valley that you can see in all directions, and then the river ties it all together. I would say that the river is, I guess I don't want to compare it to anything else, but it's just an amazing river. It has deep, deep, deep canyons like Yankee Jim Canyon. It's just amazing. I've heard it's just ridiculously deep and then it'll have just long, great channels that will braid, and I would say just the whole valley and the experience between that and the mountains, it's... visually, it's amazing.

Carol: [comparing it to the Gallatin River] Lot deeper, lot swifter... lots better fishing holes. [laughs]. It is. Down the canyon in Yankee Jim there are some really good fishing holes.

Becky: To me, it's a really magical place, and it's a combination of the mountains being so close to the River, the color of the River, the incredible weather that we have over here, storms that can just hideously blow in and then beautiful weather after that, so you know, it's just a real magical kind of place that you don't find too many other places... pretty unique.

Physical Properties

In their descriptions of the upper Yellowstone River, right around half of the respondents spoke of the River in terms of its physical properties. Within their description of the upper Yellowstone River, many respondents pointed out that the upper Yellowstone is a free-flowing river. This was seen as an important aspect of the river, making the River very dynamic, constantly changing based on water flow.

John: I would describe it as the gem of the state, as it is the longest free-flowing river in the United States.

Beth: It's changed over the 30-some years I've been floating it. And I like to come back year after year because I'll see the different places. The floods will move the gravel; it's a really dynamic River.

Joyce: Free-flowing, wild, really variable because sometimes it's high and rushing and dangerous and sometimes, like now, it just drops really fast. It's always changing. I guess that's the main thing I see about it.

Related to the upper Yellowstone's free-flowing, dynamic properties, respondents pointed out the potential for disaster that the River presents. These descriptions highlight the power of the water.

Bob: I also look at it for potential for disaster... this is, you know, a free-flowing river. As far back as I've been able to find, there's never been a major flood here. There have been some small ones, but you start getting like five or six inches in one day up toward Gardiner and all of Paradise Valley— you could probably have 120 to 150 to 180 thousand cubic feet per second running down here, and the floods we've had recently have only been like 36 thousand cubic feet and that's what they consider a 100-year flood.

Further, many descriptions contrasted the potential for disaster with the relaxing and soothing properties of visiting the River, thus, realizing its power, but enjoying its recreation opportunities simultaneously.

Chuck: What would you say... soothing in one way, but it would take your life in a second. You know? Part of it's nice you kind of watch it, but it could kill you too.

Beth: It's powerful, but I consider it friendly, and it can be scary in really high water. When we've run Yankee Jim in the whitewater, there's a couple of times that were very challenging. But usually it is just really fun... exciting.

Carol: Swift... [laughs]. I taught my kids how to swim in it and they learned to respect it.

Jody: Oh gosh, [pause] I'd describe it as relaxing, and I don't know... it's beautiful, it's relaxing. It's very calming. There are obviously parts where it's not so calming. That's what I enjoy about it; it's soothing.

Recreational Opportunities

Recreation is obviously a huge part of the appeal of the upper Yellowstone River. As evident from the survey, individuals' primary reason for visiting the upper Yellowstone River was to participate in some kind of recreational activity (fishing, whitewater rafting, kayaking, canoeing, tubing, etc). Therefore, it is logical that part of the river users' descriptions of the upper Yellowstone River would be in terms of the recreational opportunities available on and around the river.

Dave: I'd describe it as a nice river that has a lot of different recreational opportunities.

Bob: That's kind of difficult because there are a lot of things that ... I look at it as a beautiful waterway; I look at it as recreation; I look at it as potential for farming...

Melanie: I think it's a pretty big River, and it has quite a variety— some whitewater, some flat-water.

Stacey: I love the town-stretch, and then, the next section from Yankee Jim, you know, all through Yankee Jim Canyon is like my home part of the river, but I've canoed from Yankee Jim Canyon all through the rest of Yellowstone, and that's more... that's just a fun place to hang out, you know, people bridge-jumping... more like the relaxed, not the rafting, the canoeing and hanging out.

Beth: It's always interesting, and so, I love to bring friends who are visiting from out of town or whatever, it's one of my favorite places because there is so much variety. If we have people with little kids or people who are really frightened of being on water, I can say, "If you're willing to trust me I can take you to a

beautiful place at a pace where you can really get a sense of what Montana's like, and I promise that, I think I can promise you that you won't even get splashed." Because there are stretches of River where I know even if there were riffles I could miss them, so that people would be safe.

While about a quarter of the people focused on the diversity of recreational opportunities, a smaller group of respondents described the river in terms of one specific recreational activity: fishing. When asked how these individuals would describe the upper Yellowstone River to someone who hadn't been here, these respondents described it only in terms of fishing.

Gary: As a big river that has, most of the fish feed within eight feet of the bank.

Larry: The only time I fish it is during the salmon fly season here... they've already gone through down there, so I'm up here waiting for them. The best part, I think. You get more of your scrap fish down the river... here you get your trout, lots of fish.

Sue: A lot of fishermen, so it must be a great place to fish although I never have fished it.

Atmosphere

In the same way that some individuals focused on the recreational opportunities of the River, others described the River in terms of the atmosphere they experienced when visiting the River. These responses were interesting because there were two extremes pinpointed in describing the atmosphere of the River. The first was the social atmosphere on the River.

Anne: Swimming with the kids. We go rafting with the kids. We go fishing with the kids. We do, you know... we do a lot of camping and stuff.

Joyce: It's also for me, an incredibly social River, in that, I come to the River and see my friends and their dogs. So for me, it's a very social place.

Stacey: People bring instruments and we play music by the river while we're waiting for our boats.

The other group, a bit larger than those describing the river in terms of its social capacity, chose to focus on the remote feeling they have on the River. Their description of the River was in terms of its ability to allow them to escape a social atmosphere, and while no one described the upper Yellowstone as a remote River, many people pointed out places along the River that they felt were remote and described the River as a place where they could “get away from it all.”

Beth: Because a lot of that stretch of the River isn't right next to the road. Some of it is right next to the road, which I use to get up there to go floating, so I like it close to the road, but it's really nice where we are here, right now, at Paradise campground, because each road, the East River Road and Hwy 89, are a few miles away from the River, and so when we float through these reaches of the River, it feels more remote and more pleasant, to me.

Jessica: I guess the thing that comes to mind the most is just its pristine beauty. It's so...unpopulated isn't the right word, but it's... it's just not taken over by so many houses and people and chaos, I guess is the way I'd say that.

John: Because the river kind of takes on a different quality once you hit Livingston, there's more braids, there's more Cottonwoods. You have more of a sense of isolation, I suppose.

Sue: It still feels fairly remote even though there's a lot of home-sites and stuff like that.

Dimension 2: Change

In understanding individuals' perceptions of the upper Yellowstone River, it was necessary to explore if and how their perceptions of the place have changed in the time that they have been using it. The recreationists who were interviewed had been using the river between five and over sixty years; many recreationists had been using the River their entire lives. Change became one of the most important topics discussed during the interviews, as individuals expressed very different opinions regarding the nature of growth and development on and along the River.

Description of the River

Though one of the four dimensions of this qualitative analysis is, in fact, change, based on the interview question which asked respondents to comment on changes they had witnessed since they had been using the upper Yellowstone River, many individuals spoke of change, growth, and development before prompted, namely in their first description of the River. This becomes noteworthy, as these individuals chose to describe the river in terms of increased use or development.

Anne: The river's cool except for all the damn rafters. [laughing] You want my honest opinion, right? Like this area if you go up and look at the sign, it's not supposed to be for these guys [points to rafting company loading boats]; it's supposed to be for family recreation. Like we've said, the kids can almost go out half-way [into the river] and play, and we raft too, but as far as certain areas that should be recreation for the families and for the kids that live here. You know what I mean? We get bombarded by rafts constantly... daily...

Carol: Yeah, but it's over-fished.... Over-rafted!

Dave: I think I'd describe it as a pretty, very beautiful river, but with a lot of development along it.

Joyce: You get down here [Mayor's Landing] and it's more of a social place for me anyway. You know it's getting more populated and that's a little sad. I think the houses along the River are difficult because that means that it will be less of a social space, and it's not just losing its wildness, it's losing its social capacity. It will be pretty much off-limits.

Bob: I really enjoy the area, but I get a little concerned with the development along it. Yes, it's beautiful. Yes, it would be nice to have [a river-front house], but is everybody prepared to get washed [away]?

Issues of growth, development, and change in individuals' descriptions of the upper Yellowstone River were merely the beginning of a discussion of the concept of change in relation to the River.

Unconcerned about Change

In general and within the two themes of ecology and growth, change takes on negative connotations as individuals point out their perception that more people -- sometimes too many people -- are using the River and too much development is occurring along the River corridor. However, some individuals felt that if the River has changed, they haven't personally experienced it, or the change did not affect their experience. While those who expressed little or no concern regarding changes along the upper Yellowstone River were in the minority, it is important to report these opinions to show the diversity of interpretations of change along the River.

Michelle: [Interviewer: And along the River, have you seen any changes?] Not me personally, no. I know that there is houses and stuff that are being built all the time, but I don't see those houses.

Jessica: I don't think it's changed much at all. It's busier; there's more people; there's more fishermen, but I think people are pretty courteous to each other in their uses of the River, and it still works out to be a wonderful experience every time.

Drew: I don't think I've used it enough, just because I was away... I'm sure there are, but also, I don't think this area changes, and I may be totally off on this, but changes as fast as some people think it does around the Livingston area because it has a lot of tourist activity, but I don't think any more than it had a lot of tourist activity in, you know always, since its relation with the Park, so I don't how much it's changed. Probably, to be fair, I couldn't say that I've noticed that much change just because I haven't used it enough.

Positive Changes

In contributing to the diversity of responses regarding change, there were also three individuals who talked about positive changes occurring along the watershed. It is important to note that within all these descriptions of positive changes, the respondents pointed out their observation of more people using the river or more development along

the River, but then went on to acknowledge the benefits of this increased use or development.

John: A lot more use as far as fly-fishing goes, there's a ton more fly-fishermen than there were 20 years ago when I was out here when I was a kid, but ... but I also think because of the fish numbers that I've seen, and the several times we boat... each person will catch 50 fish a day. These fish are pretty healthy looking... later in the summer, low flows you know, there's kind of that thermal pollution aspect, but I really haven't seen a difference in the mortality or the shape the fish are in because of the more access.... And I also firmly believe that it is a use it or lose it situation where I actually welcome the throngs of people to come and use this river because it's always going to be at some point... you know... it will always be there... it's not going to be privatized and cut off because nobody wants to do it... nobody wants to float. I think it's good in general just for this whole area... as long as people obey the rules and don't trash it...

Sue: It puts more people on the River, but I think as long as it is well managed, I think it's good for the economy because otherwise there isn't much going on here.

While two of the individuals discussed changes in only positive terms, one individual talked about both positive and negative aspects of change.

Joyce: Actually I think there's a lot of positive changes; people are more aware of it, and some place like this Mayor's Landing area has been cleaned up a lot and people paid a lot of attention to rehabilitating it. This used to be an old dump, so obviously in some ways it's not just the good old days, there's been some positive changes too. The resource becomes more scarce, we become more conscious of it and more careful of it. So even if everybody isn't careful of it, I think there gets to be a core group of people that seeks to protect access and seeks to protect the resource that they want access to. And just on a small issue, like, there's a small group of people who put posts with doggie-poop bags, and you know, it's just individual efforts, it's private efforts, it's not a government thing, it signals that this is the thing to do. If we want to keep this as a place that's dog friendly and a place where people can come with their animals, then it's good to clean it up and keep it clean. So I think there's some good things.

Ecological

As noted earlier in this section, respondents often viewed change in a negative light citing ecological and social changes occurring within the watershed as issues for concern. In fact, over three-fourths of those surveyed discussed change in terms of

having the potential for ecological destruction and in terms of increasing development or growth. A handful of these individuals commented on the ecological changes that they have experienced or perceived along the river and its surrounding corridor. In addressing the ecology of the area, quite a few individuals focused on the water level. Many individuals expressed concern over low water levels consistently occurring since the flood years of 1996 and 1997.

Michelle: The biggest change that I've seen is just the fact that there's not as much water in it from the drought and everything. ... You have to get out and drag your boat sometimes, but I worry about the fish because when it gets so low and the water gets so warm then, they can't survive.

Bob: It's dried out in the last five years... the drought. Other than that, it's pretty much the same as I remember it when I first started coming up here.

