

INFLUENCE OF BENCHMARKING ON WILDERNESS VISITOR AND MANAGER PERCEPTIONS OF CAMPSITE CONDITIONS

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Abstract: The purpose of this study was to compare visitor and manager perceptions of how heavily impacted wilderness campsites and restoration activities to restore them influence quality of visitor experience and opinions of managers. The study conducted in the Mission Mountains Wilderness ("MMW") is located in northwestern Montana and managed by the USDA Forest Service. MMW visitor results from 293 surveys, 32 interviews, and 2 focus groups were compared to results from a national survey of 33 Forest Service wilderness managers. Even though both visitors and managers indicated that observing restoration has both a positive influence on the quality of visitor experience and opinions of managers, visitor responses were more positive. There was a positive correlation between years visitors spent visiting wilderness and their responses to restoration, while manager responses tended to be less supportive of restoration the more years they worked. When visitors and managers were asked to reflect back over time and express how wilderness conditions influenced the quality of visitor experience, visitors indicated positive responses (many impacted campsites in the MMW have been, or are, currently being restored) while managers indicated that impacted campsite conditions over-time had significantly reduced the quality of visitor experience. Furthermore, managers expressed less support for the effectiveness of restoration the longer they were managers. Findings show that both visitor and manager perceptions of campsite conditions are influenced by previous benchmarking: suggesting that visitor and manager reactions to campsite conditions and support for restoration are based on information gained from prior visits, perceptions of what wilderness should look like, and by comparing the conditions of campsites observed at other wilderness areas. Overall, managers and visitors felt that restoration is a positive educational tool and demonstrates that someone cares about the area.

Introduction

The primary objectives of wilderness recreation management are to protect natural conditions and to provide opportunities for solitude and/or primitive and unconfined recreation experiences (Hendee, Stankey, & Lucas, 1990). Today when a person visits a wilderness setting, it is common to see recreational caused impacts, other visitors and evidence of management actions. Recreational impacts on biophysical resources of wilderness are a worrisome problem to managers charged with the responsibility of maintaining natural conditions. Problems include changes in vegetation and soil characteristics, wildlife impacts, water pollution, litter and

improperly disposed of human waste (Washburne & Cole, 1983). For the purpose of this paper, impacts to the biophysical resource are considered to be loss of vegetative cover and subsequent soil compaction and erosion at campsites, lakeshores, meadows, and along trails. Natural or pristine conditions are defined as areas in wilderness that are predominately influenced by acts of nature and not from impacts related to recreational use.

Background

Since the 1960s, wilderness researchers have struggled with visitor perceptions of "natural or pristine" environments. What do people actually perceive as the goal of their wilderness experience, and how does this give the individual meaning? While many visitors enter wilderness with an appreciation of the natural environment (Kaplan & Talbot, 1983), it is not clear as to how many visitors actually find the quality of environment they are seeking. More and more wilderness managers' struggle with the following question: how is visitor experience affected when their idea of a "natural" environment is different from what they find during their wilderness visit? Restoring impacted campsites could potentially improve visitor experience, by removing signs of past resource damage and returning campsites to a natural condition (Kaplan & Talbot, 1983). The first time a visitor arrives at a wilderness setting and the condition of the setting at that time, is a significant aspect or benchmark for the visitor to reflect back on (Vaske, Donnelly, & Heberlein, 1980; Watson & Cronn, 1994). In future visits, visitors may have a predisposed perception of the conditions they expect prior to their arrival. These conditions may include, but are not limited to, the level of impact on trails and campsites and the number of people they may encounter. Studies have documented the importance of visitor expectations in influencing the wilderness experience, especially with regard to effects on the perception of resource conditions in the environment (Rossman & Ulehla, 1977). Additional research is needed to further study how wilderness conditions influence visitor perceptions of resource conditions. Martin, McCool and Lucas (1989) raise the question, "will we be able to provide the visitor's choice in their selection of campsites without limiting their freedom or creating a displacement of unhappy visitors?" (p. 623). How managers and visitors perceive heavily impacted wilderness campsites and how such campsites influence the choice, use of, and satisfaction with a campsite, are crucial if managers are to make intelligent decisions concerning the management of wilderness campsites.

