

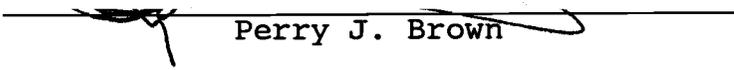
AN ABSTRACT OF THE THESIS OF

Martha Eugenia Lee for the degree of Doctor of Philosophy in Forest Management presented on June 7, 1991.

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The concept of marketing, with its primary focus on meeting customer needs, is being adopted by federal agencies such as the U.S. Forest Service who are in the business of providing, among other things, recreation opportunities for their visiting public. Although not a new concept, the notion of applying marketing to federal wildland recreation is a relatively new idea and not as yet well developed.

This study presented experience-based recreation as a useful framework from which to develop a marketing approach to providing recreation opportunities. Market segmentation, a standard marketing technique, was used to identify specific user groups upon which to focus marketing efforts. Market segments were formed on the basis of visitor preferences for recreation experiences. These data were used as input to a recreation opportunity marketing plan.

A sample of 1057 visitors to the Inyo National Forest (N.F.) were surveyed during the summer of 1989. Visitor experience preferences were measured using the psychological outcome items developed and tested by Driver and others. Cluster analysis was used to identify nine experience domains important to Inyo N.F. visitors. Visitors were cluster analyzed based on their preferences for the nine experience domains and those with similar preferences were grouped together. As a result, four distinct market segments or experience types were identified and further described according to socio-demographic and recreation participation descriptors.

The final element of the study was to illustrate how information about the four experience-based visitor segments could be made part of a marketing plan designed to assist resource managers better meet the needs of their recreating visitors. A 5-step recreation opportunity marketing plan for the Inyo N.F. was presented that incorporated basic marketing principles and was designed to target visitors in the experience-based market segments.

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Experience Opportunities for  
Wildland Visitors

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# A MARKETING APPROACH TO PROVIDING RECREATION EXPERIENCE OPPORTUNITIES FOR WILDLAND VISITORS

## CHAPTER I INTRODUCTION

In 1988 Dale Robertson, Chief of the U.S. Forest Service, introduced the agency's new "Recreation Strategy" (USDA Forest Service 1988a). In describing the new strategy Robertson said, among other things, "the Recreation Strategy is about customers. Finding out who they are and where they are ... Matching them up with the right recreation opportunities" (p. 3). The customer-focus of the Forest Service's new strategy reflects a change in how natural resource management agencies view their relationship with those who use the lands under their stewardship. The approach is one long recognized by those in the business world as a key to success--marketing. The general purpose of this study is to demonstrate how a national forest can use a marketing framework based on user preferences to better meet the needs of its recreation visitors.

A customer-oriented marketing concept was introduced shortly after World War II by the General Electric Company who, faced with a growing U.S. mass market, decided that "rather than making what you've always made, then trying to sell it, find out what will sell, then try to make it" (Wilkie 1986, p. 7). In other words, the focus in marketing

is on customers, determining their needs and wants and matching products and services to meet those needs. Once consumers and their desires are identified, the task is to formulate strategic marketing plans that match "producers" and their markets (McIntosh and Goeldner 1986).

Because there are so many existing and potential consumers, marketers may not have the luxury of looking at consumers on an individual or even a household level. They must view consumers at an aggregate level, requiring some means of grouping individuals. Market segmentation is the technique used by marketers to group consumers with similar needs or characteristics into homogeneous submarkets. Identifying market segments permits marketing resources to be directed to a well-defined group, enabling managers to develop marketing strategies that more closely match consumer needs (Assael 1984).

The marketing concept continues to drive the business world and has only recently been adopted by federal agencies managing public lands for recreation. The U.S. Forest Service has adopted a marketing customer-oriented recreation strategy and the Bureau of Land Management, in its "Recreation 2000: A Strategic Plan," has expressed a commitment to improve "service to the recreation-seeking public" (USDI Bureau of Land Management 1990, p. 7). Environment Canada Parks, Canada's equivalent to the National Park Service, has been using a Visitor Activity

Management Process (VAMP) to identify target market segments based on visitor opportunities as part of Canadian park planning efforts (Graham et al. 1987).

Although public land agencies are currently advocating a consumer-oriented focus, for many agency managers marketing applied to the management of public lands is equivalent to "selling America's soul" and attracting "hordes of new visitors" to lands already overused and abused (Knopf 1990). Knopf suggests managers' concerns are largely based on a misconception of what marketing is and the role it can play in the wise management of public lands. They see marketing as advertising and selling and attracting visitors to already heavily-used areas. Managers may also find it difficult to adopt a customer-oriented strategy because they often are not trained in the social sciences, having been educated to focus primarily on the biological environment rather than on the people who use it (Wenner 1987). As a result, research has shown that recreating visitors and managers often differ in the values they see being provided by natural areas (e.g., Merriam et al. 1972; Clark et al. 1971; Twight and Catton 1975). Visitors tend to define natural areas primarily in terms of how they might use them for recreation while managers, by virtue of their training and the professional missions of the agencies they work for, focus on the physical and biological components of the natural environment. Focusing on customer needs and

wants, the core of marketing, may be difficult for managers trained to concentrate their efforts elsewhere.

Research begun in the 1960s and 1970s provides help to managers who are now directed to focus on users, to in essence adopt a marketing strategy where customer wants are matched with recreation products. From this research has come the notion of experience-based recreation. This empirically-based framework provides a way to conceptualize a marketing approach to recreation by more clearly defining, in similar terms, the recreation products being demanded by consumers and being produced by public land managers (Driver et al. 1987; Manfredo et al. 1983).

#### Experience-Based Recreation

Beginning in the 1970s recreation managers and researchers shifted from a focus on recreation activities as a product of resource management to a behavioral or experience-based approach to outdoor recreation. The earlier approach considered visitor days of activity participation as the primary product of recreation management. An experience-based approach suggests that the products of management should be the psychological experiences generated as a result of participation (Brown et al. 1973; Driver 1976). The provision of experiences is conceptualized as being linked not only to activity but to the social group and the characteristics of the physical

setting (Brown et al. 1978; Driver and Brown 1978; Clark and Stankey 1979). Rooted in expectancy-valence theory (Lawler 1973), the underlying assumption of the experience-based approach is that people choose to participate in a recreation activity in a particular setting to achieve specific types of desired experiences. For example, a person seeking to experience social contact and exercise might participate with friends in a neighborhood football game at a local park, while a person seeking solitude and relaxation might choose canoeing alone at a high mountain lake. Similarly, an angler seeking social contact and mountain scenery might prefer a readily accessible high mountain lake where a large campground is located, while another angler seeking solitude might prefer a more isolated setting. Note how in these examples it is only in the conjunction of the person, the activity, and the setting that the goal of the experience, as defined by the person, can be achieved.

The experience-based approach has guided recreation research and management throughout the past decade. Numerous studies have been conducted to identify valued recreation experiences among a variety of recreation user types in a variety of settings such as hunters (Brown et al. 1977; Hautaluoma and Brown 1979), anglers (Knopf et al. 1973; Driver and Knopf 1976; Driver and Cooksey 1977), river rafters (Schreyer and Roggenbuck 1978; Graefe et al. 1981;

Knopf and Lime 1984), cross-country skiers (Ballman et al. 1981; Haas et al. 1980), and snowmobilers (McLaughlin and Paradise 1980). More recently, the underlying relationships among activities, settings, and experiences have received needed research attention (Brown and Ross 1982; Manfredo et al. 1983; Virden and Knopf 1986; and Yuan and McEwen 1986).

The role of recreation managers in the experience-based approach is to provide opportunities for recreationists to realize desired experiences. They can do this by managing the setting in which recreation activities occur including providing information about those settings. Settings are viewed as having three types of attributes that managers can manipulate: physical, social, and managerial (Driver and Brown 1978). For example, managers might provide opportunities for social interaction in a campground by limiting the amount of vegetative screening between campsites (physical attribute) and by providing group campsites (managerial attribute). The combination of these two management actions would indirectly affect the social setting attribute.

An important implication of this approach is that if recreation resource managers want to provide opportunities for recreationists to realize desired experiences, they need information on users, their activity patterns, and the relationship between desired recreation experiences and the settings that best facilitate those outcomes. With this

type of information recreation managers can increase the likelihood that recreationists will realize desired experiences.

Information on preferred recreation experiences and activities can be used to describe recreation demand, and when used in combination with an assessment of the ability of the recreation resources available to supply experience and activity opportunities, used as a basis for planning and managing for recreation experiences, for setting specific, quantitative recreation management objectives, and for making allocation decisions involving other resource outputs such as wildlife, water, timber, and forage.

In attempting to match recreationists' wants with the capability of the natural and managerial resources to supply recreation opportunities, resource managers are adopting a marketing approach to recreation management where the focus is on recreationists as customers and attempts are made to match their wants with what is being produced, in this case recreation opportunities.

A valued tool in marketing is use of market segmentation, a means of identifying homogeneous groups of consumers based on a number of possible partitioning variables. In this case, desired recreation experiences can be used as a basis for market segmentation. This approach provides managers with a parsimonious way to deal with the diversity among experience preferences (Manfredo and

Anderson 1982) and presents a more precise description of their clientele which can be useful in making resource allocation decisions, in communicating information to specific user groups, and in determining the impacts of resource management decisions (Brown and Haas 1980).

Recreation experience preferences have been used as a basis for segmenting wilderness visitors (Brown and Haas 1980), cross-country skiers (Ballman et al. 1981), anglers (Adams 1979; Manfredo and Anderson 1982), and hunters (Hautaluoma and Brown 1978; Hautaluoma et al. 1982), and are used in this study, as presented in the following section.

#### Research Problem and Study Objectives

Public land management agencies are becoming more aware of and interested in the needs and wants of their growing numbers of recreating users. Satisfying visitor needs has become an important goal in public land management.

Marketing, including development of a marketing strategy, provides a way for managers to integrate user concerns and recreation resources through management. Experience-based recreation provides a user-oriented framework managers can use in developing a marketing strategy for recreation planning and management.

The question then is how can information on recreation customers and their experience preferences be used to develop a marketing strategy and how might such a strategy

be used in recreation planning and management activities? The purpose of this study is to demonstrate how social and psychological information can be used within an experience-based management framework as input to a marketing plan for providing recreation experience opportunities on public lands. Information on recreationists and their preferences are used to characterize market segments and provide input for a recreation marketing plan.

The customers in this study are mostly urban-based recreationists who use the Inyo National Forest and represent the diversity in the socio-demographic characteristics, recreation activities, behavior, experiences desired, and preferences often found among urban populations (Dwyer 1989, O'Leary and Benjamin 1982; Stamps and Stamps 1985; Talbot and Kaplan 1984; Wendling 1980). The diversity within this user population makes it a particularly appropriate group for market segmentation since segmentation takes advantage of differences among consumers.

The following objectives guide the study in accomplishing its purpose:

- 1) to determine recreation experiences important to urban-based wildland users;
- 2) to identify recreation experience "segments" or groups of individuals having similar desired recreation experiences;
- 3) to describe market segments according to experience preferences and selected demographic and on-site activity variables; and

- 4) to demonstrate how information on market segments can be used in developing a recreation marketing plan.

The following two chapters describe the theoretical and conceptual framework on which these research objectives are based and the methods and procedures used in conducting the study. Subsequent chapters present the results of the analyses used to identify and describe the recreation experience segments and the implementation of these findings by wildland resource managers who provide recreation experience opportunities.

## CHAPTER II

### THEORETICAL FRAMEWORK AND ORIENTING CONCEPTS

Expectancy-valence theory and the concepts of experience-based recreation, market segmentation, and marketing planning join to form the framework for this study. The purposes of this chapter are 1) to discuss the theory and concepts, demonstrating how they provide a logical framework for the study, and 2) to review some of the outdoor recreation literature relevant to them.

#### Expectancy Theory and Experience-Based Recreation

Numerous theories exist that attempt to explain the concept of human motivation, defined as the "forces acting on or within an organism to initiate and direct behavior" (Petri 1986, p. 3). Traditionally the primary concerns of motivation theorists have focused on three major questions: What are the forces that energize and arouse behavior? How can human behavior be manipulated toward certain desirable objectives? Why do individuals differ in their response to the same stimuli and how can they be influenced? (Chung 1977). The first question led to the study of internal stimuli (or needs) which motivate behavior. Theories addressing this question are grouped under instinct, drive, or need theories of motivation (Freud 1915; McDougall 1908;

Hull 1943; Richter 1927; Maslow 1954; McClelland 1961). The second question concerns the study of external stimuli or incentives which influence or direct behavior toward certain objectives and answers can be grouped as learning or incentive theories of motivation (Thorndike 1911; Pavlov 1927; Hull 1952; Spence 1956). The third question led to the study of such personal variables as personality and cognitive style which make the individual unique in his or her response to stimuli. Research concerning personal variables relative to motivation falls within the realm of expectancy or cognitive theories of motivation (Tolman 1932; Lewin 1938; Lawler 1971; Edwards 1954). It is this third group of motivation theories that form the theoretical framework for the study.

Expectancy or cognitive theories, like most psychological theories of motivation, have their roots in the principle of hedonism which suggests that individuals tend to seek pleasure and avoid pain (Steers and Porter 1987). Expectancy theories differ from other hedonistically-based theories such as drive and learning theories in that motivation is seen as a sort of "hedonism of the future" rather than a function of past experiences or reinforcements. The basic tenet of expectancy theories is that major determinants of human behavior are the beliefs, expectations, and anticipations individuals have concerning future events. Behavior is seen as purposeful, goal-

directed and based on conscious intentions (Steers and Porter 1987; Chung 1977).

In the 1930s Kurt Lewin (1938) and Edward Tolman (1932) developed a number of very similar cognitively-oriented motivation theories. Tolman was an animal behaviorist and Lewin was interested in human behavior. Both took the position that organisms make conscious decisions concerning future behavior based on cues from their environment and as a result of past experiences (Steers and Porter 1987). The theories they developed introduced the concept of valence or the attractiveness of an outcome or goal, and the concept of expectancy or the likelihood that an action will lead to a certain outcome or goal (Lawler 1973; Chung 1977).

The basic formulation of the expectancy-valence model of motivation is:

$$F_m = \text{Exp}(E \rightarrow P) \times \text{Exp}(P \rightarrow O) (V),$$

where the motivating force ( $F_m$ ) directed toward a specific action is equal to the expectancy (Exp) that an effort (E) (or action) will lead to a specific performance (P) (or behavior) multiplied by the product of the expectancy that a performance (P) will lead to specific outcome (O) times the valence (V) (or value-importance) ascribed to that outcome (Lawler 1973). In other words, Lawler proposed that people are motivated to engage in behaviors they expect will result in positively valued outcomes.

The product of the model is an indication of the motivating force for selecting (or rejecting) an alternative. Individuals are viewed as engaging in some form of choice behavior where they first determine the potential outcomes of various acts of behavior and the value they attach to each of those outcomes. Individuals then select that mode of behavior which maximizes their potential benefits (Steers and Porter 1987). The probability of behavior depends not only on the value of the goal for the individual, but also upon the person's expectancy of obtaining the goal, both of which can be influenced by past experiences. Valence and expectancy are viewed as combining multiplicatively to determine behavior; hence these theories are often referred to as expectancy x valence theories of motivation (Lawler 1973, Chung 1977).

A number of theorists have included the main points of the early work of Tolman and Lewin and have built their own theories within the expectancy-valence framework (e.g., Atkinson 1958; Edwards 1954; Peak 1955; Rotter 1954, 1955; Vroom 1964; Lawler 1971, 1973). Expectancy-valence theory has been applied to a number of psychological fields including social learning theory (Bandura 1977; Rotter 1954, 1966), achievement (Murray 1938; McClelland and Atkinson 1948; Atkinson and Birch 1978; McClelland and Pilon 1983), work motivation (Vroom 1964; Lawler 1971, 1973; Lawler and

Porter 1967), and consumer behavior (Cohen 1974; Wilkie and Cohen 1977; Cohen et al. 1970; Fishbein and Ajzen 1980).

A basic assumption in expectancy-valence theory is that outcomes or consequences are attractive to an individual because of some drive or need the individual has (Lawler 1973). This is what determines which outcomes are desired and why some are more important than others. Maslow's (1954) hierarchical classification of needs, the most widely used taxonomy of needs, includes five need classes: 1) physiological needs--need for food, water, air; 2) safety needs--need for protection from danger, threat, or deprivation; 3) social needs--need for affection, belonging, love; 4) esteem needs--a need for personal achievement, autonomy, respect from others; and 5) need for self-actualization--a feeling of self-fulfillment, growth, and realizing one's potential. According to Maslow, the five need categories exist in a hierarchy such that lower level needs such as existence and safety needs are most important and must be satisfied before higher level needs such as social esteem, and self-actualization become important. An individual is motivated by an attempt to satisfy the need that is most important at a particular time. Within the expectancy-valence framework an individual chooses among various alternative behaviors and chooses the behavior that would have the highest probability of satisfying the need that was most important at that time.