Anne: It's gotten very low.

One individual noted the impact that low water had on the physical structure of the River.

Dave: It's just in obvious ways, floating it a lot, it's changed in eight years after the high water of '97, just there's kind of different... you know, different channels. Definitely some different channels, especially below, just a little below Livingston.

Recognizing the changes individuals perceive in the ecological aspects of the watershed is important, because individuals' recreation experiences are tied to the overall ecological health of the river system.

Growth

The majority of individuals talked about growth as a major change. Discussions of growth usually focused on one or more of four different aspects: increased use; development; recreational activities and recreation experience; privatization and internal conflict.

Increased use refers to more people using the River. Individuals' perceptions of increased use were connected to other issues such as limited parking and affects on their ability to access the river with increased riverside development.

Chris: It's making it harder to enjoy your River where you're at. Instead of where you could, we never used to have to worry about a place to park. As far as like when you go to an access, no matter what day it was, even if it was a weekend, you could always find a place to stick your trailer, drop off your boat and go.

Dave: I'd say there seems to be more usage at certain times. It's not across the board like a whole lot more users, but there definitely seems to me like there's more people. Not a whole lot more, but some days, at some access points, it just seems really a lot busier than it did eight years ago.

Gary: There's a lot more people, period, using the river, living in the valley (Paradise Valley especially). The way the fish feed actually has changed.

Jody: I think more people are starting to know about it. It's starting to be... I'm seeing more, well maybe not more, but I've noticed an increase in the number of tourists who are coming to fly fish and raft and that sort-of thing. And therefore, a little bit more litter and things.

Many people responded to the issue of growth by commenting on the increase of commercial companies, both outfitters and guides, in the Park County, Montana area.

People noticed that along with the increase in the number of individuals visiting the River, there was increased commercialization.

Corey: I mean, there's definitely more guides on the river than people recreationally fishing, but I think that both of those categories have grown. The more people who are out on guided fishing trips... I mean, yes, it definitely affects it [my experience]. You see more people; I'm not out there to see people. You probably don't catch as many fish.

Sue: A lot more commercialization with the raft companies and the commercial fishing companies, that kind of stuff.

In discussions of increased use, as presented in the examples above, while individuals observed and commented on the influx of recreation users, there were not negative feelings or connotations associated with the perceived increase in recreation. However,

in the case of increased commercialization, there was a tendency for a few of the individuals who addressed this point, to voice displeasure with the commercial companies' behavior and increased use.

Carol: Too many raft companies, too many guide-fishers.
Yeah. And they've been rude; they've drug their rafts over our stuff, things like that. NO. It's over-populated.

Stacey: And we were the only commercial company and anyone who had anything to do with the River, was tied into the Yellowstone Raft Company, and we weren't very big, and anyone who was a kayaker in the area was friends with the guides... we were one community. And then, I want to say it was like the mid-nineties or early-nineties, another raft company started up and we were like, "What?" It was kind of weird and now more raft companies are... and now, anymore, the people tied to the river, I don't know them all anymore. I grew up knowing EVERY kayaker; I knew EVERY rafter... I was... this was my... I knew all the water people... and all the fishing guides. Now, after a while, late-eighties, I didn't know all the fishing guides anymore, and it was like, I recognized one or two. Now, anymore, it's like, we've got... we'll do... eight boats in the morning, eight boats in the afternoon. We just got boats going down all day, and then there's other companies in town, and there's what, I mean there are days where we would have over forty rafts, commercial rafts, on the river, and I think there's been days when we've had fifty-something between all the companies in town. And that's just crazy, so I've watched it... that's tourism and buildings and... it's grown.

Related to increased use is the concept of development. Often, development and increased use were talked about together; development seemed to be a major theme within the topic of change. What becomes noteworthy within individuals' discussions of development is not only the increase in development, but how development is changing. Individuals spoke to this point in terms of the increasing number of houses being built on land that was being sub-divided. In addition, the size and type of residences that were being built were keynotes of individuals' concerns about increased development.

Sue: Well, there didn't used to be any multi-million dollar residences or anything like that or even some of these motor home campground-type spots... so definitely I've seen a lot of dividing up of the real estate.

Corey: I've seen houses being built closer and closer to the river.

Dave: I've noticed a lot of change too, just in the number of houses along the River, building close to the River. I think more than anything just the change in the amount of houses along the River.

Melaine: More houses around the River that would be the main thing. The River itself, I'm sure there's lots of different channels from different, when there's high water years and flooding, you know, it breaks new channels, and stuff like that, but more than that, it would be the number of houses along the River now.

Becky: Development and building along the River, is the biggest change that I see. I think it's incredible that the River itself hasn't changed that much, and it's still pretty clean on the banks. And you know, people in general are pretty respectful, but the proliferation of homes and even businesses right on the banks of the River, it definitely, I see that as the biggest change and the biggest concern I have.

Joyce: You know it's getting more populated and that's a little sad. I think the houses along the River are difficult because that means that it will be less of a social space, and it's not just losing its wildness, it's losing its social capacity. It will be pretty much off-limits.

Growth was also discussed in relation to its affects on the aesthetic appeal of the River, and its changing of the view-shed from the River. Many individuals commented on the increasing number of houses being built along the River and how these change their views while being on the River. Individuals' reactions to the changes in the viewshed were often times negative. As stated before there was a focus on the small parcel, large home landowners, and it was purportedly these residences that were affecting what individuals saw from the River.

Becky: A lot of times I chose to ignore it, and I find it so offensive some of these houses are so big and they're built in the floodplain and you just wonder what they're thinking and then you come across a new one that's built really respectfully, and you know, there's a few of those that they look like they care about and they're not trying to change the view-shed or anything like that, so I just hope more people like that who have the means to build along the River will respect it, and honor it.

Stacey: A lot of houses built, you know, just floating down the river every year, you know, it's just like, oh there's a new house, oh there's new this and there's more of that.

Dave: It affects just kind of the aesthetic value I guess. You know, you can't call it any sort-of Wilderness or Wild and Scenic because you know, there's houses everywhere. You know, I really like the stretch from Livingston down to Springdale because it's large-tract landowners it seems like, and there's not all the houses. You know, where from Gardiner to Livingston there's just starting to be a whole lot of ranchettes, just all along that stretch.

Beth: There's tremendous increase in the growth visible from the River.

Chuck: Growth of people. Building a lot on the riverbanks, and ... taking away from its beauty. You look over there [pointing to a spot where there is a lot of vegetation and no obvious human development] it's pretty. When you look over here [pointing to a place where there are obvious signs of development] and see homes and stuff, it's not very pretty.

Concerning growth and development, many individuals commented on the influence of increasing development and usage on the watershed, the recreational activities, and the recreational experience. While the end result for these individuals was that their recreation experience was affected through increased use or development along the River, the perceived reason for this often differed for each individual. One woman blamed an increase in the number of rafting companies for the destruction of an area she and her family had enjoyed.

Carol: This river, here [Corwin Springs] for example, this used to be Bull Trees, used to where you could just come down here and hang out with your kids; and raft companies have taken it over. Done. I got into an argument with Fish and Game a couple of years ago. Because on that sign it says no commercial use, if you're rafting, it's commercial use.

Other individuals talked about riprap, a bank stabilization technique using materials such as wire and rocks to build up and secure the riverbank. Riprap has been used on the upper Yellowstone since the floods, and with the increase in riverfront development, there has been a corresponding increase in the amount of riprap along the River. The use of riprap

changes the flow of the River, creating new channels and hydraulics, and affects individuals' abilities to participate in recreation activities, such as fishing or kayaking.

Chris: It's [the riprap's] making it harder to fish.

Chuck: When they put all the riprap in because it just makes a channel, it doesn't let the river get out and do what it is supposed to do.

Dave: I've noticed a lot of different riprap holding the banks up. And it's kind of created different rapids and stuff. You know, different features that weren't necessarily there. You know, every year it seems like there will be some sort-of new feature formed, and it's kind-of sometimes, I think, because of rip-rap, and it just change... you know, it'll just channel the water out from a bank and all the sudden there's a wave train there that wasn't there before.

In addition to noticing the affects of riprap on his personal recreation in terms of where he can kayak and how the water flow has changed, Dave, a river guide, also noticed a change in the behavior of his clients over the past few years. This is noteworthy because of his recognition of the focus of visitors' discussions. Not only has development changed the views of individuals who have been using the River over the course of a few years or more, it has also become a focal point for individuals who may be visiting the River for the first or second time.

Dave: And it seems like people on floating trips talk more about houses. [laughs] Some of the stretches like, "oh, look at that house." You know, talk more about houses than they do about the wildlife, the riparian environment or anything like that. I think my commentary along the River has definitely changed because I'm like, "Oh, I don't remember that house." I mean, there are definitely a lot of days; a lot of people that's all they want to talk about are the houses along the River... I guess it's all right.

Two of the individuals who have been using the River for the longest of all the individuals interviewed, focused on the idea of increased privatization and the breakdown of previous social contracts that used to exist between property owners and recreationists. When asked to describe the social contracts that existed, Joyce stated,

Well, I think there was the idea that if you used the River or you went onto somebody's property... you were allowed to be there as long as you respected that property, and there was a mutual understanding, I don't think it was always conflict free, wherever you go there's people who don't follow informal rules, who try to push the boundaries... but you know, I'm trying to think of what specifically it would be, I think mostly just access, and the rules of access, and the rules of use. And littering is just one of the major issues, I mean maybe it's not a major issue, but it's just one of those givens. Like you don't leave things around on somebody's property, but I think also there was always the understanding about dogs and wildlife, dogs and livestock or firearms and livestock that kind of thing.

Thus, social contracts are the implied understanding that public users are permitted to recreate on private land. Understanding the former existence and recent disappearance of these social contracts appears to be a notable change for long-time river users.

Joyce: Well certainly since I was a kid, but I was a kid fifty years ago, so everything has become much more formalized, much more privatized and much more rule-bound and linearistic, so it's part of everything, but I think it's also part of the pressure of a changing community and increasing population, and the informal use rules that apply for a lot of people who lived here can't hold right now when there's people who did not grow up here, and don't understand those rules.

Larry: Well... you don't have the freedom you used to have... used to be able to go fishing anywhere.... Now there are probably more owners... most of them would let you in probably... I never ask.

There were recreationists who had lived on or near the River all or most of their adult lives, and these individuals often expressed difficulty explaining what the River meant to them. In describing change, many individuals began by expressing a unique identification with the River, using the words "home" or "my" to describe the River.

Carol: But I love it up here because... we're moving, going to the Gallatin River... [sighs]... I'm going to miss the Yellowstone so much.

Chris: It's all special to me, as far as, you know, it's our River, we grew up here.

Jody: In my experience, I like to be alone or with close friends when I'm on the River, so it's always a little bit sad when you go out and there are tons of people, but I kind of know where to go, and they don't go there.

Larry: Just that's it's home, I guess.

Stacey: So I love the town-stretch, and then, the next section from Yankee Jim, you know, all through Yankee Jim Canyon is like my home part of the river, You know, it's... weird. I don't know; I liked it when it was MY river. I call it Earl's, but the sign says McConnell's. That's the other thing, now I can't call it Earl's anymore because everyone asks, "What are you talking about?" McConnell's... all those little names you know.

Many of these long-time upper Yellowstone River users were struggling to come to terms with what they perceived as a changing watershed -- realizing that the place is a public waterway, but also recognizing that increased usage of public waterways has often led to restrictions of recreationists' access.

Beth: I don't know, there is a huge increase in use, but -- I love it so much, I could never deny someone else the chance to go. It would be a drag if it reached the point where I couldn't go. If it got so crowded that there were limits imposed, and only, and you had to draw a lottery for a day when you could go.

Chris: But you know that's the thing, I would hate to see it come to a River where you have to get a permit to float. You know, there are many out there that are that same way, and you know, I would never want to see it go to that point, but I suppose if it has to, if that's the only way you could do, that's the only way you could keep people off the River, to manage the boats. I don't know. You know, I think I probably need to think. Well, somebody asking questions makes me think about it more.

The subject of change often led to individuals expressing their feelings and sentiments towards the upper Yellowstone River. Though most individuals focused on increased use and, especially, development as the primary changes they have noticed in their time using the River, it is important to make note of what individuals perceived to be troublesome about development: division of land and large homes being built in the floodplain. This study brings to the fore the diverse ways in which increased use and development affects individuals using the River, and allows us to understand how complex and powerful increased development and use are on individuals' experiences

with the River. To understand further how individuals align themselves with the River, questions were asked regarding special places, having recreationists both identify a special place along the River and then having them elaborate on why the identified place was special to them.