Understanding Motivation

According to Stankey and Schreyer (1987), the reason people want to participate in a recreational pursuit is generally considered the motive for behavior. This motive must be translated to behavior through some choice process, which can be influenced by many situational factors. The object of choice might be a particular recreation environment, a behavior, or desired psychological condition. The selection of a particular wilderness environment depends on the attributes in the environment being perceived as suitable for fulfilling the needs that initially motivated the behavior.

Reasons for engaging in recreation behavior have been described, as "recreation experience preferences" in recognition of the fact that forces initiating behavior are voluntary and represent preferred conditions. This suggests that preferences for a particular behavior and environment are chosen in response to a given motivation and that the information available at the time leads visitors to expect that the behavior and environment will produce desired outcomes (Driver & Knopf, 1976). Thus, visitors participate in recreation with some expectation that they will encounter desirable conditions (Schreyer & Roggenbuck, 1978). Measurement of the extent to which these outcomes are attained is usually presented as satisfaction. If the expected outcomes are not forthcoming, the person is assumed to be dissatisfied with the recreation experience (Driver & Brown, 1978).

Perceptions of Onsite Conditions

One of the reasons people visit wilderness is to participate in recreation pursuits. Because motives represent reasons why people visit wilderness, it stands to reason the motives would be related to the quality of the onsite conditions encountered. Anderson (1980) measured changes in the behavior of users in response to perceived conditions. She discovered that visitors who found their perceptions different from the actual conditions made a psychological adjustment to the different conditions, or were displaced to a different area better able to meet their needs. Evaluations of impact can vary depending on the nature of the individual. For instance, research conducted by Vaske et al., (1980) demonstrated that people who had first visited an environment several years before tended to evaluate environmental conditions more negatively than those whose first visit occurred recently. These research findings suggest variations in motivations and previous experience or benchmarking are significant influences on how visitors and managers evaluate an experience and onsite conditions.

Benchmarks for Visitor Perceptions

Social psychologists have documented that standards people use to evaluate a setting are influenced by their expectations for that experience. This implies that different individuals may have different expectations for the same activity or setting. When a situation differs from what the person defines as appropriate, the experience is more likely to be evaluated negatively (Vaske et al., 1980; Watson & Cronn, 1994). Vaske and others suggest that visitors with no prior expectations of a wilderness setting are susceptible to viewing what they see during their first visit as being appropriate. Therefore, the standards visitors and managers use to evaluate a particular resource are determined by the condition existing during the person's initial exposure to the environment. Subsequent trips may then be compared against these initial evaluations when the visitor establishes a benchmark to reflect back on. This finding suggests that each new generation of visitors and managers may experience a different set of initial conditions. Visitors with a more extensive history of visiting wilderness generally perceive there to be more social and resource problems (Watson & Cronn, 1994; Cole & Hall, 1992). This information implies that these

visitors are more sensitive to changing social and resource conditions and may assist managers in better understanding many of the problems visitors report. Understanding these problems would help managers evaluate and select management actions by incorporating more of the experienced visitor's perceptions of social and resource problems in the decision making process. Moreover, wilderness areas that have a high percentage of repeat visitors should find general visitor surveys more helpful in assessing resource conditions. Educational messages may also be tailored to be more in-depth regarding the management program and desired visitor behaviors when users have a good foundation and understanding of wilderness policy and management (Cole, Watson, Hall, & Spildie, 1997). The Wilderness Act of 1964 sets the tone for management actions that result in preserving or restoring natural conditions. McCool and Lime (1988) argue that management actions, while designed to preserve resources, enhance opportunities, and reduce conflict, can negatively impact the visitor. Use of management techniques requires an understanding of how visitors perceive such actions, management objectives for the site, as well as visitor expectations. Recent research findings suggest that new generations of wilderness visitors may have different expectations about what management actions are appropriate (Cole et al., 1997; Vaske et al., 1980; Watson & Cronn, 1994). This information may suggest that each new generation of wilderness managers, with little or no previous wilderness managing experience, may also share similar assessments, perceptions, and expectations of the wilderness resource as newly arriving visitors. Stokes (1990) argues that public support for management practices may provide resource managers with the basis to develop successful strategies to maintain wilderness quality. As stakeholders of the wilderness idea, he felt that visitors want to participate in management decisions and can provide important insights about the condition of wilderness and should be considered a key source of information when developing wilderness implementation schedules and policies.