In addition to Maslow, other need theorists have developed more extensive lists of human needs (e.g., Murray 1938) and condensed the Maslow need hierarchy into three hierarchical levels of needs (Alderfer 1969, 1972). Others focused on establishing the existence of one or two important needs such as achievement (McClelland and Atkinson 1948; McClelland et al. 1949), self-actualization (Csikszentmihalyi and Kleiber 1989), competence (White 1959), or personal causation (deCharms 1968).

Recreation researchers have identified a variety of physical, psychological, and social needs providing motivation for leisure and recreation activities. One approach used in leisure needs research has been to ask people why they participated in or enjoyed leisure. These reasons are then often classified in need-related terms and viewed as motivation for participation in leisure activities. For example, an early study by Lundberg, Komarovski and McInerry (1934) developed a list of eight reasons why a sample of high school students enjoyed their favorite activity. Similarly, Gump and Frieson (1962) and Olds (1964) collected data on why high school students enjoyed extra-curricular and leisure activities. Reasons included social contact, to achieve something, to get physical exercise, and competence development. Havinghurst (1961) and Kelly (1978) assessed reasons why adults engage in leisure activities. Havinghurst measured the importance

of reasons such as contacts with friends, change from work, to be creative, and to achieve something and Kelly developed a list of 26 reasons such as it's restful, it's exciting, self-expression, and enjoy the companions.

A second approach used in leisure and recreation research has been to measure motivating needs more directly. Three primary lines of research have developed in this area. Tinsley and his colleagues (1977, 1978, 1979) have developed a list of 45 needs they believe to be a reasonably exhaustive sample of needs which might potentially be satisfied through participation in leisure activities. Starting with the set of 45 needs, their research has determined the extent to which needs distinguish among sets of five and ten passive and active leisure activities of college students such as watching television, attending plays, concerts, sporting events and lectures, reading, bicycling, and socializing and drinking. Tinsley et. al. (1977) identified 45 need dimensions that are particularly leisure activity specific (i.e., needs which can be more easily satisfied through participation in some leisure activities than by participation in other leisure activities) such as achievement, activity, creativity, dominance, relaxation, and self-esteem.

A second line of leisure oriented needs research conducted by Crandall and his colleagues focused largely on social needs associated with leisure activities (London,

Crandall and Fitzgibbons 1977; Crandall 1979; Crandall and Thompson 1978). Results of this research suggest that social interaction is an important reason for participation in a diverse group of leisure activities. Crandall (1979) pointed out that most leisure activities probably involve some social interaction, which contributes to the decision to participate as well as to decisions not to participate.

A third line of research on assessing leisure-related needs was initiated during the 1970s by Driver, Brown and colleagues (Driver 1975, Driver and Tocher 1970, Driver and Brown 1975, 1978). Their research has focused on outdoor recreation activities and seeks to understand the outcomes of recreation participation as motivators for recreationists engaging in specific recreation activities at specific areas (Driver and Brown 1975, 1978). This focus on the outcomes of participation goes beyond a traditional activity focus in outdoor recreation to address questions about why an individual is participating in an activity, what rewards or satisfactions are received from participation and how the quality of the experience can be enhanced (Driver and Tocher 1970). To better answer these questions, Driver and Tocher (1970) proposed a behavioral approach where recreation is defined as a type of human experience arising from intrinsically rewarding voluntary engagements (mental and physical) during nonobligated time. The emphasis is on rewards or outcomes of participation in an activity vs.

simply activity participation. This approach is similar to ideas in consumer behavior suggesting that people purchase goods not as ends in themselves but for the benefits they provide (Loudon and Della Bitta 1984). For example, managers in promotional seminars are taught, "We don't sell cosmetics, we sell youth," and "People don't buy drill bits, they buy round holes" (Weinstein 1987).

The term "experience" or "recreation experience" has been described by Driver (1975) in a generic sense, as the sum of the participants mental, physical, spiritual, or other responses to a recreation engagement. It may be satisfying or dissatisfying. At a broad level, an experience is described by the activity engagement such as a downhill skiing experience, a fly fishing experience, or a whitewater rafting experience. At a narrower level, any one activity may produce several specific experiences. For example, going camping may lead to realizing such experience outcomes as increased appreciation of nature, outdoor skill development, strengthening affiliation with ones camping companions, and escaping work-related demands. Specific experiences realized from participation in activities in settings have been referred to as psychological outcomes (Driver and Brown 1978, McLaughlin and Paradise 1980, Brown and Haas 1980), psychological constructs (Brown, Dyer and Whaley 1973; Brown, Driver and Stankey 1976; Hautaluoma and Brown 1978), and "multiple satisfactions" (Hendee 1974).

The central point is that recreation is characterized by the kinds of outcomes that are realized and that the set of salient outcomes is the recreation experience (Brown 1983).

Driver and Brown (1975, 1978) proposed a model of an individual's recreation decision process based on the expanded view of recreation as an experience made up of specific psychological outcomes resulting from participation in a particular recreation activity in a particular setting. Their model was heavily influenced by Lawler's (1973) interpretation of expectancy valence theory. Although originally developed to study work motivation, Lawler's formulation fits well in the concepts of psychological outcomes and recreation experiences, and their relationship to recreation resource planning and management.

Lawler proposed that one's motivation to engage in a behavior is a function of primarily two types of expectancies. One is the expectation that one's efforts will lead to certain performances, and the second is the expectation that these performances will lead to positively valued outcomes (Lawler 1973). Applied to recreation, this suggests that the motivation to engage in a given recreation opportunity is a function of 1) the expectation that one's efforts to recreate (e.g., plan, travel, spend money) will lead to performance (participation in certain activities at a specific type of setting), and 2) the expectation that participation in activities in such a setting will lead to

desired experiences. In this model, recreation activities are behaviors such as hunting, hiking and fishing. Settings are the places where activities take place and include all physical resources (e.g., topography, water, wildlife, fish), social (e.g., numbers of others, behavior of others), and managerial (e.g., fee systems, permits, facilities) conditions of those places. Experiences are defined as a package of specific psychological outcomes which are realized from a recreation engagement (Manfredo et al. 1983).

A large and growing number of studies were begun in the 1970s based directly on the conceptual framework developed by Driver, Brown and their associates. To test their conceptual formulations of an experience-based approach to recreation, researchers developed and refined a comprehensive list of potential psychological outcomes sought by recreationists and measured empirically by a series of scale items (Driver 1977, 1983). Identifying and measuring recreation experiences centers on analyzing individuals because it is individuals that actually produce and have recreation experiences, though they may be influenced socially and culturally (Brown 1983).

Respondents are asked to rate the relative importance of each scale item representing a potential outcome from participating in a designated recreation activity. Scale items are usually then reduced through cluster analysis to

domains representing more generalized bundles or packages of psychological outcomes referred to as experience preference domains. For each experience domain, a mean and standard deviation are calculated. Means and standard deviations for the experience preference domains can be calculated for all subjects or for any subset which might be of interest based on activities, socio-economic characteristics, areas visited, and other classification variables. By using means, the highly valued and salient specific experiences for any group of users can be determined and then compared to any other group (Brown 1983). The psychological outcome scale items and experience preference domains have been tested and refined over the years and these tests have generally confirmed both the reliability and validity of the scales (Tinsley et al. 1981; Rosenthal et al. 1982; Knopf et al. 1983; Driver and Knopf 1977).

The first group of studies using the psychological outcome scales (Driver 1977, 1983) sought to identify experiences sought by participants in a variety of recreation activities. Research results supported the notion that those participating in different recreation activities obtain different patterns of experience outcomes and that those experiences could be measured. For example, Driver (1975) presented results from a number of studies that showed there is some variability in psychological outcomes important in activities such as camping, biking and

tennis. Similarly, Brown (1981, 1983) compared valued experiences associated with a number of activities and identified a number of experiences common to all the selected activities such as: relationships with nature, escape from social pressures, and being with one's recreation group. Brown also found specific differences among activities. For example, a risk taking, action/excitement experience was highly valued only by off-road vehicle recreationists and river runners in his analysis. Likewise, the experience of meeting and observing other people was highly valued only by off-road vehicle users yet its value was measured for all activities considered. Other experience-based research has focused on fishing (Knopf et al. 1973; Driver and Knopf 1976; Driver and Cooksey 1977), river floating (Roggenbuck and Schreyer 1977; Schreyer and Roggenbuck 1978; Graefe et al. 1981; Knopf and Lime 1984) and hunting (Hautaluoma and Brown 1978; Brown et al. 1977).

The experience-based approach to recreation has been applied to recreation planning and management to identify the role of public land managers in providing satisfying recreation experiences. The Driver and Brown model suggests that what managers supply and what recreationists demand can be described in similar terms as recreation opportunities (Driver and Brown 1975, 1978). Recreation opportunities, defined as the chance to engage in a specific activity, such

as hiking; in a specific setting, such as a remote area; to realize desired experiences, such as physical exercise, isolation, and enjoying nature can be viewed as the goods and services supplied by public land managers to meet recreationists' demands for such opportunities (Driver et al. 1987).

The provision of recreation opportunities on public lands can be viewed as a production process where the basic inputs are settings and management activities which together provide opportunities for activities and experiences that are desired and "consumed" by recreationists, resulting in satisfying experiences and ultimately some type of individual or collective benefits (Figure 1). This production process is part of a recreation management strategy referred to as experience-based setting management (Brown 1984, Driver and Rosenthal 1982, Manfredo et al. 1983). According to the process, managers cannot provide recreation experiences, but they can increase the probability that specific types of recreation experiences (e.g., solitude, group affiliation, nature appreciation, risk taking, etc.) can be realized. Experiences are produced by recreationists combining their past behaviors, knowledge, skills, equipment, time, and other individual resources with the recreation opportunities supplied by land managers. These recreation opportunities supplied by

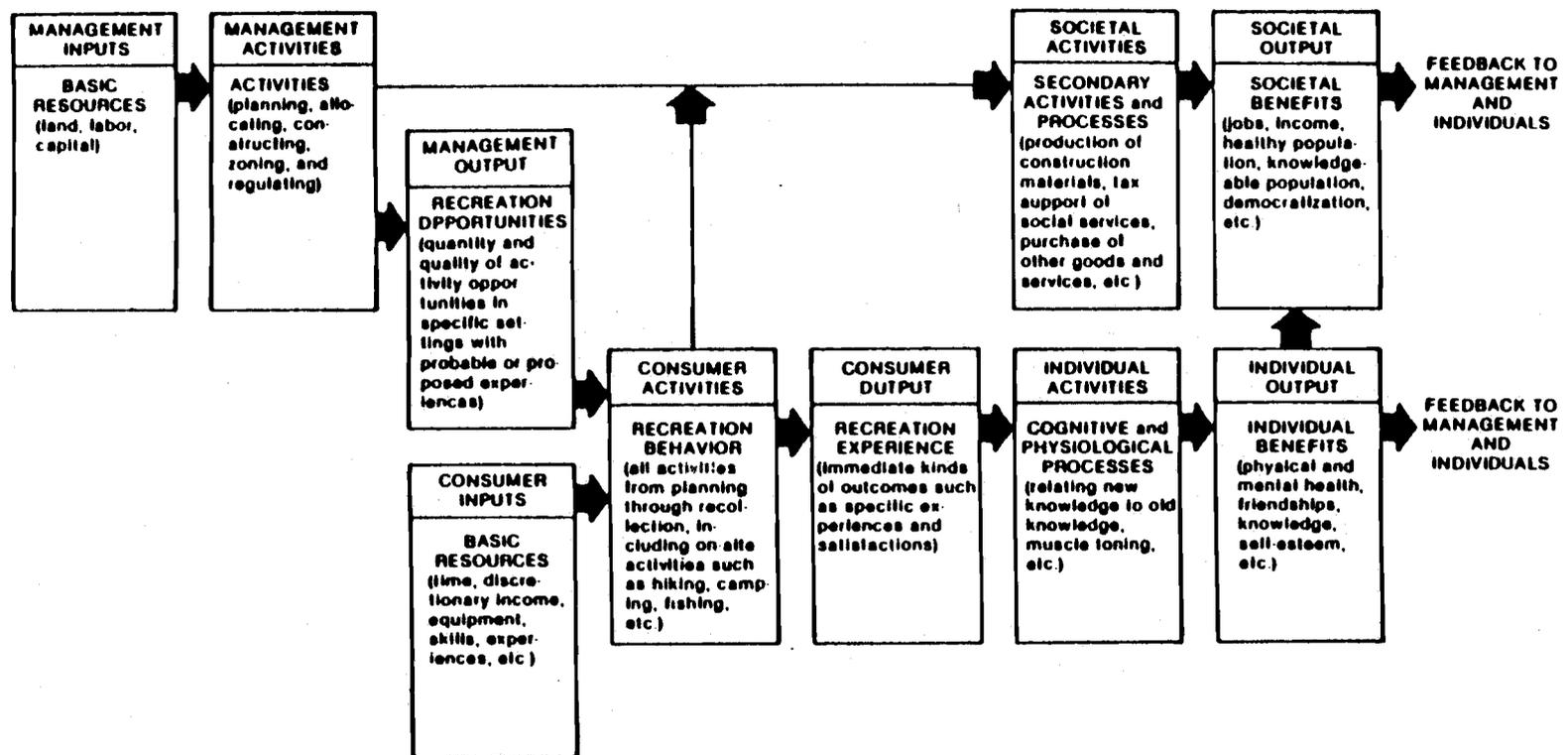


Figure 1. Overview process and subprocesses for producing outdoor recreation benefits. Reprinted with permission of the author, from Brown (1984).

management are places where recreationists can engage in specific activities (behaviors) in specific settings made up of physical, social, and managerial attributes, and where they can have the expectation that certain experiences will be realized (Brown 1983). Recreation managers are in the business of providing opportunities, that is, the recreation goods and services produced on public lands.

Experience-based setting management has been incorporated into a recreation planning system, the Recreation Opportunity Spectrum (ROS), that enables land managers to inventory lands for the supply of recreation opportunities available and to assess demand for the same opportunities. This system is currently in use by land management agencies in the U.S. such as the U.S. Forest Service and Bureau of Land Management and agencies in other countries such as Canada, Australia, and New Zealand (Brown, Driver and McConnell 1978; Buist and Hoots 1982; Clark and Stankey 1979; Driver et al., 1987).

A key to managers being able to inventory and supply desired recreation opportunities lies in understanding the relationship between valued psychological outcomes and experiences and the types of activities and settings which facilitate those outcomes. With this information managers can increase the probability that users will realize desired experiences and activities by ensuring that the physical, social, and managerial settings which help facilitate them

are available. Empirical support for experience-based setting management is still emerging, although a number of studies have focused on documenting the relationship between settings, activities, and experience preferences. Many of the studies cited above supported the notion that those participating in different activities may desire different recreation experiences.

Research on the relationship between experiences and the settings in which they occur has been limited, although the research that has been done is supportive. For example, Brown et al. (1977) in a study of Colorado deer hunters found a relationship between management preferences and experiences among hunters. Ballman et al. (1981) and McLaughlin and Paradice (1980) offer support for the relationship between social, physical resource and managerial attributes of a setting and desired cross-country skiing experiences. Brown and Ross (1982) found that desires for specific experiences are related to preferences for different recreation settings and to different activities in these settings. Manfredo et al. (1983), in studying users of three Wyoming wilderness areas, identified experience groups who differed on preferred recreation activities, settings, and management actions.

More recently, Virden and Knopf (1989) presented a case study of relationships between recreation activity, desired experience, and desired environmental setting using a sample

of visitors to a large Bureau of Land Management recreation area in southwestern Colorado. Their data suggest that relations among activity, experience, and setting exist. They found that the desired recreation experiences varied according to preferred activity. They also found that experiences were contingent upon setting preferences as well, and that the character of some of these relations were in turn contingent upon activity preference.

Yuan and McEwen (1989) examined experience preferences across three different campground setting classes. They found that, among the four most preferred experiences, there were no significant differences across the three setting types. Camping, as an activity, can take place in a range of settings and a lack of distinct experience preferences among the settings used in this study supports the suggestion by Driver et al. (1987) that some experiences are more setting and activity dependent than others.

A third generation of studies on experience-based recreation has gone beyond simply identifying recreation experiences and treating recreationists as individuals to identifying types or groups of individuals who evaluate the experience preference scales similarly, i.e., who are seeking similar recreation experiences. This is done by adding an additional methodological step and clustering recreationists based on their evaluations of the experience domains. In this way similar groups or "market segments" of

recreationists sharing similar experience preferences can be identified. These studies have been conducted on hunters (Brown et al. 1977; Hautaluoma and Brown 1978; Hautaluoma et al. 1982), river floaters (Ditton et al. 1982), wilderness visitors (Manfredo et al. 1983; Brown and Haas 1980), ski tourers (Haas et al. 1980; McLaughlin and Paradice 1980; Ballman et al. 1981), and visitors to an historical park (Knopf and Barnes 1980).