Dimension 3: Special Places

Having individuals share special places is a way of understanding more about people's attachment to place. In this case, the range of places identified as special and the reason for each place being special varied greatly. Some individuals identified the entire River as special, saying that it was one waterway and it could not be divided up, while others were very specific about naming and describing a specific place along the River they considered special. Finally, there was one respondent who, though having a few favorite places, would not label any place as special.

Drew: Well, there's a place that I always wanted to fish because it's incredible, but you have to pay \$100 to fish it. Channels and I think Spring Creek, just south of here up the valley a little bit. I can't say that's special because I haven't fished it, but it's really a beautiful spot. ... I think just, I look at it as a whole. I don't have any certain spots because I've fished, probably only fished three or four spots, so I kind of go back to those same ones, but I just look at it as being a valley...

Beth: Wow, that's a good question! [pause] I think I'd have to probably choose the stretch of River that runs from say Yankee Jim put-in down through Yankee Jim Canyon and then all the way down here through the Valley until oh, say, Loch Laven. But any one spot? I don't think I could pick any one spot.

Jessica: I don't think I could give you one specific spot because I don't have a great memory for individual places, you know. There's places where I've obviously spent more time on, but to pick one, I don't think I could say.

Dave: There's a couple of different areas, but I guess one area I like the most and I like to camp out there is not on the Story Island, but on the back of the Story Island, there's a smaller island that only comes out like at low flows, and it's a big, sandy bar, and you can, if you know where to eddy out and roll up this little side channel next to the Story Island, you can get on this other island.

Michelle: I don't know if I have a place that's really special to me, I have several places that I like to go. They're [Carter's Bridge, Mayor's Landing and Mallard's Rest] easily accessible, and they're pretty.

[Interviewer: But not maybe necessarily a special place?] Michelle: No, no.

Chuck: The whole river's special.

Another aspect of people's identification with special places was how they answered the question relating to special places. Many people answered right away and were very specific about their special place, implying that it had been their special place since the time they started recreating on the River.

Becky: [answers immediately] Yeah, the Mallard's Rest area. I hope that's where they scatter my ashes; I just love that area. My family all knows it. I mean, if I'm bummed out or whatever, I always go to Mallard's Rest.

Carol: [answers immediately] Yankee Jim Canyon. Yeah, there's a certain spot you go on the old road, you go to Corwin and you go up the old railroad bed...

Other individuals expressed the notion that special places change over time, so a place being special to them is dependent upon circumstances in their life at a specific time.

Joyce: Well, this [Mayor's Landing] is probably the most special to me right now because part of my life with having everyday contact with friends, it's kind of a social arena for me. I think, the Big Timber area in general is special because I spent so much time there as a kid, but I don't think about it so much as the River, I guess, as I do Mayor's Landing, and Ninth-Street Island another really special place. I love to go rock hounding up there. It's got good rocks, but I guess this would be the most special place at this point in my life. If I was younger and more adventuring, I would probably be picking the Yankee Jim area or something like that...

Stacey: You know, kind-of, because I'm a photographer with the raft company so places where I take my picture is kind of like... oh, this is my rock.

Reasons Places are Special

Reasons for special places varied greatly. While there was the obvious explanation of a place being special because it was the best place to participate in a specific recreation activity, there were other reasons given ranging from the lack of development visible from a certain place to the memories of being with friends and family at a particular spot.

Their ability to fish in a specific location was given by roughly a fourth of the respondents as a reason why a place was special. While individuals participated in a variety of activities when visiting the River, fishing was the only activity (with the exception of one individual who identified rafting) that was mentioned as the reason to make a certain place special.

Carol: Good fishing.

Corey: My good friend grew up there and I just like that stretch of river; it's somewhere I like to camp. There's a lot of places near there that are very, very accessible for wade-fishermen.

Gary: It's just the best fishing; it has the best banks. It's a very pretty section of the river. Fishing's a little better up here because the water's colder, so the fish are active longer into the summer because the water temperature's not too high because fish really like that high 50s... like 56 degrees is like there, you know, so the water because it's closer to the park, you know the source and everything like that, it's colder. So the fish are a little more active. They're also cutthroat. Cutthroat aren't the smartest trout. They'll rise to you, you know. Cutthroat are famous for rising to a strike indicator, so they'll rise to a lot of stuff, so it just makes it fun to fish with clients. You know, if you want to catch trophy Browns this isn't the section of water to fish, but if you want to just go have fun for a day, it's really good water.

Jody: It's good fishing.

Larry: Well, it's the best water. It's the best fishing!

Those who identified the entire River as being special explained that the River could not be split into sections, but rather, each place contributes to the presence of another, so it must be thought of as one living system.

Chuck: We just got through with a 2,500 mile trail ride, I rode from San Antonio to Calgary, Canada, and so that's the same question I hear over and over... where, what stands out most, but when you travel something, like on the river, that slow and you get to see everything, it's all beautiful, you can't say this spot is prettier than that spot. You know, I mean, I don't like all the houses being developed on, but the river itself... there's not a section of it that is prettier than the rest of it. The whole river itself is just beautiful, so it's hard to say, oh yeah, this spot's prettier... you know... or nicer. I mean, there's a couple of places on the river that are neat because they got warm springs coming up in them, so you like to get out there and play and, but it's no good fishing there, so you gotta go down the river where the fish are at. Yeah, there's no one thing... all of it makes the river special and unique, it's not this and that... it's the whole thing.

Drew: I think just -- I look at it as a whole. I don't have any certain spots because I've fished, probably only fished three or four spots, so I kind of go back to those same ones, but I just look at it as being a valley... It's like being on the Yellowstone in Paradise Valley is its own thing. I think the river anywhere around here is so perfect for fishing and anything else, but I use it for fishing, anywhere that I've fished or saw, driving along it, is really nice, so I guess I can't say one spot.

A few people identified a special place because of the way they felt when they were there. This was often described as being relaxed and away from both people and development.

Dave: That it's a nice sandy beach and you can position yourself and your tent, and you don't see... you can't see the highway, you can't see any houses, and you really can't see like any ranch land or anything. Basically you see the mountains and then you see basically just the River corridor and the trees. And so I really like that. ... Well, I definitely wouldn't say it's remote or even remote feeling. It just feels... less touched by man.

Becky: You know, I love where you are in the mountains there. I mean, I could name millions of other places along the way, but you can just drive right there, and there's that sandy beach at the end. I love to just sit in my chair and get my feet in that warm sand, or take my dogs to swim and chase sticks there or whatever; I've always loved the Mallard's area. I like to just sit in my lawn-chair

in the morning in that sand and drink my coffee and look at those mountains because you're right in the heart of those mountains right there.

For a few individuals, two of whom grew up living close to and using the River, their special place was based on what it provided in terms of family, friends, and memories. A few people felt that their special place was a part of their home.

Corey: My good friend grew up there and I just like that stretch of river; it's somewhere I like to camp.

Chris: Yeah, my home. I mean like, I live right over there. You go around this corner and it's right there... that's special to me, you know, it's all special to me, as far as, you know, it's our River, we grew up here.

Anne: Because it is only right down my driveway.

Similar to the notion of a place being special because of it being an extension of home, there were those who identified their special places as a specific place they go to see people. Their special places were based on the social capacity of the place, and the experiences they have with others at a particular place.

Joyce: This [Mayor's Landing] is probably the most special to me right now because part of my life is having everyday contact with friends, it's kind of a social arena for me.

Stacey: Yeah, just more rafting companies, and there's more... now, I share. I love the photographers for the company, so it's like our little place. People bring instruments and we play music by the river while we're waiting for our boats.

Anne: Here, and there's a couple other beaches, but you know. [Pause] But this one is perfect because the kids can go out in the water and play. ... And it's safer for the kids.

Special places take on an important role when we attempt to understand individuals' perceptions of a shared space such as the upper Yellowstone River. Special places go even further in expanding upon individuals' personal relationships to the

watershed. The role of special places becomes important as people begin to grapple with how a public watershed has, is, and will be managed.

Dimension 4: Management

Management agencies have a difficult job as they attempt to balance the best interest of the watershed with that of the various groups and individuals using that watershed. A diverse collection of public and private groups, including the US Corp of Engineers; Montana Fish, Wildlife, and Parks; the Park County Conservation District; the United States Forest Service; and private landowners (both residential and commercial), influence the ecological state of the upper Yellowstone watershed. Individuals were asked for their input regarding management of the upper Yellowstone River by requesting that they list one or more things they would like to tell management agencies. There were four main categories of responses: balance, use, planning, and accepting current practices.

Balance

A few individuals expressed a need for balance, indicating that all individuals connected to the River should have a voice and should be considered, as well as considering what is best for the upper Yellowstone River.

Bob: I believe we have to grow, we have to think, but I also believe we have to protect what we have.

Michelle: I would say to have them really manage that River, so that we have a balance between people and animals. I think the more people that move in, the more need for water there is for the people, and the less water the animals have. And I think there just is a constant need for that balance. If you have the River go low, and you have to close down part of the River like they did last year because the fish were threatened -- and the people get angry because they can't fish, and just kind of, you have to balance out everything.

One individual focused on private landowners versus public river users and how to deal with keeping access available to all, but at the same time respecting the privacy and safety of those who own land adjacent to the River. This is different than other individuals who talked about balancing human desires with overall ecological needs, however, it also introduces the concept of balance in terms of compromising and finding a system both the public and private sectors can agree upon. Beyond balance though, there are many interesting ideas presented in this individual's opinions about the management of the River and how the River as a social space needs to be realized and addressed within a complete management plan.

Joyce: That's what I keep coming back to because what I hear as a [city official] and a recreational user, is the concerns that people want things, they don't want to be invaded, and they want to have their privacy, and their safety respected, and it's reasonable. If I had the Yellowstone River as my backyard, I wouldn't want to think about who might be drifting up to the shore, but on the other hand, I think that's why we shouldn't have our backyards right on the River. It should be sort-of the public's backyard. It's a social-space kind of thing to me, and that's more of a European thing. When I did my research in Kentucky, I dealt with a lot of this public-use, recreational-use versus private property issue, agricultural issue, and ideas about recreation per se... I mean, what is a valid recreational experience? And, I think that that's always the concern; people want things to stay the way they are, but they can't, so it's like what do you do with the change that's already happening. And, it really isn't about preservation of a natural resource only as a natural resource, but as a social resource, and somebody had explained to me that that kind of concept of the social space, rather than public property, social property, is much more of a kind of British and European idea. The Commons is a tradition, whereas, we don't have that tradition, we have government protected tracts of land, and then we have private property. So maybe the whole concept of social space is one I would like managers to look at.

While many people were discussing issues of public, private, and representation of all, there were a few individuals who felt that there should be recognition of locals.

Recreationists living in Park County wanted to make sure that managing bodies

understood how important the River is to their lives, and felt that local benefits should be considered in terms of recreation use.

Jody: That it's crucial to our community to keep it in good, in good environmental standing, and that I think for a lot of people, it's why we're here. One of the reasons, yeah. I wouldn't be here if it wasn't here, I don't think -- I love water, so.

Corey: I definitely think that there should be an advantage for people who live in Park County, especially the guides, to go fishing more. But I also would like to see guides live in Livingston, and not coming over from Bozeman all the time. Well, I think it would make guides move over here and pay Park County taxes, and it would make them... you know, spending local dollars. Instead of bringing their clients over to go fishing for the afternoon and then taking them back to Bozeman to stay in a hotel in Bozeman or to eat a dining establishment in Bozeman. I would rather see that money come here.

Use

The subject of fishing guides was a popular one with the recreationists. A fourth of the respondents stressed the importance of managing use and user groups, and often fishing and whitewater guides and outfitters were the subject of the discussion. Some expressed managing use through education, feeling that there was a lack of information being disseminated.

Gary: Well, there's two things actually. One, I would educate fishermen more on river resources and catch and release fishing and stuff like that. Like right here as a matter a fact is a really good example, a week ago I saw a guy hook a 20 inch Brown Trout on a spinning lure and he picked it up out of the water and walked 150 feet upriver to show it to his son and to get the hook out and then he walked 100 feet to get back down after he dropped it twice on the ground and try to put it back in the river and revive it, and then when me and my guy told him there was no way it was going to survive, he might as well take it home, he looked at us like we were crazy, but that's only because it was moving in the water, but it's like well the lactic acid that's built up in his body is so high, it's never going to recover. Just because it was moving a little now, you know as soon as it gets out in the current, it's just going to fall over. So that's part of it. You know, I have a lot of people who walk into my office because I own a fly shop in Emigrant, I have a lot of people who walk into my shop who have no idea what the regulations are. You know, I'm always being told stories about guys who are up at Mill Creek, that are camping out keeping Cutthroat, which is a major violation.