Rationale for Revisiting Visitor Benchmarking

Wilderness can be regarded in two dimensions: (1) the psychological and (2) the biophysical. The psychological dimensions involve the perceptions, attitudes, values and responses visitors have toward wilderness. The biophysical characteristics of wilderness encompass the vegetation, wildlife, and interrelated geographical settings. Throughout the National Wilderness Preservation System it is common for wilderness visitors to observe heavily impacted campsites and management actions implemented to address them during their visit. This research attempts to understand the influence observing heavily impacted biophysical conditions at campsites and how measures taken to restore them influence the quality of visitor experience. Both visitor and manager attitudes and perceptions of the wilderness resource need to be examined to preserve the quality of visitor experience as well as the management of wilderness.

Theoretical Frameworks

What motivates visitors to spend time in wilderness and how they evaluate onsite conditions is a growing concern for managers and researchers (Cole et al., 1997; Hall & Shelby, 1993; Lucas, 1980). The use of theories to identify visitor intentions, how these intentions lead to benefits sought during the visit and how onsite conditions influence the quality of visitor experience is not well understood. Over the past twenty years, theories and

models from the fields of psychology and sociology have been reshaped and applied to measure human behavior in wilderness settings. Previous studies (Cole, 1996; Hall & Shelby, 1993; Peterson, 1974) have used and adapted Lawler's (1973) Expectancy Model (see Figure 1) to explore the role of expectations and actual perceived conditions in the satisfaction of wilderness visitor experiences.

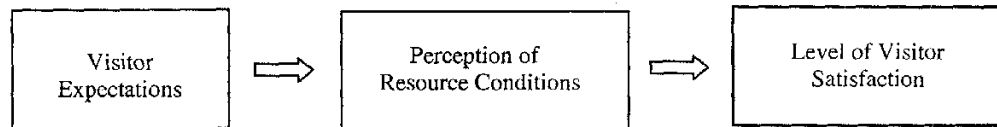


Figure 1 Expectancy Theory: Motivation for Wilderness Visitors (Lawler, 1973; Adapted by Hall & Shelby, 1993).

Expectancy theory illustrates that internally held information or beliefs about value and leisure outcomes determine an individual's attitudes, intentions and, ultimately, behavior. This study uses the expectancy theory as a starting point to illustrate how campsite conditions influence onsite experiences visitors go through before and during a wilderness visit. Although this research is not testing the validity of the model, it is used as a foundation for research conducted on visitor perceptions of resource conditions in wilderness. Expectancy theory suggests that outcomes or consequences are attractive to an individual because of some drive or need the individual possesses (Lawler, 1973). More specifically, the basic assumption of expectancy theory illustrates that the determinants of human behavior are the beliefs, expectations and anticipation individuals have concerning future events (Chung, 1977; Steers & Porter, 1987). A wilderness visitor's behavior is, therefore, goal directed and based on conscious decisions. Lawler (1973) suggests that people engage in behaviors that provide positive outcomes. Expectancy-valence theory (Ajzen & Fishbein, 1980) has also been used in wilderness settings to help understand how level of motivation, role of expectation, and onsite conditions influence the wilderness experience (Hall & Shelby, 1993). The expectancy-valence theory predicts visitor behaviors and the specific perceived consequences of the visitors' leisure experience. The valence included in the expectancy-valence theory is the attractiveness one has toward achieving that goal or outcome. Ajzen (1991) proposed that internally held beliefs about particular outcomes determine an individual's attitudes, intentions, and resulting behavior. Expectancy-valence theory has provided the foundation for other leisure theories and management frameworks which include the theory of reasoned action (Ajzen & Fishbein, 1980); the theory of planned behavior (Ajzen, 1991); experienced-based management (Driver & Brown, 1983); and benefits-based management (Driver, 1996). Within the expectancy-valence framework, the wilderness resource conditions selected by

the visitor are embraced in the expectation that they will realize their desired wilderness experiences.