In the majority of studies segments formed on the basis of experience preferences were further characterized according to selected descriptive variables such as demographics, use patterns and preferences for activities, settings, and management actions. For example, in their study of cross-country skiers in Minnesota Ballman et al. (1981) identified eight different cross-country skier "types" according to experience preferences and further characterized them according to preferences for physical and social setting characteristics and facilities related to cross-country skiing (e.g., length of trails, steepness of hills, presence of other skiers, and overnight facilities available), participation characteristics (e.g., number of years skied and number of days skied during past and current season), and demographic characteristics (e.g., age, gender, income, residence, and occupation). This information provides a more detailed picture of cross-country skiing "consumers" that can be used to accomplish a number of

management and planning tasks including allocating physical and administrative resources, assessing and predicting customer needs, designing and implementing facilities such as trails and support services, and in developing an information system to communicate the existence, purpose and content of available cross-country skiing opportunities (Ballman et al. 1981).

In summary, a model supported by expectancy-valence and needs motivation theories was developed that describes recreation as an intrinsically rewarding experience made up of identifiable and measurable psychological outcomes. Empirical research has generally supported this experience-based approach to recreation which suggests that it is the process of participation and the outcomes arising from it which are important--participation is a means to an end. A management and planning framework has been developed using this approach and suggesting that the products resource managers provide are opportunities for visitors to realize preferred recreation experiences. Experiences can be identified and used as a basis for identifying groups of users desiring similar experiences, providing a basis for market segmentation as part of a recreation opportunity marketing plan designed to better meet the needs and wants of recreation users.

### Marketing and Market Segmentation

Marketing is not a new idea in recreation resource management. In 1974, Wilbur LaPage proposed that "most outdoor recreation activities can be studied usefully in the context of a market" (LaPage 1974, p. 107). More recently, Knopf has suggested that marketing can be potentially powerful "for promoting the wise use of our natural environments" (Knopf 1990, p. 61). This recognition of the appropriateness and value of marketing applied to resource management is reflective of a growing interest among marketing researchers and educators in exploring the extent to which marketing concepts and techniques can be applied to government agencies such as those managing public lands and providing outdoor recreation opportunities. This movement has been led by the writings of Philip Kotler (e.g., Kotler and Levy 1969; Kotler 1972, 1975) who suggests that "marketing is relevant not only to businesses, but to every organization that provides 'something of value' to clients or to the public" (Kotler et al. 1983, p. xi).

Marketing has been defined as a point of view (Wagner 1978), a perspective, and a philosophy as well as a set of activities used to complement that philosophy (Crompton and Lamb 1986). In both uses of the term the focus is the same, linking an organization to its environment, particularly its customers. However, not everyone perceives marketing in

this manner. Kotler and Levy (1983) suggest that there are two definitions of modern marketing in the minds of people who use the term. One meaning of marketing conjures up the terms selling, persuading, and influencing. Marketing is seen as a "huge and increasingly dangerous technology," making it possible to get people to buy things and support causes that they either do not want or are bad for them.

The other meaning of marketing, the authors suggest, is weaker in the public's mind; it is the concept of "sensitively serving and satisfying human needs" (p. 9). It is this second view of marketing that provides a useful concept for all organizations because all organizations are formed to serve the interests of people; hospitals serve the sick, schools serve students; recreation resource managers serve visitors (Kotler and Levy 1983). Marketing activities are directed by an organization's goals and objectives, whether it is a business determined to make a profit or a government agency trying to provide opportunities for satisfying human experiences. The set of marketing activities are "neutral tools" that can be used to assist any organization, public or private, in achieving whatever objectives it establishes (Crompton and Lamb 1986, p. 37).

Marketing has gone through four major phases over the last 100 years (Kotler and Andreasen 1987; Crompton and Lamb 1986). The first phase had a production orientation.

Innovation was dominant and businesses viewed their task as putting out new products they thought the public needed. A production orientation also characterized phase two. This was a period of mass production and mass consumption. The key task was efficiency, to produce more and more products cheaper and cheaper. Phase three occurred during the depression when there were fewer buyers in the market and the key task became selling. Salesmanship was the mark of successful marketing. Phase four began in the 1950s and focused on the customer, recognizing that marketing planning must begin with the customer, not the organization. The goal in this phase, which continues to dominate marketing today, is to make every effort to sense, serve, and satisfy the needs and wants of customers and publics within organizational constraints.

Government agencies, such as those providing recreation opportunities on public lands, may be reluctant to adopt a marketing strategy focused on satisfying customer needs. They may view marketing as first described above, carrying negative connotations associated with hucksterism (Crompton and Lamb 1986). Government agencies may focus on providing facilities, services, and programs they consider most appropriate and what the public needs and wants (Crompton and Lamb 1986). An organization may prefer to concentrate on things other than customer satisfaction (Kotler and Andreasen 1987) such as growing and harvesting trees or

managing wildlife and associated habitat. Agencies may also lack needed resources or power over employees to hire, train, and motivate them to adopt a customer-oriented marketing strategy. Employees may be "burned out," but are civil servants or volunteers and cannot be fired or disciplined (Kotler and Andreasen 1987).

While market researchers tend to agree that marketing activities developed in the business sector can be relatively easily applied to marketing by government agencies (e.g., Kotler et al. 1983; Kotler and Levy 1969; Crompton and Lamb 1986; Lovelock and Weinberg 1984), they also have pointed out some distinct characteristics of public and nonprofit organizations that may influence an agency's ability and effectiveness in developing a marketing strategy. These characteristics and differences can be divided into six categories:

1. The nature of the product being provided. Most government agencies are responsible for the delivery of services rather than physical goods. Services are intangible, they cannot be seen, heard, smelled, tasted or felt in the same manner as goods. This makes it more difficult for customers to evaluate a service whereas most goods have characteristics that can be evaluated prior to purchase (e.g., color of a car) and during usage (e.g., gas mileage). The benefits of a physical fitness program or a

recreation experience are more difficult for a consumer to evaluate and for the marketer to communicate.

2. Pricing. Private organizations rely on direct client pricing to raise revenues whereas government agencies rely on taxation or philanthropy (Crompton and Lamb 1986, Rothschild 1979). In many instances the prices paid by consumers involve no financial payments at all. Consequently, agencies must often devote marketing resources to attract donations or tax-derived revenues.

3. Dominance of nonfinancial objectives. Organizations providing services have service-related objectives vs. profit objectives. This makes it more difficult to measure organizational success or failure (Crompton and Lamb 1986; Lovelock and Weinberg 1984, Rothschild 1979).

4. Multiple clients. Government agencies tend to have more comprehensive interrelationships with the general public than their private counterparts. Consequently agencies may need to develop and carry out marketing programs that are responsive to the needs of multiple constituencies such as politicians, regulatory agencies, and environmental groups, not just immediate consumers (Lovelock and Weinberg 1984). Because government agencies are essentially owned by citizens, potential clientele often have performance expectations beyond those they expect for private organizations, such as higher levels of fairness,

responsiveness, and accountability. This proprietary interest of citizens means government agencies are subject to much greater public scrutiny, outside monitoring, and are able to keep fewer secrets than businesses (Crompton and Lamb 1986; Lovelock and Weinberg 1984).

5. Internal organizational structures and procedures.

Government agencies tend to have more complex objectives that are often vague, contradictory, and involve intricate tradeoffs. Decision-making and individual authority are more clearly defined in private organizations whereas in public agencies there is often uncertainty regarding authority and responsibility for decisions and subsequent actions because of multiple hierarchies and bureaucracies. There are greater incentives and rewards for performance in private organizations. Civil service regulations, unions, rigid pay and promotion guidelines can limit an agency's ability to motivate and reward public employees (Crompton and Lamb 1986).

6. Environmental forces. Government agencies are faced with social, economic, legal, technological, and competitive forces external to the agency. As a result agencies may have less flexibility and autonomy, being slower to implement marketing strategies. As mentioned above, agencies are subject to political forces such as elections, political appointments, interest group demands, and lobbying efforts. This may have a demobilizing effect

on marketing efforts because priorities and consensus change frequently, inhibiting an ability to do long-range marketing planning (Crompton and Lamb 1986).

Despite the complexities involved in marketing, government agencies and other public organizations can benefit from making a commitment to marketing in three important ways (Crompton and Lamb 1986):

1. Marketing provides a framework for decision-making and coordinating activities;

2. Familiarity with marketing tools may lead to improvements in decision-making by exposing managers to previously unfamiliar ideas and strategies; and

3. A commitment to marketing will result in more popular and legislative support as an agency becomes more aware of the desires of its client groups. Increased satisfaction among clients can mean increased support from legislators.

Although it may be a somewhat complex undertaking, the philosophy of marketing is basically simple and intuitively appealing: the social and economic justification for any organization is the satisfaction of customer wants. Marketing involves establishing a way for the organization to learn about customer wants and to use that information internally to create programs that will satisfy targeted customers (Crompton and Lamb 1986). The need for marketing

in a government agency is best summed up by Kotler and Levy (1983):

The choice facing those who manage non-business organizations is not whether to market or not to market. The choice is whether to do it well or poorly, and on this necessity the case for organizational marketing is founded (p. 10).

For an agency to be successful at marketing it is necessary that an effort be made to find out what customers want, and then to provide services that satisfy those wants. The desires of each potential client are likely to be unique; however, it is rarely, if ever, economically feasible for an agency to develop services uniquely designed to meet each individual's desires. Compromise is necessary and the most effective way to compromise is to group together those people whose desires are similar (Crompton 1983).

The process of grouping together customers with similar desires is called market segmentation. Market segmentation is based upon the propositions that (1) consumers are different, (2) differences in consumers are related to differences in market behavior, and (3) segments of consumers can be isolated within the overall market (Lovelock 1983).

Segmenting consumers into homogenous groups can be useful to an organization in three important ways (Engel et. al. 1972; Lovelock and Weinberg 1984): 1) It provides a more precise definition of the customer market in terms of

the needs of specific groups, why they behave as they do, and possible ways of influencing behavior; 2) It gives an organization a clearer focus and the ability to identify its strengths and weaknesses relative to the needs of consumers and the competition; and 3) It allows more efficient allocation of often limited resources to the development programs that will satisfy the needs of target segments.

One of the first steps in market segmentation is to select the variable(s) used as a basis for segmenting the market, in this case the recreation market. The basic problem is to select segmentation variables which are likely to prove useful in a recreation marketing context. Kotler (1980) proposes three criteria, each of which must be satisfied if meaningful market segments are to be developed:

1. Substantiality. Each segment should be sufficiently large (and/or sufficiently important) to be worth the time and cost of developing distinct, programs or services and communication, distribution, and/or pricing strategies.<sup>1</sup> The criterion for minimum size is that it should be economically practical to tailor a separate marketing mix for the segment (Crompton 1983).

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<sup>1</sup>Those four items--product, communication (promotion), distribution and pricing make up an organization's offering and are referred to as the "marketing mix."

2. Measurability. Potential customer groups should be measurable; it must be possible to obtain information on the specific characteristics of interest.

3. Accessibility. Managers must be able to identify chosen segments and effectively focus marketing efforts on these segments. Minority groups who do not speak English, illiterate persons, and senior citizens with reading and hearing disabilities are often difficult to reach in American society. These may be important market segments needing recreation services tailored to their needs, but effective communication with such groups may require imaginative and unusual techniques (Crompton 1983).

Any of a number of variables can be used to segment a market. The most often used segmentation variables are composed of user characteristics and user responses. User characteristics include demographic and socioeconomic characteristics (age, sex, marital status, family size, language, etc.), geographic variables (region of the country, political jurisdiction, urban vs. rural, etc.), psychographic variables (personality, life-style, attitudes, loyalty, etc.), and benefits sought. User responses include product-related behavior (frequency of use, amount used, timing of use, etc.), and sensitivity to marketing variables (e.g., response to produce modification, price sensitivity).

Outdoor recreation market segmentation studies have used both user characteristic and user response variables to

segment recreationists. Tatham and Dornoff (1971), for example, developed market segments among participants in twenty recreation activities based on relationships among nine socioeconomic characteristics: race, age, age of youngest child, number of children, months worked in a year, hours worked per week, minutes to/from work, days paid vacation, and annual family income. The number of segments formed for a particular activity ranged from a low of five for "playing softball" to a high of ten for "swimming" and "attending a fair." Socioeconomic characteristics varied noticeably among segments. Size of segments and participation rates in the 20 activities also differed among segments.

Rather than segment users on socioeconomic variables, it is more common in outdoor recreation studies to find segments based on user response variables. One of the most commonly used has been rate of participation in selected outdoor recreation activities. As early as 1960, Proctor (1962) proposed the existence of leisure "types" based on participation rates in 15 recreation activities. He used factor analysis to group the activities into four categories: backwoods, boat culture, country club to picnic ground complex, and passive purists. He suggested there was a characteristic type of recreationist associated with high rates of participation in each grouping.

Burton (1971) did a similar classification of recreationists into types based on participation rates in 71 activities using factor and cluster analysis. He identified four activity groupings whereby participation in one activity in a group almost always meant participation in the other activities in that group.

In a national survey of Canadian residents, Romsa and Girling (1976) validated the existence of distinct recreation market segments based on participation rates in a given activity. They carried their analysis one step further to determine if these segments could be differentiated based on socioeconomic-demographic characteristics. After testing for differences on 14 socioeconomic variables, they concluded these characteristics do not differentiate among participation segments from different activities. However, some socioeconomic variables did differentiate among segments within an activity.

Ditton et al. (1975) conducted a participation rate-based segmentation study of northwestern Wisconsin residents. They performed two cluster analyses in their study, the first to identify segments based on participation frequencies for eight water-based recreation activities and the second that included type of environment along with activity frequencies. Addition of the environment variable created markedly different groupings than segmenting

residents using activity participation alone. The authors suggest that inclusion of the location variable added an important dimension to segment creation and enabled a more useful description of participant groups.

One activity participation rate segmentation strategy sometimes used is called the "heavy-half" method. This approach involves arraying individuals in order of participation rates in a particular activity from lowest to highest and dividing them at the median into a "light-half" and "heavy-half." The heavy half usually accounts for a far greater proportion of the total participation in an activity than the light half. Market analysts have suggested a similar notion, that the distribution of total purchases among persons in a market is sharply skewed: some people buy much more of a product than others do (Sizzors 1966; Twedt 1964). The reasoning behind using this method is that it is more efficient for recreation providers to look at the characteristics of "heavy-half" users than the total user population.

LaPage and Ragain (LaPage 1969; LaPage and Ragain 1971) used the heavy-half strategy in their study of New England campers. For 5 years a 565-member panel of campers submitted annual summaries of their camping activities. Analysis of the data found that heavy-half campers accounted for more than 75 percent of all reported camping. Heavy-half campers were found to differ significantly from light-

half campers in their motives for camping, past camping experience, and investments in camping equipment. Based on their findings, the authors suggest possibilities for focusing a promotional campaign on the heavy-half of the camping market.

Stynes et al. (1980) conducted a survey of Michigan's downhill ski market that provided data for three separate segmentations. Participation rates were used in two of the segmentation analyses. In the first analysis residents were classified as active, inactive, dropout, or potential skiers. Segments were compared on socio-demographic characteristics, perceptions of skiing, and reasons for skiing.

A second segmentation analysis segmented active skiers using the heavy-half, light-half strategy. Heavy-half skiers accounted for 83 percent of the total number of days skied during the season. Although they did not differ from light-half skiers on any socio-demographic characteristics, they did differ slightly on some of the site attribute preferences, participation characteristics such as skill level and equipment ownership, and number of places skied.

In their third analysis Stynes and Mahoney (1980) classified skiers into five market segments based on importance placed on seven ski area attributes such as after-ski entertainment, lodging and restaurant facilities at the ski area, slope quality, price of lift tickets, and

driving distance from home to the ski area. Significant differences were found among some of the segments on site attribute preferences, preferred types of entertainment and eating facilities, willingness to pay and travel, marital status, income, and participation patterns.

The attribute segmentation analysis by Stynes and Mahoney is an example of another approach used in outdoor recreation segmentation and typology studies: segmenting recreationists based on user preferences for selected components or attributes of the recreation experience. For example, Merriam et al. (1973) and Mills et al. (1976) developed a scale (the Minnesota Scale) for classifying campers into four categories based on preferences for campground modern convenience facilities, activities, and degree of campground clearing. Tests for differences among the four camper types on socio-demographic variables did not show any statistically significant relationships. In a more recent study designed to identify alternative products and markets for Oregon's recreation charterboat industry, Manfredo et al. (1988) used a slightly different strategy and segmented a sample of visitors to Oregon's EXPO 86 pavilion at Vancouver, British Columbia based on preferences for specific trip types such as salmon fishing, whalewatching, etc. Market segments were compared on trip characteristics, age and residence.

Recreationists in this study were segmented on their preferences for recreation experiences. This is analogous to segmenting customers based on benefits sought. Segmenting people based on benefits is equivalent to asking the question, from the consumer's perspective, "What is this good or service going to do for me?" (Weinstein 1987). Recreation experiences can be regarded as intrinsic rewards or benefits an individual receives as a result of recreation participation much like increased self-esteem and recognition are benefits of purchasing a new sports car.