So that's one. You know I think that they should put in some, something to make people like me who can issue a license have to at least spend 20 seconds educating or you should have to go online or take a test or something to get your license. It's kind of like the joke that you have to have a license to drive a car, but you don't have to have a license to have a kid. Well, you know, you gotta have to at least be educated a little. So that's one.

Joyce: I guess the key to keeping access available is also educating the public about responsible use, and trying to really coordinate in a programmatic way with the private-land owners along the way.

Sue: I think it would be important to educate the people that use the River. Make sure that they don't litter and abuse the water, don't dirty the water and don't over-fish it. So I don't know, I guess I'm not even sure if it is catch and release or what the status is, but it should be maintained in that fashion for everybody to use.

Following the need to educate river users was the issue of enforcement. There was an expressed desire for commercial guides and outfitters to be regulated and for those regulations to be strictly enforced. A few individuals expressed the sentiment that too many guides and companies were on the River, citing both issues of over-use and safety.

Gary: The other one is that they would enforce; I think they should control the amount of people who are allowed to use the river for commercial use. There are so many guides in Park County alone, much less in the state of Montana, that there's too many guides for the amount of work there is. And the quality of them, some of them, is really bad. Yeah, I mean there's some guides in the valley that have buried a couple of boats in their lives, and you know, that's not impossible to do, but when you're at number three in your life, you probably shouldn't be guiding anymore because you know, even on a good day, you're probably unsafe. So... and you probably don't understand the river that well. And that you know, unfortunately in the state of Montana it doesn't take anything more than finding an outfitter willing to sign your guide license to be a guide. So there's no minimum safety test; you have to take a CPR class. All right, it's a first aid class. So because of that, there's a lot of them and it's very easy to do, so it creates an environment. Whereas if you look at other states like Idaho, Wyoming, Colorado, where it's much more difficult to be an outfitter and a guide, then the quality of what they're doing is a lot higher than it is here in these places.

Corey: And I would like to see a type of moratorium put on people fishing, on guides especially, on certain days, so that locals can get out and fish and not encounter any commercial fishing. I would say more guide regulations, less

guides. Especially regulating how many launches per day for certain accesses; I think that would be a good thing.

Carol: To get control of the rafting and the boats because it's out-of-control, limit it to certain accesses and stuff like that. They need to manage the boat-stuff more, so locals, more people... the public can go here and enjoy it instead of being bombarded by raft companies, fisherman... [laughs]. Designated boat areas, designated... you know, they can fish, they can do that, but have designated areas where they put-in and take-out their boats and stuff like that. Like there's a stretch from Emigrant, it's called Greyowl, I do believe, from there to Pine Creek, they have designated little spots with picnic tables along the river for people to pull off and do that so they're not using areas like that. So maybe more of that kind of stuff just around here.

Anne: That they should put 'in and out zones' for the rafters in, you know, specific places, other than here. There's plenty of places down the road. Enforcement you know. I mean kids get run over; they have to worry about their stuff, if their building castles... you know.

Finally, two individuals talked about controlling river modification. In order to protect against bank erosion and floods, some individuals who own property adjacent to the river have installed riprap -- walls of rocks along the banks -- which keeps their banks from washing away, but also changes the course of the river, creating eddies and channels. Individuals who were interviewed felt that riprap needed to be better controlled.

Chuck: Don't repeat your mistakes. Because all the riprap was a mistake.

Becky: First of all I would say that I think they're doing a really good job as far as managing the resources of the River. You know, we still have good fishing; they've got good regulations to keep the trout, and the fisheries I think they're managing really well. And, I think they do a good job with the campsites and that kind of thing. You know, I worry about in the flood years, that whole thing about building the berm by Livingston. They get the Corp of Engineers coming in and you know, things get done; it's tough to undo them. And I still -- I'm concerned about the banking, and the ways they've found to try to keep the River in its flow, and I guess that would be my biggest thing is that we have to let the Yellowstone be the Yellowstone, and do what it wants to do, and you know when you go down with those big rock walls and that stuff, and I guess they're still legal, it concerns me because, you know, I remember when there was the proposal to damn it and you know, my biggest thing is to keep this the longest undammed River and keep

it. I hope my grandchildren can come here and fish and camp and enjoy the same experience.

Planning

Similar to the desire expressed for the management of River use was the concern of some individuals regarding management planning. About a third of the individuals felt that the upper Yellowstone was currently in good condition and well managed, but they also saw more use and development, and because of this, they expressed a need for proactive planning.

Joyce: This has come up in specifically around the city commission because... The Yellowstone River Trails and Greenways Task Force, to start inventorying what we have, how to make use of what we have, and to establish some trails, I would hope, in the future; but what's come up is a lot of concern about people who live near these popular places like Mayor's Landing, who are afraid of having trails built in such a way that they're going to have a lot of strangers in their backyard. I mean, it's been a concern, but we're promoting that, and what I hope we can do is actually present that, so that whatever we plan for -- and this is what I said to one person who was concerned -- planning helps -- we think planning helps, is to start looking at this in a really systematic way... in a big-picture kind of way, so that we can promote recreational use that is respectful to private property. And just listening to myself talk, I guess what I keep coming back to is how do you make the private and public meet? You know, accommodate both concerns, and what I don't want to see happen is that there becomes like this intense, heavy-use of the River and the areas around the River, and that change happens by default and people are in other people's backyards, rather than some kind of coherent planning that directs recreational use in a way that respects people's privacy.

Beth: I would want them to do what they're already trying to do, which is work with the very diverse group of interests who want to use the River, the landowners, the ranchers who need their water, the real estate developers who -- don't get me started [laughs] --- the fishing guides, the commercial fishermen, all of those groups are represented in meetings I think. They have someone who represents their individual interests, there's a lot of us out here who are just boaters, and we don't have any kind of individual to represent us, so I would say, that I would hope that, the river managers would keep those sort-of, not-officially represented people in mind, and not somehow impose limits that exclude us... or diminish our chances. Get the word out that there's a proposal on the table to, for FWP to require (this is a hypothetical) -- if hypothetically there were going to be a plan where FWP would require all boaters to get permission to go boating, and

that's something as simple as a fishing license which a lot of us buy since we use the fishing accesses whether or not we fish, but if there were going to be any changes made to the way we're allowed to freely use this River, I would hope that that would be very well-advertised.

Melanie: I mean in an ideal situation, yeah, I'd rather not see it, but, I guess in reality it is going to happen, but I would hope that it could be controlled. More planning, maybe.

Stacey: Really think out development and policies and procedures, like you know, there's no policy of how many people can go on the River, and kind-of get a smart planning because it's going to grow, and there's going to be more people wanting to use the River and be near it. Building, you know, somebody's building too close, just make sure to manage the -- all the things that go with building along the sides.

In addition to encouraging proactive planning, there was an expressed interest in planning for the long-term. Roughly a third of the respondents said that managing for the long-term allowed the needs of different interest groups to be considered, but realized that what is ultimately most healthy for the watershed is also best for river users.

Jessica: Keep it the way it is. You know, don't, I don't know, there's development, there's, there's... just keep it the way it is. Access-wise, no fancy stuff, no new fabulous improvements, just keep it the way it is... wild and free.

Chuck: If you're gonna build... it's just like building a house on the coast, sooner or later, it's gonna get flooded. People know that when they build on the river, the river's gonna flood... just let it do what it's supposed to do. Let nature be the guide, not man... we can't control it. We're controlling to a point, but at the same time then we're killing everything out because then it makes a wash out of it. It just washes everything away, and there's nothing left for the fish to lay their eggs in. Development's the biggest thing because without the development they wouldn't need the riprap. So the development's the hardest thing on the whole country... you know, it's what they need to start paying attention to... the development.

Melanie: I guess to protect it as much as they could, either from development or to keep it as natural as possible. I'm wondering if there has been any planning at all. [laughs] I think I saw in the paper one time that, like, for so many years in the future, if the development kept up at the same pace that it is, kind of what this whole Paradise Valley would look like, it was just you know, this was just like a general map, and it was just like a grid and dotted with structures, as opposed to not having structures. So, I don't know that there's really much planning or

development planning going on right now, and really you have to start, well, it should have been done already, and if not, they should at least start it as soon as possible, or it just kind of gets out of hand.

Dave: I guess it seems like there is so many people who manage the River, and it's not just managing the River, it's more managing the people who use the River. I guess just what I would say to everyone: you know, manage it in a long-term way. Like what's going to be the best 25-years, 100-years down the road, not what's necessarily the best for like a short-term thing...like, not what's going to be the best for this particular landowner, or what's going to be the best for the fishing outfitters, but kind-of what's going to be the best for the whole River corridor from now on.... Not so much even thinking about the human needs, but thinking of what's creating.... Because all the human needs are basically surrounded by having a healthy River, so sometimes in pursuit of making a living or recreation or whatever, we forget what is most important thing for a River and we start thinking what's the most important thing for us, and I think we can all, everyone, from cattle-ranchers who need irrigation to outfitters who need number of users days to kayakers who want a place to surf on a wave or whatever, I think we all can... if you point it out to us while we're hammering away at what our specific needs are and you say what are the long-term needs of the River. I think most user groups could understand that, and so that's something that I would, you know, don't cater or cower to one particular user group, the outfitters or recreationists, fishermen, umm, irrigators, look at it as a huge river system that has a lot of different uses, so you can't really pick one use that's like we should manage for this. You've got to manage not for use, but for a healthy river.

Drew: I would say to really look at it as one entity... a lot of things make the Yellowstone, I think Yellowstone itself needs to be [interruption] -- you need to look at things like the Park, keeping the Park healthy and the mountains around here. There shouldn't be too much logging, you know, all the Spring Creeks and stuff. Corey and I were talking today about something interesting and this is just Yellowstone... how Spring Creeks can kind of be owned and they aren't considered waterways, and I think that's... I don't think that's right. In looking at waterways, I think that anything that feeds the system, especially water should be looked at as integral to the system as a whole. I just think that the Yellowstone River is probably so much a part of this community, not just people using it recreationally, but also economically that you need to have a healthy river. I'm not a scientist or anything, but I think overuse, I don't know if it's a problem. I know a lot of people fish here, but I guess just whatever is best for the river is best for all of us.

Stacey: You gotta start paying attention to the numbers, really get the idea of how it grows, so you know, we'll still be under the quota of how many we should have, but pay attention to what that is, and like look at, how it is affecting the ecosystem around it. Like I said, I find more garbage and stuff along the shores, and just more... like change... like people will move the rocks around here and

there to get their boat out, and you know, we don't want people destroying the River... just to kind of plan... a long-term plan.

Accepting Current Practices

While many expressed concerns with how the river would be managed in the future, there were a few individuals who felt that management of the river was being done well, especially with all the different stakeholders weighing in on issues.

Corey: I think they've improved the access, more signs, more campsites, you know... moving from primitive to actual campsites. That's about it I guess.

John: I would tell them that they're doing a good job because, I mean, I know there's limited resources for law enforcement, and you know pumping out the toilets and stuff are stretched thin and I really don't have any complaints. We've got what we've got, you know, I mean... so the river is the main resource and it's headwaters in Yellowstone Park means that it's always going to be fairly pristine... I don't know. I can't really think of one thing I'd say, other than they're doing a good job to me. It seems that the cards are stacked against them really, you know.

In addition, there were a couple respondents who realized the need of individuals, beyond management agencies, to do their part in helping to keep the river as clean as possible, and that while agencies are ultimately responsible for management and planning, there are steps that the private sector can take to help keep the upper Yellowstone River healthy.

Jody: I think people are trying hard to keep it... I know there's some groups in Livingston that go around and try to clean up, so hopefully...

John: Public access is pretty plentiful. You know there's not a lot of garbage and people kind of police it up after... keep clean... pick up after themselves.

Finally, though it wasn't an opinion expressed by many people, a couple individuals expressed the idea that a River needs recreationists in order to stay viable as a public waterway, open to recreationists. These individuals encouraged use and realized the positive benefits of more people using the river.

Sue: It puts more people on the River, but I think as long as it is well managed, I think it's good for the economy because otherwise there isn't much going on here.