A number of researchers, with assistance from managers, developed a conceptual framework called "benefits-based management" to better understand what visitors are seeking in a recreational experience and the potential benefits to their lives (Bruns, Driver, Lee, Anderson, & Brown, 1991). Because visitors spend a majority of their time at wilderness campsites, the condition of the site may play an important role in the quality of visitor experience outcomes. Although managers are not in a position to provide benefits, they can set the stage for positive visitor experiences by managing settings for particular experiences and benefit outcomes (Stein & Lee, 1995). Because motives represent reasons why people visit wilderness, they likely relate to perceptions of conditions encountered as well as the anticipated benefits. Results from several studies suggest that a relationship does exist between the environmental conditions and anticipated visitor experience outcomes (Manfredo, Driver & Brown, 1983; Stein & Lee, 1995; Virden & Knopf, 1989; Yuan & McEwen, 1989). Because these studies produced mixed results, further research is needed to better understand the relationship between desired environmental conditions, the conditions of the resource experienced by the wilderness visitor, and how these factors influence visitor experience.

Theoretical Implications

Central to this study are the theoretical constructs taken from expectancy theory as adapted by Hall and Shelby (1993). As the data was collected and analyzed from the different data sets, information relating to how visitors conceptualize wilderness experiences and the many factors influencing the quality of visitor experiences began to emerge. As a result, The Quality of Wilderness Visitor Experience Model (see Figure 2, "The Model") is presented as an emergent feature illustrating the outcomes of the research findings.