Segmenting consumers based on benefits is an accepted practice in marketing (Haley 1984, Weinstein 1987). An advantage of this technique is that the focus is on an individual's needs or wants--the motives for purchasing a product or service--rather than simply relying on descriptive factors such as socio-demographic characteristics (Weinstein 1987, Green et al. 1972). In addition, identifying and segmenting consumers based on benefits sought most closely reflects the current marketing focus on satisfying customer needs and wants.

The basic premise in benefit segmentation is that groups of individuals differ with regard to their evaluations of the want-satisfying abilities of products or services (Green et al. 1972; Weinstein 1987). A good example is the airline industry. People fly different airlines for a variety of reasons, including economy, good

service, catering to the business traveler, flying to the "right" destinations, the airline's reputation, etc. In the case of recreation, research described earlier in the chapter has shown that individuals differ in the recreation experiences they seek. Experience preferences have been used as a basis for segmentation in a variety of recreation locales and among a number of different activities.

### Marketing Planning

For market segmentation to work effectively, it must be included within an overall marketing planning effort as an integral part of an agency's formal marketing plan. The marketing plan is a systematic approach to coordinating all marketing activities--it is a "blueprint for action" (Weinstein 1987, p. 17), serving as the basis for allocation of monetary and human resources and performance evaluation (Lovelock and Weinberg 1984).

Marketing plans can be prepared for an agency or organization as a whole or be confined to a single product or market segment (Lovelock and Weinberg 1984). In the case of agencies which provide recreation opportunities, a marketing plan could be developed for all recreation opportunities provided on a particular resource unit such as a national park, a forest or a forest district. Alternately, separate market plans could be prepared for each recreation target market segment.

It is to an agency's advantage to develop and utilize a marketing plan. It provides a central document to use in coordinating individuals and activities, as a guide to decision-making about where to focus human and economic resources, as a timetable for anticipating timing of activities, and, perhaps most importantly, as a focus for communication about goals and strategy (Lovelock and Weinberg 1984).

A marketing plan contains five major elements presented as a series of steps (Weinstein 1987):

Step 5:  
Evaluation

Step 4:  
Implementation

Step 3:  
Strategy  
Formulation

Step 2:  
Marketing  
Objectives

Step 1:  
Market/  
Situation  
Analysis

The first step is to analyze the current market situation including the external environment and the agency's internal condition. This involves identifying external market "uncontrollables" such as the economic environment, agency regulatory rules, current social lifestyles, and, if

appropriate, an agency's competitive situation. In the case of a public agency providing recreation opportunities, this step also could include identifying other public and private organizations in the surrounding region providing complimentary or competing recreation services and opportunities.

Analyzing an organization's internal environment includes identifying the strengths and weaknesses of the organization. It is unlikely that an agency could provide the entire array of recreation opportunities demanded by recreationists. Natural, historic, and human resources, in coordination with an agency's goals and objectives, will dictate what recreation opportunities a particular management unit can best provide.

The second step in developing a marketing plan is to identify marketing objectives or the sorts of results an agency is seeking from its marketing efforts. Objectives should be specific, measurable, time-oriented, and realistic. For example, a recreation manager might have as an objective to increase visitor use of a particular interpretive site by 20 percent over the next six months by adding a particular hands-on nature study interpretive activity. Objectives provide direction and motivation for staff members, provide a timetable, and serve as a standard for measuring marketing performance.

The third step is strategy formulation. It is during this step that target markets are identified using market segmentation. As discussed earlier, a number of different variables can be used in segmenting a particular population, including service benefits or outcomes such as recreation experience preferences.

Once target segments are selected based on customer wants and organizational goals and constraints, strategies are then developed for the delivery of the product or service to target groups. The elements that make up what is offered to customers are collectively called the "marketing mix" and include product or service, price, promotion, and distribution (Lovelock and Weinberg 1984). Decisions are carefully made and strategies developed for each element and each provides an important contribution to the success or failure of the overall marketing effort.

In step four of the marketing plan, implementation strategies become actions. Programs and policy strategies for each element of the marketing mix are implemented.

The final step of the marketing plan calls for an evaluation of marketing efforts. Based on stated objectives, how well is the organization or agency doing? Changes in the marketing plan and/or marketing mix elements can then be made based on this evaluation.

Marketing plans are practical, dynamic working documents. Developing a plan is not a one-time process. It

must be revised and updated as needed. For example, in the case of a marketing plan developed for providing recreation opportunities, adjustments might be made as changes occur in visitor populations, such as increased numbers of ethnic minorities or senior citizens, or as other resource uses occur, such as timber harvesting that may change the types of recreation opportunities a management unit is able to provide. In either case, objectives and marketing mix strategies can be revised to reflect these changes in the external and internal marketing environments.

### Synthesis

Experience-based recreation provides a means of defining the "product" of recreation resource management. Grounded in expectancy-valence theory and based on an empirically-tested model of recreation behavior, experience-based recreation suggests that resource managers provide opportunities for people to participate in recreation activities in settings to realize valued experiences. Making available a variety of these "experience opportunities" is a service offered by land managers.

Marketing is a well-supported, well documented approach useful to any agency concerned with customers and meeting their needs. Marketers have recognized some of the unique problems and concerns of public agencies engaged in marketing activities such as the nature of the product,

multiple clientele, difficulty in quantifying nonfinancial objectives, and complex internal organizational structures.

Market segmentation is a valuable marketing tool that allows an agency to focus its marketing resources and activities at customer groups best suited to the resources and goals of an agency. Segmenting recreationists on desired experiences is similar to segmenting customers on product benefits, a common and favored segmentation variable.

For market segmentation to be effective, it must be a central part of an agency's marketing plan. Such a plan serves as a guide in directing marketing activities, it focuses human and economic marketing resources, and is a basis for evaluating the effectiveness of marketing efforts.

These concepts and theoretical frameworks provide the bases for this research on the experience preferences of wildland recreationists. The recreation consumers in this study are users of the Inyo National Forest located in southeastern California. The Inyo is a popular year-round wildland recreation area. Within easy access of 14 million people in southern California and another 3 to 4 million in the San Francisco Bay Area, recreation is the most significant use of the Inyo National Forest. In 1988 the Forest ranked fifth in recreation visitation among national forests in the nation and second in California.

A wide variety of recreation opportunities are available on the Forest. Special attractions include the Mammoth/June Mountain Ski Areas in winter and camping, fishing, and backpacking in the summer months. Three visitor centers provide information and serve as points for beginning recreational or interpretive activities. Five Wilderness areas, accessible by 727 miles of trails, provide backpackers opportunities for solitude. The Pacific Crest Trail traverses the forest from one end to the other. Mammoth Mountain ski area, one of two downhill ski areas within Forest boundaries, receives more skier-days of use per year than any other ski area in the U.S. The John Muir Wilderness, located on the Forest, is the most heavily used wilderness in the nation. Developed-site campground use leads the nation. Summer dispersed camping, fishing, mule deer hunting, four-wheel drive recreation, and winter nordic skiing also are popular activities.

The study of Inyo National Forest users was initiated in response to concerns about changing recreation use on the Forest based on recreation use patterns in forests closer to the Los Angeles Basin. The four national forests in the Los Angeles Basin receive high levels of use, particularly from ethnic minorities. Users often experience crowded conditions and must wait to use popular areas (Hunt 1988). It may be that some of these users, seeking less crowded conditions, might come to the Inyo National Forest,

potentially diversifying the ethnic composition of Inyo visitors. With changes in visitor composition may come increased diversity in recreation activity patterns and recreation experience opportunities being demanded.

The diversity in recreation opportunities available on the Inyo National Forest and the potential diversity among visitors and their recreation experience preferences provide the opportunity to identify and segment recreation users based on experience preferences for use in a marketing plan designed to better satisfy the needs of a potentially diverse consumer market. The general proposition being investigated in this study is that meaningful and distinct groups or market segments useful for building a marketing plan can be identified among wildland recreationists based on the recreation experiences they desire. This general proposition can be stated more specifically as four specific research propositions:

Proposition I: There are definable segments of wildland recreationists which differ according to the experiences they desire. Some recreation experiences such as enjoying and experiencing nature, escape from social pressures and learning will be valued by all recreationists although their relative importance may differ among segments. Other desired experiences such as isolation and risk taking which require specific combinations of recreation activities and settings will be more prominent in discriminating among segments. Desired experience is defined as the bundle of specific psychological outcomes desired by a recreationist.

Proposition II: Recreation participation differs among segments of wildland recreationists desiring different experiences. Favorite recreation activity, use location and intensity of use will be used as measures of recreation participation.

Proposition III: Socio-demographic characteristics differ among segments of wildland recreationists desiring different experiences. Socio-demographic variables include group type, residence (rural, small city, large city), age, group size, and ethnicity.

Proposition IV: Information generated in the market segmentation analysis related to propositions I, II and III can be used as input to the strategy formulation phase of a marketing plan designed to better meet the needs of wildland recreation customers.

The next chapter describes the methods used in the collection and classification of data used to investigate these propositions.

## CHAPTER III

### METHODS

This chapter provides a discussion of the methods and procedures used to gather and analyze the data used in the study. A description of data collection methods is provided including discussion of the on-site interview procedure, sampling design, and the questionnaire, the primary data-gathering instrument, followed by a description of data analysis procedures. The chapter concludes with a discussion of the limitations of the study.

#### Data Collection

The data collection portion of the research was conducted in two phases. Phase one involved contacting Inyo National Forest recreationists on-site and conducting a brief interview. Phase two included giving subjects a postage-paid mail-back questionnaire to fill out at the conclusion of their recreation visit.

#### On-Site Interview

The initial on-site contact served three important purposes: 1) to build a sampling frame of individuals for the mail-back questionnaire; 2) to obtain basic recreation use information; and 3) to establish rapport with recreation users with the purpose of strengthening their commitment to

participate in the survey and increasing the response rate of the mail-back questionnaire.

Information collected on-site included use of a standard interview form (see Appendix A) and included questions regarding group size, race, history of recreation on the Inyo N. F., primary purpose of the trip, overnight accommodations, and seasonal residence ownership within or near the Inyo N.F. Names and addresses were gathered solely for sending subsequent follow-up reminders to those who did not return the mail-back questionnaire.

Visitor groups were contacted most often as they were leaving the sampling site. The interviewer first determined if the group was on a recreation outing, and if so, then asked them to participate in a recreation study. Participation was voluntary and groups who agreed were assigned a group spokesperson who participated in the on-site interview and was given a copy of the postage-paid mail-back questionnaire to be completed at the conclusion of his or her recreation outing. Care was taken to alternately pick a man or a woman to be interviewed and receive the questionnaire in order to obtain an equal representation of men and women in the sample.

The sampling design used in selecting visitor parties was a stratified clustering scheme used to draw a sample from the total population of recreationists during the sampling period. Stratification was used to partition the

sampling or visitor contact sites and to partition the sample by weekday and weekend use. The sample size collected within each stratum was a function of the total population (the number of vehicles or individuals passing by the interview site) of that stratum. The sampling period was further divided by day into clusters of elements. Each cluster (day) consisted of recreationists exiting the study area. Sample clusters were randomly selected and visitors leaving an interview site were interviewed during those days. The amount of interviewing done at each site was roughly proportional to Forest Service-estimated use levels. Interviewing began on June 23, 1989 and concluded on September 5, 1989.

Sampling sites were selected in cooperation with Inyo National Forest recreation personnel and represented areas of recreation use concentration. The following eight sites were selected: Whitney Portal, Bristlecone Pine Entrance Station, Rock Creek Campground, Convict Lake, Minaret Vista, Oh! Ridge, Mammoth Lakes Visitor Center, and Mono Lake Ranger Station/Tioga Pass Area (see Figure 2).

#### Mail-Back Questionnaire

The primary instrument used to obtain data from Inyo recreationists was an 8-page mail-back questionnaire (Appendix B). The questionnaire contained the four following types of questions:



- 1) Questions about visitors' on-site and trip behaviors and recreation use history;
- 2) Scale questions designed to identify and measure the relative importance of various psychological outcomes and benefits visitors expected as a result of recreation participation;
- 3) Satisfaction with recreation facilities and opportunities provided by Inyo National Forest managers; and
- 4) Sociodemographic characteristics of users.

Questions regarding on-site and trip behaviors included length of stay, group type, areas of the Forest visited, Inyo National Forest locations visited, other nearby recreation attractions visited, sources of information regarding recreation opportunities on the Inyo National Forest and use history of the Inyo and Los Angeles Basin National Forests. Many of these variables were used as descriptors in characterizing experience-based market segments.

The selection of psychological outcome items was taken from the pool of outcomes scales developed by Driver (1977, 1983) and described in the previous chapter. Scale items used were intended to measure 14 different outcomes thought to be important to Inyo National Forest visitors. Respondents were asked to indicate the importance of each item as a contribution to a high quality recreation

experience by circling a response on a 7-point Likert scale with endpoints labeled "unimportant" and "important." The items were randomly ordered. The first item was a dummy not included in analyses but to give respondents a chance to get used to the rating technique for the scale items. Responses to the outcome items served as the basis for classifying respondents into Inyo visitor experience "types" or market segments. These types in turn served as dependent variables for subsequent analyses and in investigating research propositions.

The final part of the mail-back questionnaire included questions regarding visitors' socioeconomic characteristics including age, gender, education, residence type, income, and residence. Responses to these questions, along with data on race and group size (from the on-site interview) and data on activity participation, sources of information, and use history were used to describe and distinguish among Inyo National Forest visitor experience "types."

#### Sample

Visitors who responded positively to the on-site interviewer's request for participation in the survey were given a copy of the mail-back questionnaire upon completion of the on-site interview. Subjects were asked to complete the questionnaire at the conclusion of their visit and to

deposit the questionnaire in any mailbox, as it was postage-paid.

During the survey period 1,518 visitors were interviewed on-site and received mail-back questionnaires. Follow-up procedures included a two-stage process suggested by Dillman (1978). The first stage included sending a postcard reminder to respondents approximately 10 days after the on-site interview using names and addresses obtained as part of the on-site interview. The purpose of the postcard was to thank visitors for participating in the study and to remind those who had not returned their questionnaires to do so as soon as possible. The second stage of the follow-up procedure was to send a cover letter and a second questionnaire to all subjects who had not yet returned their questionnaires. This was done two weeks after the first follow-up mailing. The final tally of returned questionnaires included 1,057 useable questionnaires, a 70 percent response rate.

#### Data Analysis

Two principal data analyses were used to meet the objectives of the study. The first concerned the identification of valued psychological outcomes and recreation experience domains used to identify Inyo N.F. recreation experience "types" or market segments. The second involved describing and differentiating among

experience segments. All data were entered onto a microcomputer and analyzed with microcomputer-based statistical software.

#### Identifying Recreation Experience Types

The first form of data analysis involved use of cluster analysis to identify psychological outcomes valued by Inyo N.F. visitors and to use that information to identify groups of homogeneous recreationists or recreation experience "types." This was done using two separate cluster analyses.

Cluster analysis is a statistical technique used to group objects or variables into homogeneous subgroups on the basis of their similarity (Romesburg 1984). Everitt (1977) suggests three reasons for using cluster analysis: 1) data reduction; 2) data description or summarization, and 3) to discover whether or not the data reflect some true typology in a particular field of study. Cluster analysis techniques have been widely used in the recreation and tourism research (e.g., Brown, Hautaluoma and McPhail 1977; Hautaluoma and Brown 1978; Ditton et al. 1975; Meidan and Lee 1983; Romsa 1973; Tatham and Dornoff 1971; Shoemaker 1989; Punj and Stewart 1983; Gum and Martin 1977; Ritchie 1975).

To perform a cluster analysis one needs a measure of association (or distance) between objects or variables and an amalgamation rule to follow in forming clusters. Many different association measures and amalgamation rules can be

used in cluster analysis. Different methods provide different results.

After coding responses to the 47 psychological outcome items from 1 to 7, they were cluster analyzed using the SPSS/PC+ CLUSTER program for Clustering Variables (Norusis 1988) with Pearson product-moment correlations among the 47 variables serving as the measure of association. The CLUSTER program is an agglomerative hierarchical clustering procedure referred to as R-analysis or variable clustering as opposed to Q-analysis which refers to clustering people. Hierarchical clustering methods, commonly represented by a tree structure, begin with the two most similar variables and continue merging variables and clusters until a single cluster is formed. The result is a set of nested clusters. Agglomerative clustering techniques, as opposed to divisive techniques, begin with all n individual objects or variables and at each stage combine the entities or clusters that are the closest until all are combined into one cluster. Divisive techniques work in the opposite direction; beginning with the entire data set in a single cluster and subdivide it into finer subsets (Lorr 1983).