John: And, I also firmly believe that it is a use it or lose it situation where I actually welcome the throngs of people to come and use this river because it's always going to be at some point ... it will always be there... it's not going to be privatized and cut off because nobody wants to do it... nobody wants to float. I think it's good in general just for this whole area... as long as people obey the rules and don't thrash it... which is a different story, but... I think there's been a precedent already set in other states as far as -- if there's not any interest in recreating, I mean somebody who's come up from another state can't maintain it anymore so they'll sell it off.

[Interviewer: Is there a 'too many' point though?] Too many people using the river? [Interviewer: Yeah.] I'm sure there is, but I don't think we'll ever see it in Montana.

Summary

The purpose of this study was to understand how an overarching group of individuals (recreationists) was using, interacting with, and perceiving the upper Yellowstone River. Two study instruments gauged information about river users. The first of these instruments, the quantitative survey, provided information about length of time using the River, activity participation, overall satisfaction, attachment to place, levels of concern regarding growth, and demographic information about river users.

The second instrument used in this study, the qualitative interviews, provided information regarding four different dimensions: description, change, special places, and management. The description dimension was divided into descriptions dealing with aesthetics, physical properties, recreational opportunities, atmosphere, and change of the upper Yellowstone River watershed. In this dimension some respondents chose to describe the upper Yellowstone River in terms of it being a great place in which to partake in a specific activity and some who viewed the watershed primarily as a unique and magical place.

Change was the second dimension delineated by the qualitative interviews, and the responses gleaned can be divided into three groups: those unconcerned about change; those viewing changes as positive; and those concerned with ecological changes and growth, specifically regarding increased use and development. Individual responses on this dimension varied from the River not having changed at all to the reported breakdown of previous social contracts and increased preoccupation regarding development of the river corridor.

Special place was the third dimension of the qualitative data. This presented individuals' reported special places and included passages of individuals explaining why their chosen place was in fact special. Finally, the fourth dimension dealt with management. Themes within this dimension included a discussion of identified balance, use, planning, and accepting current practices. The next chapter contains proposed conclusions and implications based on these results.

CHAPTER FIVE: CONCLUSIONS/IMPLICATIONS

This chapter presents conclusions to the previously asked research questions. Each research question is presented with the conclusions of the researcher based on the results presented in chapter four. Further, the second section of this chapter presents the implications of this research. The implications section is broken into two sub-sections: management implications and implications for the field of river recreation management. Included in these two sections is a discussion of the impact these findings have on managers, specifically those managing the upper Yellowstone River, and on the field of recreation management at large. Included in both these sub-sections are recommendations of possible future research to both assist upper Yellowstone River managers and to advance the field of recreation management.

Research Question One: Who are upper Yellowstone River recreationists and how are they using the upper Yellowstone River?

Through a quantitative analysis of the survey data, we begin to gain a better understanding of upper Yellowstone River recreationists. It is important to note that the group of river recreationists is diverse. Over half of the individuals surveyed were males, however, this was not an overwhelming majority. There was also diversity in the age of the recreationists, and while there were no individuals under the age of 17 surveyed for this project, many children were observed recreating with their peers or with their families. In addition, of those who filled out the survey, there was a 64 year range in age, with the average recreationists being 39 years old. Upper Yellowstone recreationists were also a well-educated group, with well over half of the respondents being college graduates. In terms of income, the most represented group was comprised of individuals

reporting a household income of \$100,000 or more; however, this was not a majority and incomes varied quite a bit.

The majority of recreationists surveyed were from Montana and had used the River previously. In fact, the average number of years recreationists reported using the River was just over 13. However, beyond Montana, recreationists reported being from 31 different states and at least one Canadian province. Many of these individuals were repeat visitors as well. In addition, the proximity of the upper Yellowstone River to Yellowstone National Park allows for many first-time visitors to experience the River before or after their visit to the Park.

There was no one activity that dominated recreation on the upper Yellowstone River. While it is known for being a very good river on which to fly-fish, and indeed fly-fishing was a primary activity for many, there were numerous other activities in which individuals participated including whitewater rafting, canoeing, kayaking, and swimming. Along with these popular primary activities, the majority of individuals reported participating in viewing wildlife and nature while on their visit to the upper Yellowstone River, thereby highlighting the importance of the natural world to their recreation experience. The diversity of recreational activities in which individuals participated helps highlight the importance of recreation on the upper Yellowstone River, similar to the findings of the Socioeconomic Assessment (2002). In addition, similar to Taylor & Douglas (1999) findings of high levels of satisfaction for overall experiences on the Trinity River, upper Yellowstone River recreationists were also very satisfied with their overall experience.

When asked to respond to concerns they may have, recreationists expressed overall moderate concern for growth and development issues on and along the River. However, there was notably more concern surrounding the development along the River than the number of individuals and watercrafts observed on the River. This also seemed to be supported by the qualitative data, in that, while increased river usage was discussed, there was more focus on the development along the River as having a negative impact upon people's river experiences.

This study in conjunction with the Socioeconomic Assessment (2002) is just beginning to scratch the surface of knowledge regarding upper Yellowstone River recreationists. The individuals recreating on the upper Yellowstone River are indeed a diverse group of people, using and interacting with the River in unique ways. It is important to remember, however, that they are just one type of river user; there are still other diverse groups who use the River for utility purposes, including, for example, both river guides and ranchers.

Research Question Two: What are the dimensions of sense of place along the upper Yellowstone River Valley?

As described in the quantitative portion of chapter four, the place attachment scale included on the survey revealed two dimensions of place within the upper Yellowstone River: place identity and place dependence. This finding supports the study on which the place attachment statements used in this survey were based, wherein Williams and Vaske (2003) also found two dimensions of place: identity and dependence, as well as supporting other studies dealing with the dimensions of place attachment (Moore & Graefe 1994; Warezecha & Lime 2001; Williams & Roggenbuck 1989). Further, and similar to Bricker's (1998) findings, the place identity dimension appears stronger than

the place dependence dimension. This is also shown in the qualitative data, where we see that although individuals expressed the importance of the River as a good place for their chosen recreation activity (i.e. fishing), the expressed emotional attachment to the upper Yellowstone River received more attention and was stressed by many respondents over the River's adequacy for a chosen activity. For example, Becky's description of the River reveals that she views the upper Yellowstone River as unique and magical, but not necessarily because of any particular activity it fosters.

I think, to me, it's a really magical place, and it's a combination of the mountains being so close to the River, the color of the River, the incredible weather that we have over here, storms that can just hideously blow in and then beautiful weather after that, so you know, it's just a real magical kind of place that you don't find too many other places... pretty unique.

Though such findings have been present in other studies (Bricker 1998, Williams & Vaske 2003), these are usually just reported in the results section and little attention is paid to their potential importance. What implications does the apparent strength of this place identity dimension have? As stated in chapter two, place dependence refers to how well a setting facilitates particular activities in which users engage (Moore & Graefe 1994, 7). Place identity then recognizes that, "In addition to being a resource for satisfying explicitly felt behavior or experiential goals, a place may be viewed as an essential part of one's self, resulting in strong emotional attachment to places" (Williams et al. 1992, 32). Thus, while place dependence can easily categorize how people identify with the River through their ability to raft, kayak, fish, or walk next to it, place identity is far more elusive and personal. Place identity involves conscious and unconscious feelings, beliefs and values about a place, as well as involving personal and specific

memories people attach to it. The implications of this for River management and recreation literature are very important and will be discussed later in this chapter.

Research Question Three: Are there commonalities of reported special places between and within specific recreation groups? Where are they similar? Where are they different?

Similar to findings from other studies looking at the concept of special place (Eisenhauer et al. 2000; Schroeder 1996; Bricker & Kerstetter 2000), this study found that special places involve emotional attachments. Bricker and Kerstetter's (2000), also noted the multi-dimensional nature of special places, and this study supports their finding. Special places were identified for environmental reasons, or social reasons, or a combination of the interaction of the natural and social context of a specific site. Further, as in Bricker and Kerstetter's findings, the range of places identified as special varied from a very specific place to the watershed at large to the entire river system. In addition, the meanings individuals gave to special places were quite varied, some focusing on a specific place being the best place for their chosen recreation activity, while others citing a place as special because it allows them to relax and escape the pressures of everyday life.

Acting on Bricker's and Kerstetter's (2000) recommendation to look at reported special places based on the activity involvement of the respondent, this study attempted to look for similarities and differences of reported special places based on the activity in which respondents engaged. This proved a difficult task along the upper Yellowstone River because of the range of activities in which a single person may participate. However, it appears that those individuals who in the interview reported being fly-fishing enthusiasts, were likely to label a place as special because it was the best place to fly-fish.

Yet, there were even notable exceptions to this (the fly-fisherman who reported a place as being special because it was his home, or a fisherman indicated the whole river as being special because of its uniqueness and how it is all connected). Thus, beyond that of fly-fishing enthusiasts there was no other identifiable group in which individuals labeled a place as special based on that place's ability to allow for participation in a specific activity. It seems that what makes a place special varies from individual to individual, and therefore, it must be recognized that individuals' identification with a place is deeper than activity involvement.

Research Question Four: Are there differing views of the upper Yellowstone River that may lead to conflict?

It is this final research question that attempts to speak to the upper Yellowstone River Task Force recommendation, "A study should be funded to identify the current conflicts and potential future conflicts arising from changing uses of the upper Yellowstone River" (Governors 2003, 13). While conflict is an important issue that needs to be addressed further, it was important not to begin this study with the assumption that conflict exists within the watershed. Therefore, the researcher did not initiate contact with recreationists with questions about this assumed conflict. However, through the concept of place, the researcher could begin to speak to the notion of conflict through perceptions of a shared space.

As evidenced from the reported attachment to place within the quantitative portion of this survey, it is apparent that many recreationists identify with the upper Yellowstone River. They are emotionally attached to the River, and believe the River to be an ideal place to participate in their chosen recreational activity. However, while there is apparent unity and agreement in relation to importance of the upper Yellowstone as a

unique watershed and a popular recreation destination, we must ask whether there are differences in how this shared space is described and understood. This is central in a holistic look at sense of place, as we must not only realize the potential agreement along the lines of emotional and activity-based attachment to a place, but recognize existing or potential differences in the understanding of place.

There does appear to be some discrepancy as to how recreationists perceive the shared waterway. Recreationists' descriptions of the waterway give a baseline understanding of how they view the watershed. In some cases, individuals asserted that the River was not over-crowded or over-fished, while others expressed the exact opposite sentiments in describing what they viewed as too much use. Further, some individuals chose to describe the watershed in terms of its physical beauty, while others focused on the recreational opportunities available on/near the River. While these are not mutually exclusive categories (i.e. beauty can exist with the opportunity to participate in a variety of recreational activities), how respondents choose to describe the River becomes important because the way in which the River is viewed -- as a valley of intense physical splendor, or as a recreation destination, or as both -- must be understood by future decision-makers.

Several individuals noticed and commented on increased development in the upper Yellowstone River corridor but were not bothered by the presence of these new residences. Conversely, there were those who asserted that the corridor development negatively affected their experience on the River and stressed the need for better planning and management of this phenomenon. In fact, many individuals pinpointed a place as

their special place because of the lack of development that could be seen from that specific locale.

It is this issue of development that emerged as the most contentious point, whereas based on the FWP internal assessment and the upper Yellowstone River Task Force recommendation, there was an expectation that individuals would focus on conflicts between recreation groups. For example, we would expect that fishermen would express annoyance with the increasing number of inner tubers with whom they interact while on the river; yet, such specific conflicts were rarely mentioned and, when mentioned, they consisted primarily of complaints over the increasing number of commercial and guided groups, not lone recreationists or the specific activities of groups. While individuals did note the perceived increasing number of users as something that should be recognized and potentially regulated, it was still the off-river activities (such as new construction) that fueled the most emotional and often negative reactions from individuals.

In both the quantitative portion of the study, with individuals reacting to the development visible from the river and, especially, in the qualitative portion, with individuals recognizing and reacting to the influx of riverfront homes, the issue of development resulted in the highest level of concern. It seemed that while individuals may be annoyed by more people using the upper Yellowstone River, they recognize it as a public waterway and acknowledge that everyone has an equal right to recreate on the River. However, the issue of development was viewed with a lot less understanding and empathy. Individuals expressed concern that development was reaching a level of being out-of-control and dangerous with the potential for floods, as well as having a profound

affect on their experiences on and relationships with the upper Yellowstone River. Thus, the connection of individuals' emotional attachment to place, often described in terms of experiencing and valuing the beauty of the physical aspects of the entire watershed (the mountains, the river and the valley) as one entity, is being challenged and changed through development.