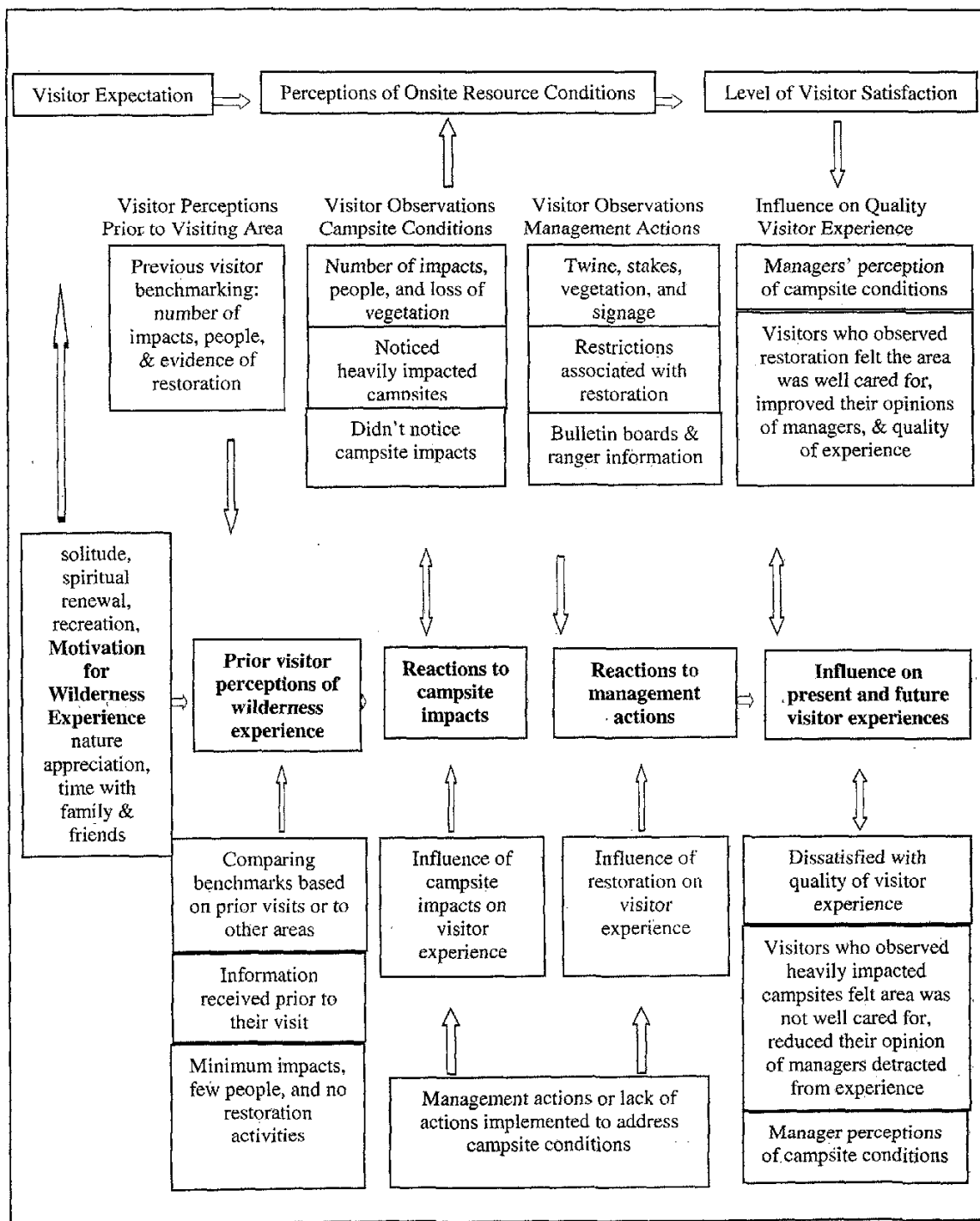


Figure 2 The Quality of Wilderness Visitor Experience Model (Expectancy Theory, Lawler, 1973; Adapted by Hall & Shelby, 1993; Flood, 2000)

The first set of findings emerging from this study supports previous research which suggests that visitors are motivated to spend time in wilderness based on specific expectations, perceptions of campsite conditions, while attempting to achieve quality wilderness experiences (Ajzen 1991; Bruns, Driver, Lee, Anderson, & Brown, 1991; Driver & Brown, 1983; Manfredo, Driver, & Brown, 1983; Stankey & Schreyer, 1987; Stein & Lee, 1995; Virden & Knopf, 1989; Yuan & McEwen, 1989). Although visitors are motivated by the desire to engage in quality wilderness experiences, this research supports other research findings that suggest managers play an instrumental role in providing these opportunities (Stein & Lee, 1995). The Model highlights factors identified as influencing the experience of wilderness visitors from the time they first enter the wilderness until their departure. Therefore, The Model provides a conceptual framework to better understand how visitor and manager perceptions of campsite conditions in wilderness influence the quality of visitor experience. The Model reflects the various stages, and potential variables, that influence visitor experience within wilderness settings. Specifically, the results reflected in The Model illustrate how motivation for a wilderness experience is tied to both visitor and manager perceptions of campsite conditions. The conditions visitors find at campsites can range from non-impacted, to heavily impacted with little or no signs of management activities, to heavily impacted and currently receiving restoration activities. The Model attempts to illustrate how the quality of visitor experience is influenced by: reasons for visiting, visitor and manager perceptions of campsite quality, previous and comparison benchmarking, and reactions to evidence of impacts and restoration activities by visitors and managers. The Model is used to specifically look at how wilderness visitor experience is tied to resource conditions, the level of management, and how these combined variables influence visitor opinions of how well a wilderness area is managed. The Model provides a proposed framework for better understanding visitor experiences and how specific campsite conditions potentially influence the quality of visitor experience. Ultimately, the model provides managers with a better analysis of visitor expectations and how onsite conditions at campsites influence the quality of visitor experience. A condensed version of The Model is illustrated in the Perceptions of Onsite Conditions: Visitor and Manager Perceptions of Quality Flow Diagram (see Figure 3). The diagram presents a three-fold depiction of visitor and manager perceptions of quality wilderness visitor experience. The process begins with the assumption that reasons for visiting are influenced by both onsite and offsite factors that can potentially influence quality of visitor experience. The second component of the diagram provides a visual narrative of the findings that explore interactions between prior experience and perceptions of onsite conditions and how previous onsite and comparison off-site benchmarking influence the quality of visitor experience. The third component of the diagram assesses visitor reactions to onsite biophysical conditions and how visitor experience is influenced by the effects of restoration, effects of impacts and how visitor and manager perceptions together potentially influence the quality of