Two cluster analyses were performed on the psychological outcome items using two different amalgamation rules (the manner in which clusters are formed). Average linkage and complete linkage are among the most popular hierarchical agglomerative methods (Lorr 1983). Both

methods form the first cluster by joining together the two variables having the highest intercorrelation. From there they differ. In the average linkage method a variable is added to an existing cluster if it has a greater mean similarity to all variables within the cluster than with all variables in any other cluster. To be included in a cluster using the complete linkage method a variable must be more similar to all members of a cluster than to all variables in any other cluster (Lorr 1983).

Comparison of the output from the two cluster analyses resulted in the selection of the results of the complete linkage procedure as the basis of psychological outcome domain formation. These results produced clusters more similar to those in the original psychological outcome item pool (Driver 1977, 1983).

The psychological outcome domain clusters and the individual outcome items upon which they were based were:

#### ACHIEVEMENT/STIMULATION

- Gaining a sense of self-confidence
- Improving your skills in your favorite outdoor activity
- Testing your abilities

#### AUTONOMY

- Feeling your independence
- Being on your own

#### EQUIPMENT

- Being able to try new equipment
- Using your recreation equipment
- Being well-equipped

**FAMILY TOGETHERNESS**

Doing something with your family  
Bringing your family closer together  
Being with your family  
Doing activities with your family  
Enjoying the outdoors with your family

**LEARNING**

Experiencing new and different things  
Discovering something new  
Learning about the geology of the area  
Learning about the ecology of the area

**ENJOY NATURE**

Being in a natural setting  
Viewing the mountains and lakes  
Being close to nature  
Viewing the scenic beauty  
Enjoying the sounds and smells of nature  
Experiencing open space

**PHYSICAL EXERCISE**

Getting exercise  
Keeping physically fit

**ESCAPE PERSONAL/SOCIAL PRESSURE**

Getting away from the usual demands of life  
Having a change from your daily routine  
Releasing some built up tensions  
Releasing tensions

**ESCAPE PHYSICAL PRESSURE**

Experiencing peace and quiet  
Getting away from crowds  
Being able to avoid crowds  
Being away from noise back home

In addition to the results of the cluster analysis, a second criterion used in forming the psychological outcome domains was the reliability coefficient computed for each domain containing more than a single scale item. Domains

containing a single item were not used in subsequent analyses. Coefficient alpha<sup>2</sup> ( $\alpha$ ) was used as a measure of reliability based on the internal consistency of the outcome domains. Reliability concerns the extent to which measurements are repeatable (Nunnally 1967). Reliabilities of 0.7 to 0.8 have been suggested as standards for scale formation (McKennell 1970, Nunnally 1967).

Cluster domain means were calculated by averaging each respondent's score on the items contained within each domain and calculating a grand mean for each of the nine domains by averaging the individual means. Domain means, number of items, and reliability coefficients are presented in Table 1.

The second cluster analysis utilized the defined experience domains to group together similar individuals (Q-analysis). The intent was to minimize within-group differences and maximize between-group differences. Cluster analysis of respondents' mean scores on each of the nine psychological outcome domains was used as the basis for identifying recreation experience "types" or market segments.

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$${}^2\text{Alpha } (\alpha) = \frac{m\bar{r}_{ij}}{1+(m-1)\bar{r}_{ij}}$$

where:

$m$  = number of items  
 $\bar{r}_{ij}$  = average of all interitem correlations

Table 1. Mean scale scores of nine experience domains resulting from cluster analysis of psychological outcome item scores.

Domain	Domain mean <sup>a</sup>	Number of items	Reliability coefficient
Enjoy Nature	6.5	6	.808
Escape Physical Pressure	6.2	4	.778
Escape Personal/Social Pressure	5.9	4	.763
Family Togetherness	5.7	5	.953
Physical Exercise	5.7	2	.806
Learning	5.5	4	.768
Autonomy	4.8	3	.713
Achievement	4.7	3	.720
Equipment	4.3	3	.694

<sup>a</sup> Mean based on a 7-point Likert scale with endpoints labeled "unimportant" and "important."

The SAS statistical procedure FASTCLUS (SAS Institute, Inc. 1987) was used to cluster respondents into homogeneous groups having similar response patterns across the nine domains. Clustering was based on the Euclidean distance<sup>3</sup> between two cases or clusters. This analysis identified

<sup>3</sup> Euclidean distance, where the distance between points  $i$  and  $j$ ,  $d_{ij} =$

$$d_{ij} = \left\{ \sum_{k=1}^p (x_{ik} - x_{jk})^2 \right\}^{1/2}$$

where:  $x_{ik}$  = the value on the  $k$ th variable for the  $i$ th individual

four recreation experience types, described in the next chapter.

#### Describing Recreation Experience Types

The SAS statistical software (SAS Institute, Inc. 1987) was also used for the second area of data analysis, to further describe and characterize the experience types. Analysis of variance was used to characterize the experience types according to the outcome domains and several descriptive variables including socioeconomic variables such as age and group size. The "types" served as the dependent variables in the analysis with the descriptors being independent variables. If the overall test of significance between groups led to the rejection of the null hypothesis (assuming there are more than two recreation experience types), then the Tukey-Kramer post hoc multiple comparison test was used because of its appropriateness for use with situations of unequal sample sizes among groups (Dunnett 1980). The level of significance used in these tests was .05.

Crosstabulation analyses (or contingency table analyses) were used to investigate associations between experience "types" and nominal descriptor variables such as recreation activities, group type, and education. Tests for statistically significant differences (indicating an association between variables) using the chi-square statistic were produced as part of the crosstabulation

analyses. Results of these analyses are presented in the next chapter.

#### Summary

Data used in the study were collected using a mail-back questionnaire in combination with on-site interviews of Forest visitors. The mail-back questionnaire contained questions designed to assess preferred psychological outcomes and other descriptive information used to identify and describe recreation experience-based market segments.

Data analysis involved the use of cluster analysis to identify segments of visitors who held similar preferences for recreation experiences. Analysis of variance and descriptive statistic techniques were used to further characterize experience segments.

Results and discussion of these analyses are described in the following chapter followed by a discussion of the implications of these findings relative to the development of a marketing plan designed to meet the needs and preferences of wildland recreation market segments. The results and implications of the study should be viewed in light of the limitations discussed in the following section.

#### Limitations of the Study

During the progression of the study, several limitations became evident that should be considered when

interpreting the study results. The limitations primarily concern the representativeness of the survey sample.

Preliminary results of the data analysis showed that ethnic minority and first-time visitors were less likely to return the mail-back questionnaires distributed on-site than White and repeat visitors and consequently may be underrepresented in the sample. Data from the on-site interviews were used to test for nonresponse bias. Visitors who returned questionnaires (respondents) and those who did not (nonrespondents) were compared<sup>4</sup> on two variables: ethnicity and first visit.

The issue of whether or not ethnic minority visitors were accurately represented in the survey was a concern because research on the recreation preferences of ethnic minorities (see for example, O'Leary and Benjamin 1982, Stamps and Stamps 1985; Wendling 1980; McMillan 1983; Hutchinson and Fidel 1984) and the changing cultural makeup of visitors to national forests in southern California (Hartley 1986) suggests that ethnic minority visitors have recreation activity and experience preferences somewhat different than White visitors.

Results of the analysis showed that there was a statistically significant higher proportion of minority (Hispanic, Oriental, and Black) visitors among

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<sup>4</sup>Using a Z-test ( $p = .05$ ) for differences in proportions with unequal sample size (Leoether and McTavish 1976).

nonrespondents (those who did not return questionnaires) than among respondents (those who returned questionnaires) (21.9% and 8.5%, respectively). While the ethnic minority visitors made up a small proportion of the total number of visitors contacted on-site, the fact that they are underrepresented in the survey should be considered in interpreting the results.

Assuming that language differences or other communication problems may have contributed to the nonresponse problem, any future surveys of Inyo N.F. visitors should be aware of the difficulties non-English speaking visitors may have in participating in visitor surveys. One source of information on methods and techniques useful in communicating with ethnically diverse user groups in natural resource settings is an audio learning program called "Wildland Recreation and Intercultural Communication." This video was developed as part of a cooperative research program between the Department of Parks and Natural Resource Management at the California State University at Chico and the USDA Forest Service in Riverside, California.

The concern regarding first-time visitors was similar to that of ethnic minority visitors. Amount of previous experience has been shown to be related to recreation experiences in a number of ways, including the experience outcomes users seek from recreation (Brown and Haas 1980,

Schreyer and Lime 1984) and their involvement in activities (Bryan 1977, 1979; Schreyer and White 1979).

Results of a test for nonresponse bias similar to that described above found that the proportion of first-time visitors among nonrespondents was statistically significantly higher than the proportion among respondents (30.6% and 22.8%, respectively). It is unclear why first-time visitors would be more reluctant than repeat visitors to return survey questionnaires but it is nevertheless a limitation that must be kept in mind in considering the results of the survey.

A third limitation has to do with the timing of the survey. Only summer visitors were included in the sample. Because of its location relative to California's large urban areas and the scenic appeal and recreation attractions provided by the natural environment, the Inyo N.F. sustains high levels of recreation use year-round. During the winter, Mammoth Mountain Ski Area receives more skier-days of use per year than any other ski area in the United States. Cross-country skiing and snowmobiling are also popular winter activities on the forest (USDA Forest Service 1988b). These winter visitors may not be the same people sampled during the summer survey and their desired experience opportunities may or may not be similar to summer visitors.

Thus, it is not possible to generalize results of this study to all Inyo N.F. visitors. To provide a complete picture of visitor use on the forest, it is necessary to conduct a survey of Inyo N.F. winter recreationists using similar methods and survey instruments. It would then be possible to use results of the winter survey to identify market segments based on the behavior and preferences of winter visitors and to develop a winter recreation marketing plan for the forest.

## CHAPTER IV

### RESULTS AND DISCUSSION

This chapter presents results of data gathering and analysis used to identify the recreation experiences important to Inyo National Forest recreationists and to create and characterize market segments for use as input into a marketing plan. The chapter begins with a general description of the characteristics and recreation activities of Inyo National Forest visitors followed by a discussion of the psychological outcomes and recreation experiences they preferred. The final portion of the chapter applies to Research Propositions II and III and includes characterization of the experienced-based market segments identified in the study.

The following chapter, Chapter V, provides a discussion of the implications of these findings for developing a recreation experience marketing plan, referred to in Research Proposition IV.

#### Description of Inyo National Forest Visitors

The Inyo N.F. appears to primarily attract resident, urban visitors. The majority of Forest visitors were California residents (90 percent of those surveyed) who most often came from the state's major urban centers. Almost half (47 percent) came from the Los Angeles/Orange County

area, 9 percent from San Diego, 8 percent from San Bernadino, and 7 percent from the San Francisco/Oakland area. Among the remaining California resident visitors, 11 percent lived in the Mohave/Owens Valley region, a less populated region adjacent to the Inyo National Forest (see Appendix C for tables summarizing visitor characteristics).

Visitors from outside California lived primarily in the nearby states of Nevada (2 percent), Arizona (1 percent), Oregon (0.8 percent), Texas (0.6 percent), and Colorado (0.4 percent). In addition, 27 other states throughout the United States were represented among visitors surveyed on the Forest.

Almost half of the visitors surveyed (48 percent) indicated they came from large cities of 100,000 people or more. Close to 36 percent came from small cities (10,000-100,000 people), and 16 percent came from rural areas or small towns of 10,000 people or fewer. The strong urban influence among Inyo National Forest visitors is not surprising and is somewhat similar to the situation found in National Forests in closer proximity to the large southern California urban centers. This urban influence contributes to the diversity and changing use patterns found among visitors to many near-urban wildland recreation areas.

The majority of visitors surveyed came to the Inyo National Forest in family groups (70 percent), while others came with friends (34 percent), an organized group (4

percent), or alone (10 percent). Group sizes ranged from a single person to a maximum of 47 people in a tour group, with an average close to four people (3.7). The largest proportion of respondents came in groups of between three and five people (40 percent) or in two-person groups (39 percent). While family groups were the dominant group type among Forest visitors, there was a relatively large component of friendship groups and solitary visitors. The needs and preferences of friendship groups and single individuals may be different than those of family groups.

The average age of survey respondents was close to 43 years old (42.6 years), with ages ranging from 17 to 79 years old. Slightly more than half of the respondents (57 percent) were between 30 and 50 years old and 28 percent were over age 50.

The ethnicity of respondents was determined for visitors contacted during the second half of the survey. Among that group, 91 percent were White, close to 5 percent were Oriental, 3 percent were Hispanic, and close to 1 percent were Black.

Inyo National Forest visitors were, overall, very well educated with more than half of those surveyed having completed at least four years of college. An additional 34 percent had attended some college or had technical school training, meaning that close to 90 percent of all

respondents had received at least some post-high school education.

The average household income among visitors was medium to high. Nearly 60 percent of income levels fell between \$20,000 and \$60,000. Thirty-two percent of respondents had incomes larger than \$60,000 and among that group close to 10 percent had incomes of \$90,000 or more. Nine percent of respondents had annual incomes of \$20,000 or less.

Visitors were asked to indicate the primary purpose for their visit to the Forest. Asked as an open-ended question, visitors provided a variety of responses. Most often mentioned were fishing (28 percent of respondents), camping (18 percent), sightseeing (15 percent), hiking (12 percent), and backpacking (8 percent). Other activity-oriented reasons given included climbing, swimming, bicycling, boating, horse riding, sailboarding, mountain biking, 4-wheeling, motorcycling, hang gliding, and hunting. More passive activities included picnicking, photography, sunbathing, visiting with family and/or friends, relaxing, nature study, shopping, and bird watching. The variety found among responses is indicative of the diversity of recreation opportunities available on the Forest as well as the variation inherent in visitors.

The recreation activities engaged in while on the Forest reflected the reasons visitors gave for coming to the Inyo. Hiking was the most popular activity among visitors

surveyed (70 percent) followed by sightseeing (67 percent), fishing (58 percent), wildlife viewing (45 percent), picnicking (43 percent), tent camping (42 percent), nature study (27 percent), backpacking (26 percent), and RV camping (22 percent). Other activities listed by fewer than 10 and describe percent of the sample included collecting, mountain biking, dispersed camping with an off-road vehicle, motorcycling, off-highway vehicle use, hunting, hang gliding, and hot air ballooning.

The Forest was divided into 20 use zones (see Figure 3) based on natural and man-made attractions and on features of the Forest. Visitors surveyed were given a map showing the use zones along with the questionnaire and asked to indicate the zones they visited and the number of days spent in each zone.<sup>5</sup> Among those surveyed, the most frequented zones were ones that included major Forest attractions and camping areas such as the Mammoth Lakes area (28 percent of respondents spent time there), the Mt. Whitney trailhead area (22 percent), the Tioga Pass area which includes a number of camping areas (21 percent), and Mono Lake (18 percent). The least visited zones included the more remote and undeveloped regions of the Forest, although the Bristlecone Pine Forest, located in a relatively isolated

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<sup>5</sup>It should be noted that there appeared to be some confusion among respondents in identifying where on the map some of the zone boundaries lay.

portion of the Forest, was visited by 8 percent of visitors surveyed.

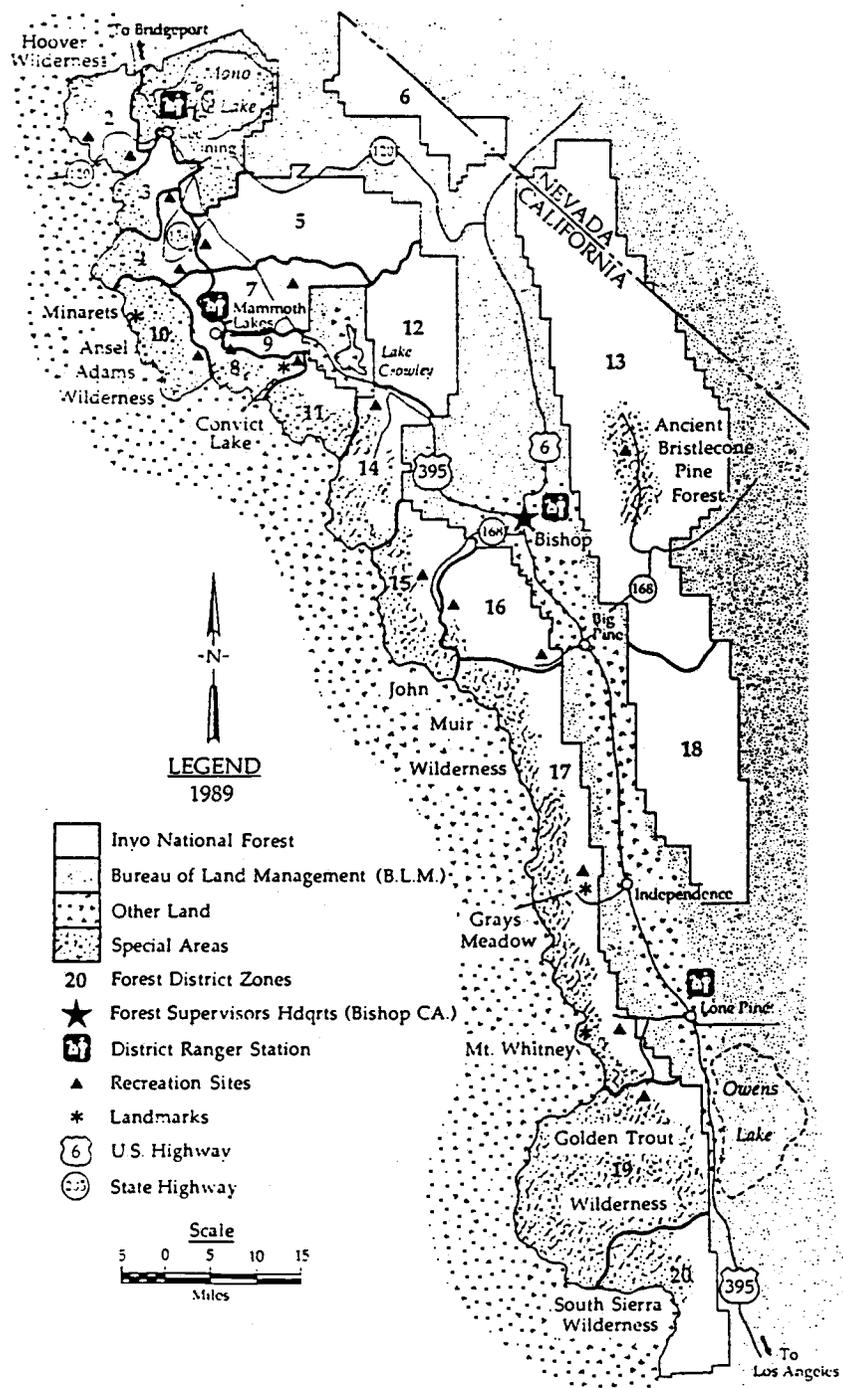


Figure 3. Inyo N.F. use zones.