Management Implications

In realizing the management implications of this study, it is again important to note that those who manage the river corridor are not one unified management team, and therefore, it is stressed that open communication and understanding between these differing agencies is necessary in order to best manage the upper Yellowstone River. In this regard, there are quite a few important management implications that become evident from this research.

As stated previously in the chapter, recreationists have a strong attachment to the upper Yellowstone River. It is important that managers recognize the emotional ties recreationists have to the upper Yellowstone River because, as previous research has suggested, individuals who are emotionally attached to a recreation place will have an "increased level of concern regarding how a place is used and managed" (Williams et al. 1992, 32-33). This is where it becomes crucial for managers to recognize the fact that place identity ranks above place dependence. As Kyle et al. (2004) stated, "To manage recreation resource based solely on the activities enjoyed in the setting may be inappropriate if in doing so we ignore the more abstract elements of the experience such as values, beliefs, and feelings about specific recreation settings" (138). It appears, in the case of the upper Yellowstone River, that people emotionally align themselves with the

River, and often perceive their sense of self as intertwined with the place. This becomes difficult when trying to manage a public recreation area because the place may mean different things and hold different values for each of those who are using it.

Management must be aware that this does indeed appear to be the case with the upper Yellowstone River because, while there is obvious unity regarding the importance of the watershed, the ways in which people identified with the watershed and how it has changed were often very different. In moving forward, management must be sensitive to individuals who are very invested in the watershed but may not already be represented through prominent, established stakeholder groups. As one respondent stated,

I would want them to do what they're already trying to do, which is work with the very diverse group of interests who want to use the River, the landowners, the Ranchers who need their water, the real estate developers who don't get me started [laughs], the fishing guides, the commercial fishermen, all of those groups are represented in meetings, I think. They have someone who represents their individual interests, there's a lot of us out here who are just boaters, and we don't have any kind of individual to represent us, so I would say, that I would hope that, the river managers would keep those sort-of, not-officially represented people in mind, and not somehow impose limits that exclude us... or diminish our chances.

Thus, it is recommended that the relationship river-users have with the watershed be better understood, considered, and reflected in future management plans. Building from the recommendation of previous research dealing with the concept of place attachment (Warzecha & Lime 2001; Bricker & Kerstetter 2000), it is the recommendation of this study, that management recognizes and attempts to understand individuals who are deeply attached and in many cases deeply committed to the upper Yellowstone River, and identify them as key stakeholders within the watershed.

Further implications from this study recommend that management take notice of identified special places along the upper Yellowstone River, as well as understanding

why such places are deemed special. In doing this, management should recognize the range of reported special places to include a specific group of rocks on the side of the river to the entire river corridor, and also realize, “Changes to any one of these special places may have an enormous impact on individuals’ perceptions of the entire river corridor” (Bricker & Kerstetter 2002, 420). While it is obvious that future management decisions may change individuals’ special places, it is the recommendation of this study that managers be aware of special places and their importance in one’s overall understanding of the upper Yellowstone River.

It is obvious that managing the different aspects of the River is a very difficult job, as trying to balance the diverse human uses with the overall ecological health of the watershed indeed proves challenging. However, it is important to note that river users overall seemed compassionate to this cause. There was an overall focus on management viewing the watershed in terms of long-term benefits and putting the ecological needs and health of the River before those of the various user groups. Thus, it becomes important for management to realize that while everyone may perceive of and relate to the upper Yellowstone River differently, there appears to be an overwhelming majority of recreationists who believe that what is best for the River is best for the river users. As one individual, who is an outfitter, guide, and recreationist said,

Not so much even thinking about the human needs... Because all the human needs are basically surrounded by having a healthy River, so sometimes in pursuit of making a living or recreation or whatever, we forget what is most important thing for a River and we start thinking what’s the most important thing for us, and I think we can all, everyone, from cattle-ranchers who need irrigation to outfitters who need number of users days to kayakers who want a place to surf on a wave or whatever... if you say what are the long-term needs of the River. I think most user groups could understand that, and so that’s something that I would [say]... don’t cater or cower to one particular user group, the outfitters or recreationists, fishermen, irrigators, look at it as a huge river system that has a lot of different

uses, so you can't really pick one use that's like... we should manage for this. You've got to manage not for use, but for a healthy river.

Future Research for River Management

In terms of the upper Yellowstone River Task Force's recommendation to fund a study to identify current or future conflicts along the upper Yellowstone River Valley it appears from this study that overt user conflicts do not readily exist. Individuals who were interviewed reported that in their experience other river users were for the most part courteous and friendly. Crowding at certain access points was reported that may have the potential to lead to conflict. Therefore, future studies dealing with conflict may want to focus entirely on the second part of the recommendation and try to identify potential future conflicts, with special emphasis on alleviating crowds at certain access locations. It would appear that potential future conflicts may arise because of perceived or actual increased use and crowding. Thus, studies identifying how many people are using the River today and if and how that number changes over time would be helpful for management to get an idea of the capacity of users the upper Yellowstone River can support.

As it stands now, there is a preoccupation among recreationists as to how the river will be managed in the near future, as it is perceived that more people continue to use the river. Long-time users fear that their ability to access and use the river may be jeopardized or regulated. This is not leading to overt conflicts between individuals or user groups, but to an overall concern about the future of the River.

In addition, it is recommended that managers and all those involved in decisions being made along the upper Yellowstone River be aware of the influence development along the river corridor is having on individuals' recreation experiences, as well as

recreationists' overall preoccupation with increased development. Though this is something that recreation managers cannot necessarily control, it is recommended that the impact of development is recognized. Further, FWP could work with Park County on regulations related to building close to the upper Yellowstone River and in the floodplain. Tourism and river recreation are important components of the Park County economy (Socioeconomic 2002), and knowing this, there is a need to address the issue of development along the River. In addition to individuals reporting development along the river corridor as being a visual blight, these buildings could also result in flood problems later. Thus, the connection between recreation and land development should be recognized and studied further to gain a better understanding of this connection.

The overall recommendation of this study to upper Yellowstone River managers is to ask that they try to recognize and understand the diversity of those who are using the River and continue to learn about how the River is being used, who the River is being used by, and how the individuals who are using the River view and identify with the watershed. Findings from this research also urge the issue of development to be seriously considered. Development is a very important issue and appears to be threatening people's connection to the upper Yellowstone River. Tourism and recreation are important parts of the Park County economy, and thus, it is economically important to better understand recreationists. In studying recreationists, it was found that there is a strong emotional connection between individuals and the watershed, especially in terms of the physical beauty of the watershed as a whole. It is this connection that appears to be threatened by the development of structures along the river corridor. While there are

currently few regulations regarding development along the River, it is urged that riverside development be considered and be better planned and managed in the near future.

In addition, there is definitely a need to glean more information about upper Yellowstone River recreationists, including use numbers, information about activity groups, and studies dealing with recreation experience and user norms and limits. There is also a need for studies dealing with different user groups (i.e. private property owners, property owners who use the river for irrigation, outfitters and guides) to be conducted in order to get a well rounded picture of river use and a better understanding of user groups.

Contributions to River Recreation Management

In its contribution to the literature within the field of recreation management, this study speaks primarily to the body of literature dealing with place. One of the goals of this study was to explore the concept of place through the traditional measure of place attachment. In addition, this study looked beyond the concept of place as it has been traditionally defined in recreation literature: a unifying concept in which everyone acknowledges the importance of the resource and has apparent shared meanings and understandings of the place. As was found in this study, while there was obvious agreement about the importance of the upper Yellowstone River, there were sometimes very differing views about the River and how individuals expressed identifying with the River. It is from this information that this study attempts to contribute to the growing body of literature that deals with recreation areas as shared places imbued with individual, group, and social meanings that may differ dramatically from one another. Additionally, this study helps break down previous assumptions as to how place should be dealt with. Rather than gauging place attachment through a set of statements to which

individuals respond in only a quantitative manner, this study advocates that place be thought of as a more complex and changing idea that needs to be investigated further. Thus, it becomes clear that it is important to not only look at whether place attachment exists, but also learn how individuals are attached to a place through their expressed descriptions of the place, how the place has changed, and what the place means to them as individuals.

This researcher recognized a potential gap within place attachment studies. Often times studies use only one methodology, qualitative or quantitative, and from this are only able to glean either in-depth information from a limited number of individuals or the surface level place attachment index of many individuals. By using both methods, this study was able to get more information about individuals' attachment to place. As presented in response to the second research question, the quantitative portion of this study revealed a stronger place identity dimension than that of place dependence. Furthermore, it was found through individuals' descriptions of the upper Yellowstone River and special places along the River, that the identity component of place attachment is indeed extremely important and appears to be a motivating factor for visitation to the River. Thus, while activity engagement on the River is a necessary part of the recreation experience, it seems that often an individual's purpose for being at the upper Yellowstone River IS the upper Yellowstone River itself.

Additionally, it is recommended that the concept of attachment to place be expanded in future recreational literature studies by the inclusion of an examination of the concept of special places. As Eisenhauer et al. (2000) stated, "Attachments to special places are bonds with a locale based on a sense of place that involves sentiments

extending beyond the use value of the land. And [these] unique place attachments are important considerations for social science researchers seeking to comprehend the wide variety of connections people have with areas of the natural world” (438). Thus, as other researchers have stated (Bricker & Kerstetter 2002; Schroeder 1996), the concept of special places is a means of moving beyond looking at place attachment in its traditional form, to glean and reporting more detailed information of places within larger recreation areas, all of which will further highlight the complex relationships individuals have with places. As seen in this study, identified special places vary dramatically in scope and size. In addition, reasons given for places being special also vary greatly. This indicates that it is hard to predict why individuals identify a place as special based on specific user characteristics.

While there are many studies dealing with place attachment, the areas in which place attachment is studied becomes important. There have been numerous studies dealing with place attachment within river settings, but these have looked at rivers within wilderness areas or within National Parks. These studies have indeed built a solid foundation for the concept of place within recreation literature, however, there is a gap within this literature in that there is little attention given to how individuals’ attach to places that are continuously changing. In other words, due to the fact that National Parks and wilderness areas are protected, they often remain unchanged and thus, individuals’ attachment to the area is not often threatened or challenged by circumstances beyond their control. In the case of the upper Yellowstone River, change is occurring rapidly and individual users have very little control over these changes. While it was found that recreationists are attached to the watershed, it was also found that there is an enormous

amount of perceived change along the watershed, especially in terms of growth and development. Currently individuals appear to be able to cope with changes to and along the waterway, while still achieving their desired goals and emotional attachment to the area. However, it is hard to know whether such changes have driven individuals away from using the River since they would not have been at the River to survey. While the data from this research does not explicitly express this, it is the hypothesis of the researcher, based off the data and personal interactions with individuals, that recreationists' apparent ability to maintain attachment to the watershed while recognizing the changes occurring along it may be directly related to the concept of special places. Individuals' reasons of why places were special may have indicated what they were hoping to achieve from their visitation to the River (i.e. individuals who were fishing picked a special place that had the best fishing, individuals who were relaxing picked their favorite place to relax), and so, while the River as a whole may be changing, it may in fact be through individuals special places that they are able to achieve their goals in visiting the River and experience the River as they intend regardless of the changes. This is a topic that needs more investigation, however, could potentially begin to explain how individuals adapt to changing landscapes.

It was the intent of this research to better inform and expand upon the ways in which the concept of place is viewed within recreation literature. Through the acceptance of differing interpretations of shared places and the recognition of the complexity and diversity of special places, it is hoped that the concept of a recreation place will be expanded, both in terms of management of and research dealing with recreation places.

Future Research

There is an identified need to look further at the concept of special places. As was recommended by Bricker and Kerstetter (2000) and touched on in this study, there is a need to look further at special places to find whether or not there are patterns that become apparent between the reasons given for a place being named special and the activity of the persons asserting the place as a special one. And, if the activity isn't the predictor, what is it that makes a place special?

Further, there is a need to look into what the term "special" means to individuals in reference to identifying a special place. Some individuals within my study had difficulty identifying a special place, and in particular, one individual named many places that were her "favorites," but explicitly stated that she did not consider any of those named places to be "special." From this it is proposed that the word "special" may indeed have a very unique meaning when posed in terms of a special place. How do recreationists define special? Is it different than a favorite place, and if so, how is it different? Studies including questions such as these would help to better define and inform the concept of special place.