visitor experience. The Visitor and Manager Perceptions of Quality Flow Diagram was evaluated using a triangulation of data sets in this study. Findings reflected in the diagram include results from visitor exit surveys, focus groups, manager questionnaire, and onsite interviews.

Factors Influencing Visitor Motivation for Wilderness Experience

The first set of factors drawn from the findings illustrates the reasons visitors listed for visiting wilderness. Although the reasons for visiting are similar to those found in previous research, the order of importance changed. Manning's (1986) summary of research findings indicated that visitors ranked engaging in the recreational activities as their number one reason, followed by spending time with family and friends. Contrary to his findings, MMW visitors ranked the reasons as 1) engaging in recreational activities, 2) experiencing solitude, 3) spiritual renewal, or nature appreciation, 4) to spending time with family and friends (Flood, 1999). The increased emphases on experiencing solitude, spiritual renewal and nature appreciation was evident in all of the data sets. Drawing out the significance of what this means to individual MMW visitors was best illustrated by 6 of the long-time focus group members. These members indicated their reasons for visiting were not motivated by utilitarian reasons but for a sense of peace, passion for wildness, tranquility, healing and opportunities for solitude (Flood, 1999). Inferences could be drawn from these findings to suggest this is a mere reflection of our changing society with increasing numbers of people, shrinking resources and fewer opportunities for experiencing solitude.

Benchmarking the Conditions of Wilderness Campsites

Findings from the exit survey, manager questionnaire, interviews, and focus groups suggest that visitor perceptions of onsite conditions in wilderness are inextricably tied to the idea of benchmarking. Visitor benchmarking is defined as any perception or previous experience that defines the campsite condition expected at your wilderness destination campsite (Vaske et al., 1980). This research identified three different types of visitor benchmarking. The first type of benchmarking occurs when repeat visitors returning to the same wilderness evaluate onsite conditions based on observations made during prior visits. On subsequent trips, repeat visitors reflect upon the change in conditions at a specific campsite and compare their expectations to what they actually find. The second type of benchmarking occurs when prior to entering a wilderness; first-time visitors evaluate the conditions of a campsite based on what they think it should look like. The third type of visitor benchmarking happens when wilderness visitors compare and evaluate campsite conditions found in one place with those observed at other wilderness areas they have visited. Findings from this study suggest that visitors with the least number of years visiting the MMW were least affected by seeing other people and impacts, but most affected by observing litter. Although they lacked a benchmark for knowing the appropriateness of the campsite impacts they observed or the restoration activities to address these impacts, their negative reaction to observing litter left behind by previous visitors indicated

that they were bothered a lot by litter. In both the written comments made by MMW visitors and from the MMW interviews, it is apparent that many of the visitors' positive reactions to observing restoration activities and opinions of managers, was a result of seeing heavily impacted campsites being restored in the MMW and from visiting

other wilderness areas where little or nothing was being done to restore these areas. Converging results from the MMW survey, manager questionnaire, interviews, and focus groups suggest that visitors do indeed benchmark campsite conditions.