Preferred Psychological Outcomes  
and Recreation Experiences

Visitors were asked to indicate the importance of each of 47 psychological outcome items as contributing to a high quality recreation experience on the Forest. Responses were given in the form of a Likert scale ranging from 1 to 7 with endpoints labeled "unimportant" and "important," respectively. Table 2 provides a listing of response means for each outcome item.

Table 2. Recreation experience outcomes (n=1057).

Outcome item	Mean <sup>a</sup>
Being in a natural setting <sup>b</sup>	6.7
Viewing the mountains and lakes <sup>c</sup>	6.7
Being close to nature <sup>d</sup>	6.6
Viewing the scenic beauty <sup>e</sup>	6.6
Getting away from the usual demands of life <sup>f</sup>	6.5
Experiencing peace and quiet <sup>g</sup>	6.5
Enjoying the sounds and smells of nature <sup>h</sup>	6.3
Getting away from crowds <sup>i</sup>	6.3
Experiencing open space <sup>j</sup>	6.2
Having a change from your daily routine <sup>k</sup>	6.2
Being able to avoid crowds <sup>l</sup>	6.1
Doing something with your family <sup>m</sup>	5.9
Getting exercise <sup>n</sup>	5.9
Being away from the noise back home <sup>o</sup>	5.9
Experiencing new and different things <sup>p</sup>	5.8
Being able to camp by a stream or lake <sup>q</sup>	5.8
Discovering something new <sup>r</sup>	5.7
Being with your family <sup>s</sup>	5.7
Doing activities with your family <sup>t</sup>	5.7
Enjoying the outdoors with your family <sup>u</sup>	5.7
Releasing tensions <sup>v</sup>	5.6
Keeping physically fit <sup>w</sup>	5.6
Releasing some built-up tensions <sup>x</sup>	5.5
Bringing your family closer together <sup>y</sup>	5.5
Being with others who enjoy the same things you do <sup>z</sup>	5.5

Table 2. Continued.

Outcome item	Mean <sup>a</sup>
Being with other members of your group <sup>aa</sup>	5.5
Avoiding the unexpected <sup>aa</sup>	3.9
Chancing dangerous situations <sup>at</sup>	3.5
Being able to try new equipment <sup>au</sup>	3.4
Observing other people in the area <sup>av</sup>	3.1
Experiencing solitude <sup>ab</sup>	5.4
Learning about the geology of the area <sup>ac</sup>	5.3
Experiencing exhilaration <sup>ad</sup>	5.3
Learning about the ecology of the area <sup>ae</sup>	5.3
Relaxing physically <sup>af</sup>	5.2
Improving your skills in your favorite outdoor activity <sup>ag</sup>	5.1
Feeling your independence <sup>ah</sup>	5.0
Experiencing excitement <sup>ai</sup>	5.0
Being well-equipped <sup>aj</sup>	4.9
Testing your abilities <sup>ak</sup>	4.7
Being on your own <sup>al</sup>	4.7
Being in control of things that happen <sup>am</sup>	4.7
Using your recreation equipment <sup>an</sup>	4.6
Feeling isolated <sup>ao</sup>	4.6
Being alone <sup>ap</sup>	4.5
Gaining a sense of self-confidence <sup>aq</sup>	4.5
Being near others who could help you if you needed them <sup>ar</sup>	4.3

<sup>a</sup> Based on a 7-point response scale ranging from 1=unimportant to 7=important.

Missing cases = <sup>b</sup>33, <sup>c</sup>27, <sup>d</sup>36, <sup>e</sup>26, <sup>f</sup>37, <sup>g</sup>30, <sup>h</sup>40, <sup>i</sup>27, <sup>j</sup>35, <sup>k</sup>30, <sup>l</sup>46, <sup>m</sup>49, <sup>n</sup>31, <sup>o</sup>36, <sup>p</sup>33, <sup>q</sup>50, <sup>r</sup>36, <sup>s</sup>46, <sup>t</sup>54, <sup>u</sup>45, <sup>v</sup>43, <sup>w</sup>43, <sup>x</sup>33, <sup>y</sup>41, <sup>z</sup>41, <sup>aa</sup>45, <sup>ab</sup>46, <sup>ac</sup>43, <sup>ad</sup>51, <sup>ae</sup>45, <sup>af</sup>25, <sup>ag</sup>51, <sup>ah</sup>49, <sup>ai</sup>41, <sup>aj</sup>56, <sup>ak</sup>45, <sup>al</sup>50, <sup>am</sup>56, <sup>an</sup>45, <sup>ao</sup>57, <sup>ap</sup>56, <sup>aq</sup>72, <sup>ar</sup>45, <sup>as</sup>58, <sup>at</sup>43, <sup>au</sup>76, <sup>av</sup>44.

Experience outcomes most important to Inyo National Forest visitors had to do with being in a natural outdoor setting. The items "Being in a natural setting," "Viewing

the mountains and lakes," "Being close to nature," and "Viewing the scenic beauty," had the highest means (6.7 or 6.6) and a fifth item, "Enjoying the sounds and smells of nature," had a mean nearly as high (6.3). Other important outcomes had to do with "getting away" from day-to-day life and crowds and noise, enjoying the peace and quiet and open space, being with family, and getting exercise (all averaging between 5.9 and 6.7). Of much less importance to visitors were experience outcomes having to do with observing other people, risk taking, being alone, and having and using equipment. Means for these items averaged between 3.1 and 4.7 on the 7-point scale.

Individual outcome items were cluster analyzed to reduce the number of items and identify recreation experience domains. Nine outcome domains were identified and a mean for each domain, the average of the means for individual outcomes contained within a domain, was computed. Domains and their means are presented in Table 3.

Table 3. Means for experience outcome domains (n=1057).

Domain/Scale Items	Mean <sup>a</sup>	s.d.
Enjoy Nature	6.5	0.6
- Being in a natural setting		
- Viewing the mountains and lakes		
- Being close to nature		
- Viewing the scenic beauty		
- Enjoying the sounds and smells of nature		
- Experiencing open space		
Escape Physical Pressure	6.2	0.8
- Experiencing peace and quiet		
- Getting away from crowds		
- Being able to avoid crowds		
- Being away from noise back home		
Escape Personal/Social Pressure	5.9	0.9
- Getting away from the usual demands of life		
- Having a change from your daily routine		
- Releasing some built up tensions		
- Releasing tensions		
Family Togetherness	5.7	1.5
- Doing something with your family		
- Bringing your family closer together		
- Being with your family		
- Doing activities with your family		
- Enjoying the outdoors with your family		
Physical Exercise	5.7	1.1
- Getting exercise		
- Keeping physically fit		
Learning	5.5	1.0
- Experiencing new and different things		
- Discovering something new		
- Learning about the geology of the area		
- Learning about the ecology of the area		
Autonomy	4.8	1.3
- Feeling your independence		
- Being on your own		
- Being in control of things that happen		

Table 3. Continued.

Domain/Scale Items	Mean <sup>a</sup>	s.d.
Achievement	4.7	1.3
- Gaining a sense of self-confidence		
- Improving your skills in your favorite outdoor activity		
- Testing your abilities		
Equipment	4.3	1.4
- Being able to try new equipment		
- Using your recreation equipment		
- Being well equipped		

<sup>a</sup>Mean based on a 7-point Likert scale with endpoints labeled "unimportant" and "important."

These outcome domains represent the recreation experiences preferred by Inyo National Forest visitors. Experiences are a product of participation in recreation activities in Inyo National Forest recreation settings. As suggested from analysis of the individual psychological outcome items, the most important type of experience was Experiencing Nature with a mean of 6.5 on the 7-point scale. This was followed by Escape Physical Pressure (6.2), Escape Personal/Social Pressure (5.9), Family Togetherness (5.7), Physical Exercise (5.7), and Learning (5.5). Of lesser importance were Autonomy (4.8), Achievement (4.7), and Equipment (4.3).

The opportunity to recreate in a natural outdoor setting appears to be a particularly important component of

the recreation experiences of Inyo National Forest visitors. Given the outdoor mountain setting of the Inyo N.F. and the predominately urban residence of users, that people find satisfaction in natural settings and in escaping day to day pressures, crowds and noise is not surprising. Along with being with their families, these kinds of experiences are what the Inyo N.F. can provide in contrast to home and work environments.

These findings are similar to other research on recreation experience preferences. Research has shown that outdoor recreationists in general value natural environments, being able to escape daily pressures, and being with one's recreation group (Brown 1981, 1983).

Preferred experiences formed the basis of the second cluster analysis designed to group individuals with similar outcome preferences. Respondents' scores on each of the nine experience domains were used in the cluster analysis. The result was the identification of four recreation experience "types" or market segments.

#### Experience-Based Market Segments

The four recreation experience types and their means on each experience domain are presented in Table 4 and a graphical representation is shown in Figure 4. Among those classified, 5 percent were in Type 1, 43 percent were in Type 2, 33 percent were in Type 3, and 19 percent were in

Type 4. Twenty-five individuals (2 percent of the sample) were not classified during cluster analysis due to missing data.

Previous studies of preferred recreation experiences have found that while there is variability in the outcomes sought by groups of recreationists, there is often commonality among desired outcomes (Brown 1981, 1983). To determine if this was the case among the four Inyo N.F. visitor types, the magnitude and order of the means among the four groups was examined in addition to comparing the segments.

Although the magnitude of means differed among the four experience segments, there was some agreement about the experiences considered most important. The highest mean for all four segments was for enjoying nature. The means for this domain were very similar, ranging from 6.6 for Types 2 and 4 to 5.9 for Type 1. This is a factor that all visitors consider important for a satisfying experience. Such a finding is not surprising since Inyo visitors have come to an area they consider essentially "natural" and which provides a marked contrast to their home environment.

The second most important experience for all but one of the four segments was family togetherness (being with and doing activities with family members). Types 2 and 3 had the highest means (6.5 and 6.0, respectively) and Type 4 had the lowest (3.2).

Table 4. Comparison of experience domain means<sup>a</sup> by recreation experience types.

Psychological Outcome Domains	Overall Mean	Experience type <sup>b</sup>				ANOVA F-test <sup>c</sup>	Tukey Post Hoc <sup>d</sup>
		1 (n=52)	2 (n=443)	3 (n=342)	4 (n=195)		
Enjoy Nature	6.5	5.9	6.6	6.4	6.6	37.0	2,4>3>1
Escape Physical Pressure	6.2	5.1	6.4	6.0	6.2	51.2	2>4>3>1
Family Togetherness	5.7	5.2	6.5	6.0	3.2	483.7	2>3>1>4
Escape Personal/Social Pressure	5.9	4.6	6.3	5.6	5.9	91.8	2>4>3>1
Physical Exercise	5.7	3.7	5.9	5.6	6.2	94.1	4>2>3>1
Learning	5.5	3.9	5.6	5.3	5.6	83.0	2,4>3>1
Autonomy	4.8	2.6	5.1	4.3	5.4	121.6	4>2>3>1
Achievement	4.7	2.4	5.4	3.9	5.5	274.5	4,2>3>1
Equipment	4.3	2.7	5.1	3.4	4.6	214.3	2>4>3>1

<sup>a</sup> Means based on a 7-point scale with endpoints labelled 1="unimportant" and 7="important".

<sup>b</sup> There were 25 individuals (2.3% of the sample) that were not grouped by the cluster analysis due to missing data.

<sup>c</sup> Statistically significant at .01 level.

<sup>d</sup> Significant at .05 level.

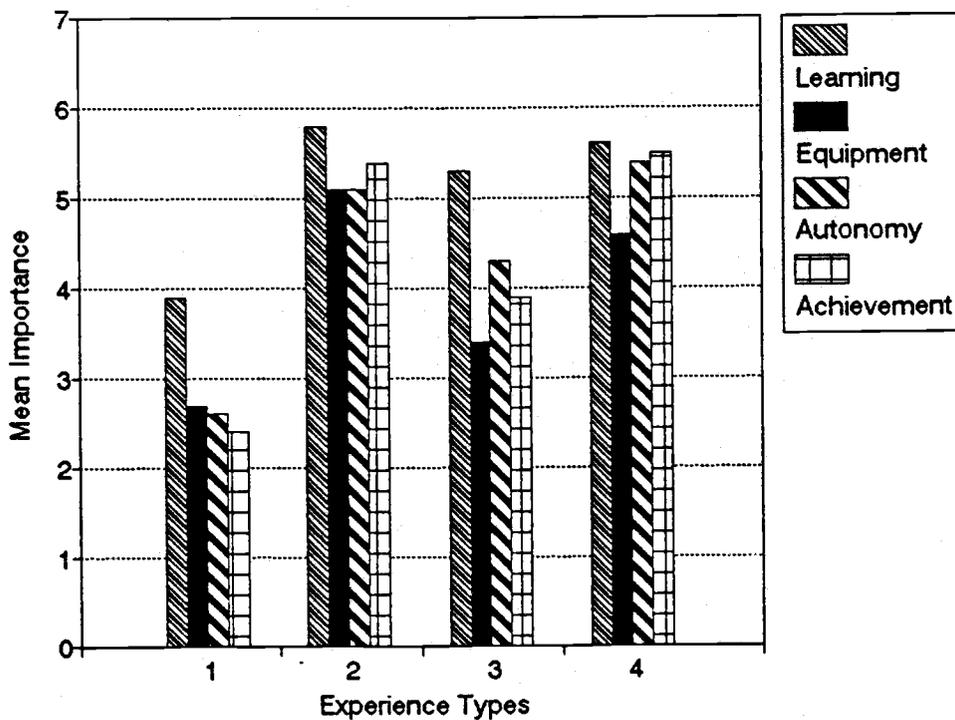
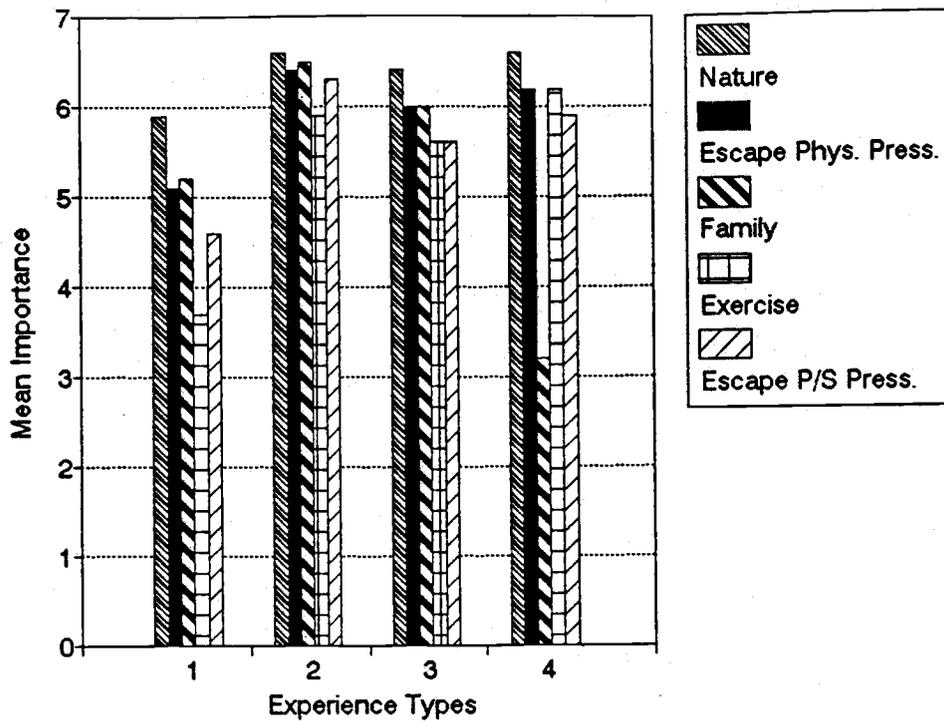


Figure 4. Experience domain means among the four experience types.