Concluding Remarks

It was my intention through this study, to deal with the practical, on-the-ground issue of recreation on the upper Yellowstone River, as well as to look at more theoretical concepts of the meaning of place as it informs recreation literature. This study was completed with the intention of learning more about people using the upper Yellowstone River, as well as learning more about how people identify with the watershed through their descriptions and interpretations of the place. This study was grounded in

hermeneutic philosophy and based largely on a moderate social constructivist view of place. As individuals express their views and feelings of the upper Yellowstone River, they are helping management better understand an ever-changing watershed. It is hoped that managers will utilize the information in this thesis to better inform future policy decisions. I am also hopeful that this study will begin to speak to the upper Yellowstone River Task Force's recommendation, and that as more studies are conducted on and along the upper Yellowstone River, the human interactions with the River are not underestimated or forgotten as important pieces in determining the overall health of the watershed.

LITERATURE CITED

- Altman, I. and S.M. Low. (1992). Place Attachment: A conceptual inquiry. In I. Altman and S.M. Low (Eds.), *Place Attachment* (pp. 1-12). New York, NY: Plenum Press.
- Arnold, S.J. and E. Fischer. (1994). Hermeneutics and consumer research. *Journal of Consumer Research*, 21(1), 55-70.
- Beaty, S.E., L.R. Kahle, and P. Homer. (1988). The involvement—commitment model: Theory and implications. *Journal of Business Research*, 16, 149-167.
- Bell, 1998. An Invitation to Environmental Sociology. Thousand Oaks, California: Pine Forge Press.
- Bloch, P., W. Black, & D. Lichtenstein. (1989). Involvement with the equipment component of sport: Links to recreational commitment. *Leisure Sciences*, 11, 187-200.
- Bricker, K.S. and D.H. Kerstetter. (2002). An interpretation of special place meanings whitewater recreationists attach to the South Fork of the American River. *Tourism Geographies*, 4(4), 396-425.
- Bricker, K.S. and D.H. Kerstetter. (2000). Level of specialization and place attachment: An exploratory study of whitewater recreationists. *Leisure Sciences*, 22, 233-257.
- Bricker, K. S. (1998). *Place and preference: A study of whitewater recreationists on the South Fork of the American River*. Unpublished doctoral dissertation, The Pennsylvania State University, University Park, Pennsylvania.
- Brown, F.L. and H.M. Ingram. (1987). *Water and poverty in the Southwest*. Tuscon: University of Arizona Press.
- Buchanan, T. (1985). Commitment and leisure behavior: A theoretical perspective. *Leisure Sciences*, 7, 401-420.
- Burch, W.R. Jr. (1969). The social circles of leisure: competing explanations. *Journal of Leisure Research*, 1, 125-147.
- Cortese, C.F. (2003). Conflicting Uses of the River: Anticipated threats to the resource. *Society and Natural Resources*, 16, 1-18.
- Crosby, L.A. and J.R. Taylor. (1983). Psychological commitment and its effects on postdecision evaluation and preference stability among voters. *Journal of Consumer Research*, 9, 413-431.

- Dvorak, B. G. (2004). Interpreting the meaning of recreation impacts. Unpublished masters thesis, University of Montana, Missoula.
- Dvorak, B.G., N.P. Nickerson & J. Wilton. (2004). 2003-2004 Clark Canyon Recreation Survey. Research Report 2004-6. Missoula, MT: Institute for Tourism and Recreation Research, 105 pp.
- Dvorak, B.G., N.P. Nickerson, J. Wilton & M.K. McBride. (2004). 2003-2004 Canyon Ferry Recreation Survey. Research Report 2004-5. Missoula, MT: Institute for Tourism and Recreation Research, 223 pp.
- Eisenhauer, B.W., Drannich, R.S. and D.J. Blahna. (2000). Attachments to Special Places on Public Lands: An Analysis of Activities, Reasons for Attachments and Community Connections. *Society and Natural Resources*, 13, 421-441.
- FWP (2004a). Biennial Rule Regarding Beaverhead and Big Hole Rivers. Accessed May 10, 2004, <http://www.fwp.state.mt.us/fishing/proposedbiennialrule.asp>
- FWP. (2004b). River Evaluation. Unpublished.
- Glaspell B., N.P. Nickerson, T. Dillon & K. McMahon. (2000). 1999 Missouri-Madison Recreation Survey. Technical Completion Report 2000-1a. Missoula, MT: Institute for Tourism and Recreation Research, 243 pp.
- Gold, R.L. (1997). The Ethnographic method of sociology. *Qualitative Inquiry*, 3(4), 388-402.
- Governor's upper Yellowstone River Task Force: Final Report.* (2003, December 15). www.upperyellowstonerivertaskforce.com
- Grieder, T. and L. Garkovich. (1994). Landscapes: The social construction of nature and the environment. *Rural Sociology*, 59(1), 1-24.
- Healy, P. (1997). Collaborative planning: Shaping places in fragmented societies. Vancouver, BC: University of British Columbia Press.
- Heywood, J.L. (1987). Experience preferences of participants in different types of river recreation groups. *Journal of Leisure Research*, 19(1), 1-12.
- Hull, R.B. and S. E. Michael. (1995). Nature-based recreation, mood change, and stress restoration. *Leisure Sciences*, 17, 1-14.
- Iso-Ahola, S.E. (1980). *The social psychology of leisure and recreation.* Dubuque, IA: William C. Brown.

- Ittelson, W.H., K.A. Franck, and T.J. O'Hanlon. (1976). The nature of environmental experience. In S. Wapner, S. Cohen, and B. Kaplan (Eds.), *Advances in Consumer Research*, Vol. 12 (pp. 187-206). New York: Plenum Press.
- Iverson, D.C., and R.M. Alston. (1986). The genesis of FORPLAN: a historical and analytical review of Forest Service planning models. Gen. Tech. Rep. INT-214. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station.
- Johnson, K.N., T.W. Stuart, and S.A. Crim. (1986). FORPLAN Version 2—an overview. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Land Management Planning System's Section.
- Kass, R., and H. Tinsley (1979). Factor Analysis. *Journal of Leisure Research*, 11(2), 120-38.
- Kaltenborn, B.P. and D.P. Williams. (2002). The meaning of place: attachments to Femundsmarka National Park, Norway, among tourists and locals. *Norwegian Journal of Geography*, 56(3), 189-199.
- Kvale, S. (1983). The qualitative research interview: a phenomenological and a hermeneutical mode of understanding. *Journal of Phenomenological Psychology*, 14, 171-196.
- Kyle, G., K. Bricker, A. Graefe, and T. Wickham. (2004). An examination of the recreationists' relationships with activities and settings. *Leisure Sciences*, 26, 123-142.
- Kyle, G.T., A. Graefe, R. Manning, and J. Bacon. (2003). An examination of the relationship between leisure activity involvement and place attachment among hikers along the Appalachian Trail. *Journal of Leisure Research*, 35(3), 249-273.
- Lastovicka, J.L. and D.M. Gardner. (1979). Components in involvement. In J.C. Maloney and B. Silverman (Eds.), *Attitude research plays for high stakes* (pp. 53-73). Chicago: American Marketing Association.
- Mascia, M.B., J. P. Brosius, T.A. Dobson, B.C. Forbes, L. Horowitz, M.A. McKean, and N.J. Turner. (2003). Editorial: Conservation and the Social Sciences. *Conservation Biology*, 17(3), 649-650.
- McIntyre, N. and J.J. Pigram. (1992). Recreation specialization reexamined: The case of vehicle based campers. *Leisure Sciences*, 16, 3-16.

- Mitchell, M.Y., J.E. Force, M.S. Carroll, and W.J. McLaughlin. (1993). Forest places of the heart: Incorporating special places into public management. *Journal of Forestry*, 91(4), 32-37.
- Menning, N.L. and D.R. Field. (2000). Social construction of leisure settings and recreation places: A conceptual framework. Unpublished.
- Moore, R.L. and A.R. Graefe. (1994). Attachments in recreation settings: The case of rail-trail users. *Leisure Sciences*, 16(1), 17-31.
- Mowen, A.J., A.R. Graefe, and R.J. Virden. (1997). A typology of place attachment and activity involvement. In H.G. Vogelsong (Ed.), *Proceedings of the 1997 Northeastern Recreation Research Symposium* (pp. 89-92; Gen. Tech. Report NE-241). USDA Forest Service, Northeastern Forest Experiment Station.
- Norusis, J. M. (1985). *SPSS: Advanced Statistics Guide*. Chicago, IL: SPSS, Inc.
- Patterson, M.E. and D.R. Williams. (2002). *Collecting and analyzing qualitative data: Hermeneutic principles, methods, and case examples*. Champaign, IL: Sagamore Publishing Company.
- Patterson, M.E. and D.R. Williams. (2001). Collecting and Analyzing Qualitative Data. In D.R. Fesenmaier, J.T. O'leary, and M.S. Uysal (Eds.). *Advances in Tourism Applications Series*, (Vol. 9). Champaign, IL: Sagamore Publishing.
- Patterson M.E. and D.R. Williams. (1998). Paradigms and problems: The practice of social science in natural resource management. *Society and Natural Resources*, 11, 279-295.
- Patterson, M.E., A.E. Watson, and D.R. Williams. (2001). Relationship to place and the nature of science in collaborative forest planning. Unpublished manuscript.
- Patterson, M.E., A.E. Watson, D.R. Williams, and J.R. Roggenbuck. (1998). An hermeneutic approach to studying the nature of wilderness experiences. *Journal of Leisure Research*, 30(4), 423-452.
- Proshansky, H.M. (1978). The city and self-identity. *Environment and Behavior*, 10, 147-169.
- Prohansky, H.M., A.K. Fabian, and R. Kaminoff. (1983). Place-identity: Physical world socialization of the self. *Journal of Environmental Psychology*, 3, 57-83.
- Relph, E. (1997). Sense of place. In S. Hanson (Ed.). *Ten Geographic Ideas that Changed the World*. New Brunswick, NJ: Rutgers University Press.

- Roggenbuck, J.W., D.R. Williams, S.P. Bange, and D.J. Dean. (1991). River float trip encounter norms: Questioning the use of the social norms concept. *Journal of Leisure Research*, 23(2), 133-153.
- Saegert, S. and G.H. Winkel. (1990). Environmental psychology. *Annual Review of Psychology*, 41, 441-477.
- Schreyer, R., G. Jacob, and R. White. (1981). Environmental meanings as determinants of special behavior in recreation. In *Proceedings of the Applied Geogrpahy Conference*, 4, 294-300.
- Schroeder, H. (1996). Voices from Michigan's Black River: Obtaining information on 'special places' for natural resource planning. Gen. Tech Report NC-184 (pp. 25) St. Paul, MN: USDA Forest Service North Central Forest Experiment Station.
- Shelby, B. and J.J. Vaske. (1991). Using normative data to develop evaluative standards for research management: A comment on three recent papers. *Journal of Leisure Research*, 23(2), 173-187.
- Sherif, C.W., M. Sherif, and R.E. Nebergall. (1965). *Attitude and attitude change: The social judgement involvement approach*. Philadelphia: W.G. Saunders.
- Sherif, M. and C.I. Howland. (1961). *Social judgement: Assimilation and contrast effects in recreation to communication and attitude change*. New Haven, CT: Greenwood.
- Sherif, M. and H. Cantril. (1947). *The psychology of ego-involvements: Social attitudes and identifications*. New York: Wiley.
- Socioeconomic Assessment of the Upper Yellowstone River Valley (2002). U.S. Army Corps of Engineers, Omaha Contracting Division. Omaha, Nebraska.
- Stokols, D. and S.A. Shumaker. (1981). People in places: A transactional view of settings. In J.H. Harvey (Ed.), *Cognition, Social Behavior, and the Environment* (pp. 441-448). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Stokowoski, P.A. (2002). Languages of place and discourses of power: constructing new senses of place. *Journal of Leisure Research*, 34(4) 368-382.
- Sun, D. and D. Walsh. (1998). Review of studies on environmental impacts of recreation and tourism in Australia. *Journal of Environmental Management*, 56, 323-338.
- Taylor, J.G. and A.J. Douglas. (1999). Diversifying Natural Resource Value Measurements: The Trinity River Study. *Society and Natural Resources*, 12, 315-336.