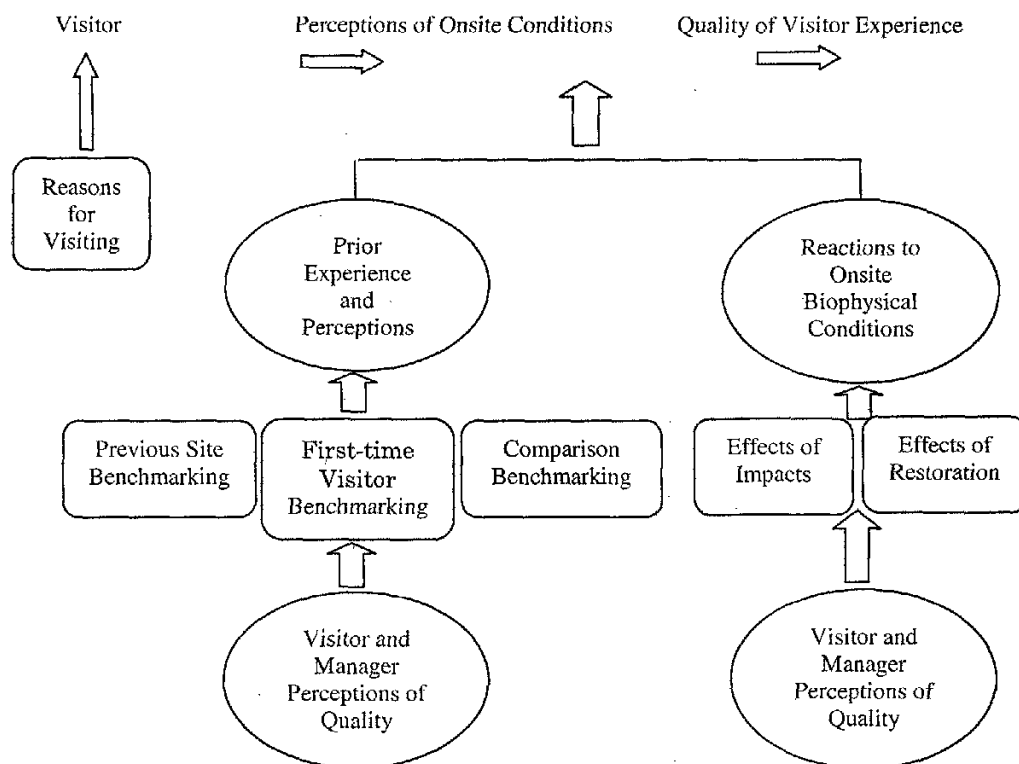


Figure 3 Perceptions of Onsite Conditions: Visitor and Manager Perceptions of Quality Flow Model (Flood, 2001)

Influence of Onsite Conditions at Campsites

The next set of factors influencing visitor experience takes place once visitors arrive at their destination campsite. A number of onsite factors influence the quality of visitor experience. These factors include visitor reactions to level of impact at campsites and level of management activities, or the lack thereof. Onsite observations by visitors are varied and may include acceptable campsite conditions, heavily impacted campsites that are devoid of native vegetation and seriously eroded, and/or observing evidence of management actions to restore them. These restoration activities may include information signs located at trailheads and at campsites, contact with wilderness rangers who provide onsite restoration education, evidence of stakes and twine and visitor restrictions. This stage of the model illustrates that visitor motivations to engage in specific wilderness experiences, and whether it is possible for them to attain a desired level of quality, are dependent on prior perceptions of the campsite conditions they expect to find at their

wilderness destination campsites. As a result, visitor experiences are influenced by what they find at their campsite. These findings are supported by previous research (Cole et al., 1997; Martin et al., 1989). The third stage of The Model illustrates that when managers chose to restore heavily impacted campsites, the quality of visitor experience was improved, visitor opinions of managers were very positive and visitors felt that the area was well cared for. When managers did little or nothing to address heavily impacted campsites, the quality of visitor experience was greatly reduced, visitor opinions of managers were very negative, and visitors felt that the area was not well cared for.

Conclusions

The model emerged from the findings to provide a visual framework for assessing the relationship between visitor perceptions, conditions visitors observed at campsites during a wilderness visit and how these factors influence the quality of visitor experience. Whether

managers choose to ignore or restore heavily impacted campsites, these decisions influence the quality of visitor experience and opinions of managers. Moreover, it affects visitor perceptions and expectations of campsite conditions they will encounter in future visits. The Model provides an opportunity for assessing the relationship between conditions found at campsites and the influence these conditions have on the quality of visitor experience. It is hoped that additional research will be conducted to test the validity of the model.

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