All four experience groups specified escaping physical pressure (getting away from crowds and noise) as the second or third most important experience outcome. Type 2 had the highest mean among the four groups (6.4) and Type 1 had the lowest (5.1). Escaping personal and social pressure (being away from the usual day-to-day demands) was the fourth most important experience outcome for all four segments.

Being in a natural setting with family members and getting away from their daily working environment and the noise and crowds of an urban setting are important for members of all four visitor groups and appear to represent fairly strong motives for visiting the Forest. Physical exercise and learning are somewhat less important although exercise was particularly important for one group. Outcomes of generally little importance among the four groups were autonomy, achievement, and equipment.

After identifying outcome preferences shared by the four groups, a comparison was made among the groups based on experience domain means. To identify statistically significant differences between group means, an analysis of variance and a Tukey-Kramer post hoc multiple comparison test were conducted on each experience type. Results of this analysis are also presented in Table 4. Analysis of variance revealed that group means differed on all four experience types, in support of Research Proposition I suggesting that it was possible to identify segments of

visitors who differed in the recreation experiences they desire. Type 4, however, had means not significantly different from Type 2 on enjoy nature, learning, and achievement. Additionally, Type 4 had a mean not significantly different from Type 3 on escape physical pressure.

Type 1 was the smallest segment, containing 5 percent of those classified. These visitors generally had the lowest experience domain means of the four segments, ranging from a high of 5.9 for enjoy nature to a low of 2.4 for achievement. Means for Type 1 were the lowest among the four segments on eight of the nine experience domains. Five of nine experience domain values were below neutral on the importance scale. Only enjoying nature, family togetherness, and escape physical pressure had means above 5.0 on the 7-point scale. This group had particularly low means for equipment, autonomy, and achievement (2.7, 2.6, and 2.4, respectively). These findings suggest that a satisfying recreation experience for these visitors has little to do with the experience outcomes described here and may be related to some other motives such as activity participation or simply wanting to do something in the outdoors.

Type 2 was the largest segment and included 43 percent of the classified sample. Members of this type could be viewed as the opposite of Type 1 in their experience outcome

preferences. This group was very positive in their evaluations, having the highest values for all but three experience domains and for two of those three domains the values were equal to those of the highest (Type 4) and on the third the value was second highest among the four types. Means for this segment ranged from a high of 6.6 on enjoy nature to a low of 5.1 on autonomy and equipment and four of the nine means were 6.0 or higher--enjoy nature, family togetherness, escape physical pressure, and escape social pressure. The strong positive values expressed by members of this group suggest that, of the four groups, they would likely be the most responsive to information and promotional materials emphasizing the experience outcomes described above. For example, this might include interpretive and advertising materials emphasizing opportunities to escape from daily pressures and spend time with family members in an outdoor natural environment.

Type 3 included 33 percent of the classified sample. This segment had experience means similar to those of the entire sample and might be labeled the typical Inyo N.F. visitor. In addition to enjoy nature and family togetherness, this group had relatively high means on physical exercise and escaping physical and social pressure (5.6). This group was fairly neutral about autonomy (4.3), achievement (3.9), and equipment (3.9). The relative preference rankings of this group were similar to those of

Type 2. This suggests that if managers focused on meeting the experience outcome desires of Type 2 visitors, Type 3 visitors could easily fulfill most of their desires.

The last segment of users, Type 4, made up 19 percent of the sample. Along with Type 2, this group generally had high values for all experience domains, ranging from a high of 6.6 on enjoy nature to a low of 3.2 on family togetherness. This segment had the highest mean values among the four groups on physical exercise (6.2), autonomy (5.4), and achievement (5.5). Their score on family togetherness was significantly lower than for any other segment. This group had values similar to those of traditional wilderness users (Brown and Haas 1980), having comparatively high mean scores on autonomy, achievement, escaping pressures, and being in a natural environment.

Information presented above on the psychological outcomes sought by recreationists can be useful to planners and managers by helping to answer the question "Who wants what?" Answers to the question form the basis of a marketing plan used to formulate and select management objectives, choose management practices, develop visitor information programs, and evaluate programs (Brown and Haas 1980).

Psychological outcome preferences provided an important first step in identifying and characterizing the four user segments. The next step was to look for other

distinguishing characteristics of the four segments. Variables were chosen according to their usefulness within a marketing framework in targeting information, services, and promotional materials toward a particular segment. Three types of variables were used to further characterize experience segments: (1) recreation participation variables including activities, use location, length of stay, and use history; (2) socio-demographic characteristics including group type and size, residence, age, education, income, and ethnicity; and (3) sources of information on Inyo N.F. recreation opportunities.

### Recreation Participation

#### Activities

Presented with a list of recreation activities, Inyo N.F. visitors were asked to indicate whether or not they participated in each activity during their visit. Distinct differences in activity participation among the four experience segments were observed, as shown in Table 5.

Experience Type 1 participated in sightseeing (71%), fishing (65%), and hiking (65%). Close to half this group also viewed wildlife (45%) and more than a third (36%) picnicked. Relatively few went backpacking (10%) or participated in formal nature study (15%). Close to one-third (31%) tent camped and another one-quarter (23%) camped with a recreation vehicle (RV).

Table 5. Activities of Inyo N.F. recreation experience types.

Activity <sup>a</sup>	Experience type				X <sup>2</sup> Chi-square
	1 (n=52)	2 (n=443)	3 (n=342)	4 (n=195)	
	----- percent -----				
Sightseeing	71.1	69.3	70.8	54.9	16.6 <sup>b</sup>
Fishing	65.4	68.0	55.8	36.9	55.3 <sup>b</sup>
Hiking	65.4	68.4	73.4	72.8	3.4
Wildlife viewing	48.1	43.8	46.5	46.1	0.8
Picnicking	36.5	45.1	48.5	32.3	15.0 <sup>c</sup>
Tent camping	30.8	46.9	34.5	49.7	19.6 <sup>b</sup>
RV camping	23.1	26.6	23.7	8.7	26.1 <sup>b</sup>
Backpacking	9.6	22.4	21.0	47.7	62.3 <sup>b</sup>
Nature study	15.4	25.7	27.8	34.4	9.1 <sup>c</sup>
Collecting	3.8	9.9	7.6	5.1	5.7
Mountain biking	5.8	6.8	4.4	8.7	4.2

<sup>a</sup> Only activities with cell sizes  $\geq 5$  were included in the chi-square analysis and are presented here.

<sup>b</sup> Significant at  $p \leq .001$ .

<sup>c</sup> Significant at  $p \leq .05$ .

Type 2 visitors were similar to Type 1 in their participation in sightseeing (69%), hiking (68%) and fishing (68%). However, a higher proportion among this group went backpacking (22%), picnicked (45%), and studied nature (26%), while slightly fewer viewed wildlife (44%). Compared to Type 1, more of them camped with tents (47%) and RVs (27%). Type 2 visitors generally had high values for the nine experience domains, and this "enthusiasm" appears also

to be reflected in their participation in a variety of fairly active forms of recreation.

Type 3 visitors were similar to Type 1 and 2 visitors in their participation in sightseeing (71%) while comparatively fewer among this group went fishing (56%) and more of them went hiking (73%). This group contained a higher proportion of picnickers (48%) than the other three segments and the fewest mountain bikers (4%). Close to half of this group (46%) viewed wildlife and more than a quarter (28%) studied nature. A third of this group (34%) tent camped and close to a quarter (24%) camped with an RV.

Experience Type 4 was perhaps the most distinct among the four segments in activity participation. Almost three-quarters of this group (73%) went hiking and close to half went backpacking (48%) and tent camping (50%). Very few camped with an RV (9%). Although half (55%) did sightseeing, this was a considerably smaller proportion than the other three segments. Of the four segments, this group had the largest proportion of nature studiers (34.4%) and mountain bikers (8.7%). There also were fewer picnickers (32.3%) and anglers (36.9%) among this group than among the other segments.

#### Use location

Inyo N.F. visitors were asked to designate where and how much time they spent on different parts of the Forest.

The map they used for these designations was divided into 20 use zones. Days spent in each zone were collapsed into a yes/no "spent time" variable and compared among the four user segments using Chi-square analysis (Table 6). Numbers in the table are the proportion of segment members who spent one or more days in a particular zone.

Among the four segments, the most popular use zones were fairly consistent. These most-visited zones included Zone 7 (Mammoth Lakes), Zone 17 (Whitney Portal), Zone 2 (Tioga Pass), and Zone 1 (Mono Lake). Of the 20 zones, only four showed statistically significant differences among the four segments in the percentage of segment members who spent time there. One of these was Zone 17, a large zone that included the Whitney Portal area. In addition to including a popular campground, the area is a favorite day-use fishing and picnicking area. Also located here is a major trailhead servicing much of the Forest's backcountry including the John Muir Wilderness. Among the four segments, 30.8 percent of Type 4 visitors spent time there as did 22.8 percent of Type 3 visitors and 20.1 percent of Type 2 visitors. In contrast, only 9.6 percent of Type 1 visitors spent time in Zone 17.

Table 6. Inyo N.F. zones used by visitor experience types.

Use zone <sup>a</sup>	Experience type				X <sup>2</sup> Chi-square
	1 (n=52)	2 (n=443)	3 (n=342)	4 (n=195)	
	percent <sup>b</sup>				
7	32.7	28.4	32.2	20.5	8.8 <sup>c</sup>
17	9.6	20.1	22.8	30.8	14.1 <sup>d</sup>
2	23.1	23.2	20.2	18.5	2.3
1	21.1	17.6	19.6	16.4	1.3
8	17.3	14.2	17.0	18.5	2.2
9	19.2	12.9	12.0	10.3	3.2
3	13.5	10.2	12.0	8.7	1.9
14	5.8	11.7	11.1	9.7	2.0
4	17.3	9.5	9.9	11.3	3.3
10	9.6	7.2	9.1	11.8	3.6
13	9.6	5.9	9.9	10.8	6.3
5	7.7	5.9	6.1	4.1	1.4
15	1.9	4.7	6.7	5.1	2.8
16	1.9	4.7	6.4	5.1	2.4
11	5.8	3.8	5.6	4.1	1.6
12	7.7	6.3	2.3	3.6	8.6 <sup>c</sup>
19	3.8	3.2	2.9	5.1	2.0
6	7.7	2.3	2.3	1.0	7.7 <sup>c</sup>
18	3.8	1.1	0.6	1.0	4.6 <sup>e</sup>
20	--	0.9	0.3	0.5	1.6 <sup>e</sup>

<sup>a</sup> See Figure 3 for a map of use zones.

<sup>b</sup> Percent of experience segment spending 1 or more days in a particular zone.

<sup>c</sup> Significant at  $p \leq .05$ .

<sup>d</sup> Significant at  $p \leq .01$ .

<sup>e</sup> 50% of cells have expected counts less than 5. Chi-square may not be a valid test.

Differences in use among the four segments also was evident for Zone 7, the zone that included the Mammoth Lakes visitor center and ranger station. This was a popular stopping point for all visitors with close to 30 percent of visitor types 1, 2, and 3 having spent time there (32.7, 28.4, and 32.2 percent, respectively). Fewer Type 4 visitors spent time in Zone 7 (20.5%) although it was still a relatively popular use area for this group.

There were significant differences in use of Zone 12 among the four segments. This was a less-used zone adjacent to a popular lake, Crowley Lake. The area is surrounded by Bureau of Land Management (BLM) lands. Among the four segments, more of visitor Types 1 and 2 spent time there (7.7 and 6.3 percent of the segments, respectively) than Type 3 and 4 visitors (2.3 and 3.6 percent, respectively).

While sharp differences among use location were not evident among the four visitor segments, some differences were found, suggesting that visitor types vary somewhat in their use of the Forest.

#### Length of stay

The third participation variable used in describing the four experience segments was length of stay (Table 7). While average length of stay varied among the four segments, ranging from a low of 6.0 days for Type 4 to a high of 7.5 days for Type 1, there was no statistically significant

difference in average stay among the four segments. The average stay on the Forest for all visitors was approximately one week which points out the importance of providing overnight camping and/or lodging facilities for all visitor segments.

Table 7. Length of stay of Inyo N.F. visitor experience types.

	Experience type				ANOVA F-test	Pr>F
	1 (n=51)	2 (n=434)	3 (n=331)	4 (n=189)		
Average length of stay (days)	7.5	7.2	6.7	6.0	0.36	0.78

#### Use history

The final participation variable looked at for the four experience segments was prior use of the Forest (Table 8). This was asked as a yes/no question: "Was this your first visit to the Inyo National Forest?"

As shown in the table, at least 80 percent of visitors in all four segments had visited the Inyo N.F. at least once before. Types 3 and 4 contained more first-time visitors

Table 8. Prior use of the Inyo N.F. by visitor experience types.

First visit?	Experience type				Chi square	Prob.
	1 (n=52)	2 (n=439)	3 (n=347)	4 (n=194)		
	----- percent -----					
Yes	13.5	13.4	18.1	20.1	5.8	0.12
No	86.5	86.6	81.9	79.9		

(18 and 20 percent, respectively), than Types 1 and 2 (13.5 and 13.4 percent, respectively) although proportions among the groups were not statistically significantly different.

To determine where on the Forest these first-time visitors spent time, Table 9 provides a breakdown of zones for first-time visitors in each experience type. While the number of first-time visitors among the four groups is small compared to the number of repeat visitors, these data provide more specific information on areas of the Forest most often used by first-time visitors. This is useful to managers wanting to know where to locate services and facilities specifically targeting first-time visitors, such as information about the forest environment, its management, and available recreation opportunities.

Table 9. Inyo N.F. zones used by first-time visitors among the experience types<sup>a</sup>.

Use zone <sup>b</sup>	Experience type first-time visitors			
	1 (n=7)	2 (n=59)	3 (n=62)	4 (n=39)
----- percent -----				
7	42.8	23.7	25.8	17.9
17	--	10.2	25.8	30.8
2	28.6	25.4	25.8	20.5
1	57.1	18.6	19.3	25.6
9	28.6	10.2	17.7	2.6*
8	14.3*	13.5	16.1	7.7
3	14.3*	11.9	11.3	5.1
10	28.6	3.4	9.7	5.1
4	14.3*	5.1	8.1	5.1
5	--	8.5	11.3	--
6	14.3*	5.1	4.8	--
11	14.3*	--	1.6*	--
12	28.6	3.4	1.6*	--
13	14.3*	6.8	9.7	7.7
14	--	8.5	4.8	2.6*
15	--	3.4	3.2	--
16	--	3.4	6.4	--
18	14.3*	--	1.6*	--
19	--	1.7*	4.8	2.6*
20	--	--	--	--

<sup>a</sup> Tests for statistically significant differences were not performed due to small cell sizes.

<sup>b</sup> Percent of experience type first-time visitors spending 1 or more days in a particular zone.

\* Represents one person.

Type 1 included the fewest first-time visitors (13.5% of the group) and the most of these visitors spent time in zones in the northern portion of the Forest in the Mammoth

Lakes, Mono Lake, Tioga Pass area (Zones 1, 7, 2, 9, 10, 12). This area includes a number of Forest Service information centers such as ranger stations, a visitor center, a scenic overlook, and other interpretive facilities. Very few among this small group of Type 1 first-time visitors went to the less developed zones on the Forest.

Type 2 was made up of the same proportion of first-time visitors as Type 1, although this represented a larger number of people. The Mammoth and Tioga Pass areas were most popular with these first-time visitors along with the Whitney Portal area in the southern part of the Forest where there is a major trailhead and campground as well as opportunities for day use activities such as fishing and picnicking. Overall, these first-time visitors were fairly well distributed throughout the Forest with the exception of the extreme southern end.

First-time visitors in Type 3 were found in every Forest zone except the southern-most zone. However, as with Types 1 and 2, first-time visitors were concentrated in the developed areas of the Forest where information and services were provided.

Type 4 included the largest percentage of first-time visitors (20 percent). These visitors were primarily concentrated at four locations: Mt. Whitney Portal, Mono

Lake area, Tioga Pass area, and the Mammoth area. All four areas are popular hiking, backpacking, sightseeing, and camping areas, activities participated by a large proportion of Type 4 visitors.

#### Summary

Research Proposition 2, suggesting recreation participation differed among the experience segments was largely supported, primarily with regard to activity participation and, to a lesser extent, use location. While members of all four segments participated in some of the same activities, the proportion participating in those activities by members of the segments differed. There also were activities such as backpacking that were more prominent in one particular segment. From these findings an "activity profile" could be identified for each experience type, focusing on activities that were very popular as well as those that were somewhat unique to a particular type. This would provide additional information to answer the question, "Who wants what?"