- Tuan, Y.F. (1974). *Topophilia: A study of environmental perception, attitudes, and values*. Englewood Cliffs, NJ: Prentice-Hall.
- Tuan, Y.F. (1976). Geopietty: A theme in man's attachment to nature and place. In D. Lowenthal and M. Bowden (Eds.), *Geographies of the mind: Essays in historical geography in honor of John Kirtland Wright* (pp. 11-39). Oxford, England: Oxford University Press.
- Tuan, Y.F. (1977). *Space and place: The perspective of experience*. Minneapolis, MN: University of Minnesota Press.
- Viriden, R.J. and R. Schreyer. (1988). Recreation specialization as an indicator of environmental preference. *Environment and Behavior*, 20(6), 721-739.
- Warzecha, C.A. and D.W. Lime. (2001). Place Attachment in Canyonlands Nation Park: Visitors' Assessment of Setting Attributes on the Colorado and Green Rivers. *Journal of Park and Recreation Administration*, 19(1), 59-78.
- Wiley, C.G.E., S.M. Shaw, and M.E. Havitz. (2000). Men's and women's involvement in sports: An examination of the gendered aspects of leisure involvement. *Leisure Sciences*, 22, 19-31.
- Williams, D.R. (1995). Mapping place meanings for ecosystem management. A Technical Report submitted to the Interior Columbia River Basin Ecosystem Management Project.
- Williams, D.R. (1985). A developmental model of recreation choice behavior. In G.H. Stankey and S.F. McCool (Compilers), *Proceedings—Symposium on recreation choice behavior* (Gen. Tech. Rep. INT-184, pp. 31-45). Northwest Science Association, USDA Forest Service, Intermountain Research Station, Ogden, Utah.
- Williams, D.R., B.S. Anderson, C.D. McDonald, and M.E. Patterson. (1995, October). Measuring place attachment: More preliminary results. Presentation in Book of Abstract: National Recreation and Park Association Leisure Research Symposium, San Antonio, TX.
- Williams, D.R., M.E. Patterson, J.W. Roggenbuck, and A.E. Watson. (1992). Beyond the commodity metaphor: Examining emotional and symbolic attachment to place. *Leisure Sciences*, 14, 29-46.
- Williams, D.R. and J.W. Roggenbuck. (1989, October). Measuring place attachment: Some preliminary results. Paper presented at the symposium on Outdoor Recreation Planning and Management, National Recreation and Park Association Research Symposium on Leisure Research, San Antonio, TX.

Williams, D.R. and J.J. Vaske. (2003). The measurement of place attachment: Validity and generalizability of a psychometric approach. *Forest Sciences*, 49(6), 830-840.

Yung, Laurie. (2003). *The Politics of Cross-Boundary Conservation: Meaning, Property, and Livelihood on the Rocky Mountain Front in Montana*. Unpublished doctoral dissertation, University of Montana, Missoula.

APPENDIX A: Upper Yellowstone River Recreation Survey

This survey is related to you and your recreation along the upper Yellowstone River between Gardiner and Springdale (Park County only).

1. **Was this your first visit to the upper Yellowstone River?** *Yes (If yes, skip to question 2)* *No*

- 1(a.) **If no, how many years have you been visiting the upper Yellowstone River?** _____

- 1(b.) **On average how many days per year do you visit the upper Yellowstone River?**
 1 day *2 days* *3-5 days* *6-10 days* *11-20 days* *more than 20 days*

- 1(c.) **If you have been here before, how do you most often use the river?**
 as a means of participating in recreational activities *for utility purposes (i.e. irrigation, guiding, and ranching)* *for both recreation and utility purposes*

2. **Did you hire an outfitter or outdoor guide for today's river recreation experience?** *Yes* *No*

3. **On this visit, please check all the activities you participated in along the upper Yellowstone River.**
 (1) boat angling *(5) kayaking* *(9) tent camping* *(13) day hiking* *(17) tubing*
 (2) wade angling *(6) canoeing* *(10) auto/RV camping* *(14) picnicking* *(18) biking*
 (3) bank angling *(7) viewing nature* *(11) driving for pleasure* *(15) birding*
 (4) rafting *(8) viewing wildlife* *(12) walking/ jogging* *(16) nature photography*
(19) Other, please _____ specify:

4. **Of the activities marked above, what was your primary activity during this visit? Please check only one number corresponding to the list above.**

- 1 4 7 10 13 16 19
 2 5 8 11 14 17
 3 6 9 12 15 18

5. **Please check only one box per line.**

	not at all satisfied	slightly satisfied	moderately satisfied	extremely satisfied
	1	2	3	4
	5	6		
How satisfied were you with this primary activity experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What was your overall satisfaction with this river experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. **On this visit, why did you choose the upper Yellowstone River over other Montana rivers? Please mark all that apply.**

- (1) close to home (3) scenic beauty (5) whitewater (7) river access (9) facilities
 (2) close to Yellowstone National Park (4) fishing (6) water level/ water flow (8) water temperature for fishing (10) other rivers too crowded

7. **Of the reasons marked above, what was your primary reason for choosing the upper Yellowstone River? Please check only one number corresponding to the list above.**

- 1 3 5 7 9
 2 4 6 8 10

8. Please indicate the extent to which each statement describes your general feelings about the upper Yellowstone River. Check only one box for each statement.

	<i>strongly disagree</i>	<i>slightly disagree</i>		<i>slightly agree</i>	<i>strongly agree</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
					<i>6</i>
I feel the upper Yellowstone River is a part of me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doing what I do on the upper Yellowstone River is more important to me than doing it in any other place.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I identify strongly with the upper Yellowstone River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visiting the upper Yellowstone River says a lot about who I am....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get more satisfaction out of visiting the upper Yellowstone River than any other river.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The upper Yellowstone River means a lot to me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The upper Yellowstone River is the best place for what I like to do.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am very attached to the upper Yellowstone River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No other place can compare to the upper Yellowstone River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wouldn't substitute any other area for doing the types of things I do on the upper Yellowstone River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The upper Yellowstone River is very special to me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. **How concerned are you with the following conditions? Check only one box for each statement.**

	<i>not at all concerned</i>	<i>slightly concerned</i>	<i>moderately concerned</i>	<i>extremely concerned</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
	<i>5</i>	<i>6</i>		
Amount of development along the River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriateness of development along the River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Residential development visible from the River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to access the River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling crowded on the River.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of River users observed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of watercraft observed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. **What type of group are you with today?**

Please check only one.

- Alone*
 friends and family
 Family
 guided group
 Friends

11. **Including yourself, how many people are in your recreation group today?**

12. **What is your age?**

13. **What is your gender?**

- Male*
 Female

14. **What is the highest level of education completed?**

- high school*
 college graduate
 technical school
 post graduate
 some college

15. **Where do you live? Please indicate your state, or Canadian province, or foreign country.**

16. What is your home zip/postal code?

17. Have you ever lived in Park County, MT?

- Yes* *No*

18. Do you own property in Park County, MT?

- Yes* *No (If no, skip to question 19)*

18(a.) Do you own property adjacent to the Yellowstone River in Park County, MT?

- Yes* *No*

19. What is your approximate annual household income before taxes?

- | | |
|--|--|
| <input type="checkbox"/> <i>less than \$20,000</i> | <input type="checkbox"/> <i>\$60,000 to \$79,999</i> |
| <input type="checkbox"/> <i>\$20,000 to \$39,999</i> | <input type="checkbox"/> <i>\$80,000 to \$99,999</i> |
| <input type="checkbox"/> <i>\$40,000 to \$59,999</i> | <input type="checkbox"/> <i>\$100,000 or more</i> |

APPENDIX B: Visitor Interview Guide

Hello. My name is Megan McBride, and I am a graduate student. My thesis research is a study of recreation users on the upper Yellowstone River. The purpose of this research is to learn about how individuals are using the river and why the river is important to them.

How long have you been coming to the upper Yellowstone River?
Can you tell me about the different ways you use the river? Are there any other ways?

Do you have some time to answer a few questions about your river use and fill out a survey?

Before we get started, I want to let you know that your identity as a participant in this study will remain confidential. Your name will not be used in any presentations or written reports. In addition, you are free to stop this interview at any point in time. If it is OK with you, I would like to tape record the interview. Taping ensures that your views are accurately recorded.

Is that OK with you?

With tape recorder on, repeat back what has already been said...

So, you've been coming to the river for X number of years, and you participate in _____ activities on the river.

1. With your experience over the last X number of years, how would you describe the upper Yellowstone River to your friends or someone who hasn't visited the River before?

2. How has the upper Yellowstone River changed since you've been using it?

Probe: How has the River corridor changed?

Probe: How do those changes affect your experience on the upper Yellowstone River?

3. Shifting gears a little bit, is there any place that is particularly special to you?

If yes, why? What is it about that place that makes it special?

Probe: Could you describe where that place is located?

4. In wrapping up, if there is one thing you could tell individuals who manage the river, what would it be?

Thank you for taking time to answer those questions. Finally, here's the survey. Thanks for filling it out as well.

APPENDIX C: Interview Participant Profile

Interview #1

Location: Carbella

Larry is 81-years old, and he has lived in Livingston most his life. He has been fishing the upper Yellowstone River for 60-years. He and his wife bring their motorhome down to fishing access sites and camp out for a few days at a time.

Interview #2

Location: Emigrant

John is 36-years old. He is a guide on the upper Yellowstone River and other nearby rivers. He grew up on the Yellowstone River, though not in Park County. He has been using (primarily to fish) the upper Yellowstone River for over 25-years.

Interview #3

Location: Mayor's Landing

Chuck is 41-years old. He has lived in the area for 11-years and has been fishing on the upper Yellowstone the entire time.

Interview #4

Location: Mayor's Landing

Bob is 51-years old and recently moved to Livingston to take care of a family member. He has been visiting the River for close to 20 years. He normally brings his dogs to the River, so the dogs can run and swim.

Interview #5

Location: Corwin Springs

Anne is 33-years old. She has two children and brings them to the river often. She has lived in Park County all her entire life. She is visiting the upper Yellowstone River with her friend Carol and Carol's children.

Interview #6

Location: Corwin Springs

Carol is friends with Anne and is 37-years old. She also brings her children to the upper Yellowstone River often. She has lived in the area for five years.

Interview #7

Location: Corwin Springs

Stacey has lived in Park County all her life; she is 26-years old. She has worked for a whitewater rafting company for many years. She enjoys rafting and kayaking on the River.

Interview #8

Location: Carter's Bridge

Chris has lived next to the upper Yellowstone his entire life and is 25-years old. He fishes on the upper Yellowstone River as much as possible.

Interview #9**Location: Paradise.**

Sue has lived in Montana her entire life. She is 40-years old and resides in Bozeman with her family. She has been visiting the river since childhood.

Interview #10**Location: Paradise**

Beth is 53-years old. She is an avid whitewater rafter. She lives in Bozeman and goes on river trips as often as possible. She has been visiting the upper Yellowstone for nearly 30 years.

Interview #11**Location: Paradise**

Becky has been using the River for over 25 years. She comes with her family and also comes once a year with a large group of women. Becky is 54-years old.

Interview #12**Location: Paradise**

Jessica has been using the upper Yellowstone for at least 17-years. She has lived in Montana her entire life. She is 41-years old and currently lives in Bozeman. She comes to the river with friends and family.

Interview #13**Location: Paradise**

Melanie has been using the river for over 20-years. She is 49-years old. Her reason for visiting the upper Yellowstone River was to rendezvous with friends and to go rafting.

Interview #14**Location: Mallard's Rest**

Jody is 23-years old. She has been using the river for nine years. She initially moved to Bozeman and then moved to Livingston. She teaches in the area and helps out at an outfitting shop.

Interview #15**Location: Mayor's Landing**

Joyce is 59-years old and has been coming to the river all her life. She has lived in Livingston for nearly 10 years and is very active regarding community issues. She walks dogs daily on the upper Yellowstone River.

Interview #16**Location: home in Livingston**

Michelle has lived in Livingston with her family for 12 years. She is 39-years old. She has been visiting the Yellowstone River since childhood.

Interview #17**Location: rafting/outfitting shop**

Dave has been using the upper Yellowstone River, both personally and as a guide, for approximately 8 years. He owns an outfitting company in Park County. He is in his thirties.

Interview #18**Location: Yankee Jim**

Gary has been guiding on the river for ten years and has been using it personally for a few years longer than that. Gary owns an outfitting company in the area. He is in his mid-thirties.

Interview #19**Location: House in Livingston**

Corey has been fishing the Yellowstone River for over 10 years. He is 30-years old. He currently lives in Livingston.

Interview #20**Location: house in Livingston**

Drew has been using the river off and on for the last six years. His primarily activity is fishing on the river. Drew is 24-years old.