The profile of experience types was broadened to include where visitors spent time on the Forest. Members of all four types generally used the same popular Inyo N.F. use zones. There was, however, variation among the segments on the proportion of members who spent time in a particular zone.

Although the four groups did not differ significantly on the average length of time spent on the Forest, this information can be added to the profiles along with the proportion of first-time visitors. These visitors were further divided according to use zone in order to identify specific portions of the Forest that tend to attract first-time visitors. These locations were largely well-known areas with developed information and service facilities.

#### Socio-Demographic Characteristics

Seven socio-demographic variables were used to further characterize the four experience segments: group type and size, residence, age, education, income, and ethnicity. Group type and group size describe visitor groups while residence, age, education, income, and ethnicity are individual variables and describe the adult members of visitor groups who served as group spokespersons and completed the questionnaire. Sampling methods dictated that only individuals judged by the interviewer to be approximately 18 years or older be included in the sample. A comparison of those characteristics among the four segments is presented in Table 10.

Table 10. Socio-demographic characteristics of the four recreation experience types.

Socio-demographic variable	Experience type				Test statistic
	1 (n=52)	2 (n=443)	3 (n=342)	4 (n=195)	
<b>Group type:<sup>a</sup></b>					
Family	82.7%	81.9%	80.4%	23.6%	$X^2 = 253.8^b$
Friends	30.8	29.8	29.2	51.3	$X^2 = 33.2^b$
Organized group	1.9	2.3	2.6	8.2	$X^2 = 16.0^b$
Alone	7.7	5.9	5.8	26.1	$X^2 = 73.1^b$
<b>Group size:</b>					
Minimum	1	1	1	1	
Maximum	47	30	29	30	
Mean	4.7	3.7	3.8	3.2	$F = 3.18^c$
<b>Residence type:</b>					$X^2 = 5.9$
Rural ( $\leq 10,000$ people)	19.6%	16.1%	15.6%	14.4%	
Small city (10K - 100K people)	29.4	38.2	36.3	30.5	
Large city (100K+)	51.0	45.7	48.0	55.1	
<b>Age (years):</b>					$X^2 = 40.4^b$
< 18	--	0.9%	0.3%	0.5%	
18 - 29	7.8%	14.7	10.0	25.9	
30-39	41.2	31.6	29.6	28.6	
40-49	13.7	28.8	28.7	23.8	
50-59	17.6	13.6	16.2	11.6	
60+	19.6	10.4	14.8	9.5	
Mean age:	45.7 yrs.	41.6	44.2	39.3	$F = 7.39^d$
<b>Education (highest level attained):</b>					$X^2 = 29.6^d$
Elementary	--	1.8%	1.2%	1.0%	
High school	9.8%	14.0	8.4	6.3	
Some college	45.1	38.1	30.1	30.4	
Four years of college	15.7	19.9	25.9	29.8	
Post graduate work	29.4	26.1	34.3	32.5	

Table 10. Continued.

Socio-demographic variable	Experience type				Test statistic
	1 (n=52)	2 (n=443)	3 (n=342)	4 (n=195)	
Annual income:					$X^2 = 21.6^d$
<\$20,000	8.2%	7.8%	9.9%	12.0%	
\$20,000-39,999	26.5	30.7	24.3	37.7	
\$40,000-59,999	26.5	30.9	27.5	28.4	
\$60,000+	38.8	30.7	38.3	21.9	
Ethnicity:					$X^2 = 10.3^e$
White	87.5%	89.5%	82.4%	91.3%	
Hispanic	6.2	5.0	1.4	1.5	
Oriental	6.2	5.0	5.5	1.5	
Black	--	--	0.7	1.5	

<sup>a</sup> Totals more than 100 percent due to multiple responses.

<sup>b</sup> Significant at  $p \leq .001$ .

<sup>c</sup> Significant at  $p \leq .05$ .

<sup>d</sup> Significant at  $p \leq .01$ .

<sup>e</sup> Not significant. Due to the percentage of cells with counts less than five and the amount of missing data, chi square may not be an appropriate test.

### Group type

Differences were found when group types were compared among the four experience segments but those differences occurred primarily between three of the segments and the fourth. The dominant group type among experience Types 1-3 was family. At least 80 percent of members of each of those three segments visited the Inyo N.F. as part of a family

group. This is consistent with the importance placed on family togetherness by members of these three groups. Close to 30 percent of visitors in those three segments came with friendship groups which could have included family members as well. Relatively few visitors in any of Types 1-3 came as part of an organized group or alone.

The notable exception to the group configurations of Types 1-3 was Type 4, who only slightly valued family togetherness as part of their recreation experience. Only 24 percent of visitors in this group visited the Forest with family members while half of them (51%) came with friends. More than a quarter (26%) of Type 4 visitors came alone to the Forest. The largest percentage of visitors in organized groups came from this segment (8%).

#### Group size

Average group size among the four experience segments ranged from 3.2 people for Type 4 to 4.8 people for Type 1. The comparatively small average group size for Type 4 is consistent with the relatively high percentage of that segment coming to the Forest alone. Type 1 had the largest average group size (4.7) and the highest percentage of family groups among its members (83%). Types 2 and 3 had similar average group sizes (3.7 and 3.8 people, respectively).

Minimum group size for all four segments was one person and the largest group (47 people) came from Type 1. Types 2, 3, and 4 had maximum group sizes of 30, 29, and 30, respectively.

#### Residence type

Visitors were asked to indicate the size of their resident city, choosing from rural ( $\leq 10,000$  people), small city (10,000 to 100,000 people), and large city (100,000 people or more). No significant differences in residence type were found among the four segments. Approximately half of those in each segment came from large cities. Type 4 contained the highest proportion of large city dwellers (55%), followed by Type 1 (51%), Type 3 (48%) and Type 2 (46%).

The largest proportion of rural resident visitors were in Type 1 (20%) and the smallest in Type 4 (14%). As for small city dwellers, close to 40 percent of Type 2 visitors lived in small cities, 36 percent of Type 3 visitors, and fewer from Types 1 and 4 (29% and 30%, respectively).

#### Age

Meaningful differences were found in the age composition of the four experience segments. The largest proportion of younger visitors was found among Type 4 visitors where 26 percent were younger than 30 years old

compared with 8 percent of Type 1, 15 percent of Type 2, and 10 percent of Type 3 visitors. The greatest number of older visitors (50 years or older) came from Type 1 (37%) and Type 2 (31%). Type 4 included comparatively few older visitors. Close to 80 percent of this group were under age 50 compared with 63 percent of Type 1 and 69 percent of Type 3.

In addition to a comparatively large percentage of older visitors, the other large age group in Type 1 included people 30-39 years old (41%). In contrast, Types 2 and 3 had fairly equal proportions of visitors in their 30s and 40s (close to 30 percent in both age groups for both types).

Significant differences were found among the mean age for the four segments. Type 1 had the oldest average age (46 years) followed by Type 3 (44 years), Type 2 (42 years), and the youngest visitors, on average, were found in Type 4, with an average age of 39 years.

#### Education

All four segments of Inyo N.F. visitors included well educated individuals. At least one-third and as high as 45 percent of visitors within all four segments had completed some college work and at least one-quarter of those in each segment had done post-graduate work. Visitors in Types 3 and 4 included the largest percentage of college graduates (26% and 30%, respectively).

Visitors in Type 2 had comparatively less education than those in the other three segments. Among this group 14 percent had completed only high school and 38 percent had completed some college.

#### Income

Household income levels were fairly high for members of all four types. Only 12 percent of those in any of the types had annual incomes less than \$20,000 and at least 30 percent of visitors in three of the four segments had income levels greater than \$60,000 per year. Types 1 and 3 included those with the highest income levels. Close to two-thirds of these visitors had household incomes of at least \$40,000 a year. Type 2 included visitors fairly evenly split among income levels of \$20,000-\$40,000, \$40,000-\$60,000, and more than \$60,000 (31 percent in each income category).

Type 4 visitors had the lowest income levels among the four types. Twelve percent had annual household incomes less than \$20,000 a year. The most common income level among this group was between \$20,000 and \$40,000 (38%) and only 22 percent had an annual income larger than \$60,000.

#### Ethnicity

The large majority of visitors within all of the four experience segments were white. Proportions ranged from

82.4 percent for Type 3 to 92.3 percent for Type 4. Differences in the ethnic composition among the segments were not significant. Data on the ethnicity of Inyo N.F. visitors were gathered only during the last half of the sampling period, resulting in sample sizes much smaller than used in other analyses. As a result, the Chi-square analysis used to look for differences in ethnicity among segments should be interpreted with caution due to small contingency table cell sizes.

#### Summary

Significant differences were found among the four recreation experience segments on five of the seven socio-demographic variables: group type, group size, age, education, and income. This provides support for Research Proposition 3 that suggested that socio-demographic characteristics differed among the recreation experience segments. Significant differences were not found among the recreation experience segments for resident type and ethnicity, but care should be taken in drawing conclusions due to the small proportion of ethnic minorities included in the sample.

#### Information Sources

The final variable used to characterize Inyo N.F. experience segments was sources of information about

recreation opportunities on the Forest. In developing a marketing strategy, a key piece of information is the source or sources people use to gain information about a particular product or service. Based on the assumption that information designed and delivered with a particular target group in mind will be more readily received than information aimed at a generic audience, knowledge about information sources is useful in producing educational and/or promotional material. With this idea in mind, Inyo N.F. visitors were asked to indicate how they learned about recreation opportunities on the Forest. The question included a list of possible sources and respondents were to check those they had used. A comparison was made among the four experience segments and is presented in Table 11.

Results of the chi-square analysis showed no significant difference among the four segments on sources of information. Close to 80 percent of visitors in all four segments relied on friends and/or family for information about Inyo N.F. recreation opportunities. Other sources of much less importance were Forest Service flyers and ski advertisements.

The question response format restricted the possible responses to the question and results may not reflect the entire range of information sources used by Forest visitors. However, it is probably safe to assume that family and/or friends provide the primary source of information for

members of the four Inyo N.F. visitor experience segments. This underscores the importance of positive on-site

Table 11. Sources of information about Inyo N. F. recreation opportunities used by experience types.

Sources of information	Experience type				X <sup>2</sup> Chi-square
	1 (n=52)	2 (n=443)	3 (n=342)	4 (n=195)	
	----- percent -----				
Friends, family	84.6	84.2	83.3	78.5	3.4
Newspaper	--	2.5	2.6	4.6	4.0
Forest Service flyer	1.9	3.8	3.8	4.1	0.5
Radio	--	0.7	--	1.0	3.4 <sup>a</sup>
Chamber of Commerce	--	1.6	2.0	0.5	2.9 <sup>b</sup>
Ski advertisement	--	3.2	1.5	2.6	3.7 <sup>c</sup>

<sup>a</sup> 50% of cells had expected counts < 5.

<sup>b</sup> 35% of cells had expected counts < 5.

<sup>c</sup> 25% of cells had expected counts < 5.

communication between forest managers and visitors.

Visitors who have satisfying experiences will pass that enthusiasm on to others. In contrast, if needs are not met or an experience is particularly unsatisfactory, this too is

communicated to family and friends. The better informed that managers are about the needs and desires of visitors, the less opportunity for a bad experience.

### Summary

Four market segments were identified based on Inyo N.F. visitors' recreation experience preferences. These segments were further characterized using recreation participation variables, socio-demographic characteristics, and sources of information. Differences were found among the four segments on the majority of variables used, providing support for Research Propositions I, II, and III.

The four major descriptors (experience preferences, participation, socio-demographics, and sources of information) can be utilized to provide a capsule description of each visitor type. The four types are also given labels which are simplified descriptions of their profiles.

#### Type 1--The Passively Motivated Family Visitor (5%):

This relatively small segment of visitors ranked lowest on all of the experience domains. Their most important experience outcomes are enjoying nature, escaping physical pressure, and being with family. Physical exercise, achievement, and autonomy are much less important to members of this group.

Activity participation also reflects their passive nature with sightseeing being the dominant activity along

with fishing, hiking, and wildlife viewing. This group contained the smallest percentage of hikers and backpackers among the four types. They tend to use the more readily accessible areas of the forest such as Mammoth, Convict Lake, Tioga Pass, and Mono Lake. These areas have fairly developed recreation facilities. Type 1 visitors stay longer than average and are mostly repeat visitors.

Type 1 visitors are family-oriented visitors. They had the largest proportion of family groups and had an above-average group size, the largest among the four types. These are comparatively the oldest visitors. Relatively high household incomes but comparatively lower educational levels also characterize this group. While half this group identified their residence as a large city, they had the largest proportion from rural residences. Like the other four types, the large majority of Type 1 visitors are White.

These visitors rely primarily on family and friends as their source for information about recreation opportunities on the forest.

Type 2--The Highly Motivated Family Visitor (43%):  
These highly motivated visitors make up the largest visitor segment. They had the highest means on all of the experience domains and ranked enjoying nature, escaping pressures, being with family, and equipment higher than any of the other three groups.

Their activities on the forest reflect their motivated character. Type 2 visitors participate in a variety of activities, predominately sightseeing, fishing, hiking, wildlife viewing, picnicking, and tent camping. They spend time in areas of the forest where their preferred activities are readily available, such as Whitney Portal, Tioga Pass, Mono Lake, and Mammoth. They stay slightly longer than average and, like those among the other types, are largely repeat visitors.

Type 2 are also family-oriented visitors. They had the second highest proportion of family groups among the four types and the third highest average group size. The age of Type 2 group spokespersons was close to the average of the entire sample. They have comparatively high household incomes and their educational levels are fairly evenly split between those having some college and those that are college graduates and beyond. These visitors are also primarily White. Although a sizable proportion of Type 2 visitors describe their residences as large cities, this group had the largest percentage of those who identified their residence as a small city.

Family and friends provide their primary source of information about forest recreation opportunities.

Type 3--The Moderately Motivated Family Visitor (33%):  
This second largest group of visitors is characterized as having experience scores similar to those of the entire

sample. Their most valued experiences are enjoying nature, being with family, and escaping physical pressure.

Equipment is of least importance.

Activity participation is also moderate with the exception of sightseeing, hiking, and fishing. Type 3 contains the largest proportion of hikers and second largest proportion of sightseers among the four groups.

Consequently, they often frequent popular fishing and sightseeing areas of the forest such as Whitney Portal, Mono Lake, Mammoth, and Tioga Pass. These visitors stay an average length of time and are mostly repeat visitors.

Type 3 is characterized as having an average group size composed largely of family members. The age of group spokespersons is slightly higher than average, they have comparatively high household incomes, and they have the second highest levels of education among the four groups. Type 3 visitors come primarily from large and small cities and are predominately White.

Family and friends serve as the primary source of information on recreation opportunities on the forest.

Type 4--The Rugged Individualist Visitor (19%): This group is probably the most distinct of the four types. Type 4 visitors are highly motivated on experience domains having to do with nature, escape, exercise, and, to a lesser extent, learning, autonomy, and achievement. Being with family is of little importance to this group.

Participation in hiking, sightseeing, tent camping, backpacking, and viewing wildlife is comparatively high among this group. The largest proportion of mountain bikers among the four groups is found among Type 4 visitors. Compared to the other three groups, these visitors are less likely to use the readily accessible areas of the forest such as the Mammoth area. Rather, they visit areas of the forest providing opportunities to hike and sightsee such as Tioga Pass and Convict Lake, and particularly those areas providing access to the backcountry such as Whitney Portal, the Minarets, and the Golden Trout areas. Type 4 visitors stay slightly less time than the average and, although they are largely repeat visitors, Type 4 includes the largest proportion of first-time visitors among the four groups.

These are comparatively young visitors who come primarily in friendship groups or alone. Type 4 visitors have the highest levels of education, the lowest income levels, and the largest proportion of big city dwellers among the four types. Members of this group are predominately White.

Type 4 visitors also rely primarily on family and friends for information about forest recreation opportunities although a small percentage indicated newspapers were also a source of information.

In the process of characterizing the four experience-based segments, it becomes clear that there are

characteristics that are shared among the four groups. For example, being in a natural setting is of primary importance to all four groups as is being with family to all but one group. The groups share an interest in sightseeing, hiking, and fishing activities on the forest. Members of all four groups stay on the forest about the same amount of time, visit many of the same areas, and are largely repeat visitors. The first-time visitors that come tend to visit developed sites offering information and services. Shared demographic characteristics included fairly high levels of education, a predominance of large city dwellers and being White.

Differences among the segments were often a matter of degree of importance placed on various experience components or participation in activities. Type 4 is the most obviously different segment in their experience preferences, activity participation and group makeup.

Both shared characteristics and differences among segments are useful information for land managers whose goal is to more effectively and efficiently meet the needs of the visitors. The next chapter describes how these data can be used as input to a marketing plan designed to help managers achieve their goal of understanding and satisfying wildland recreation visitors.

CHAPTER V  
IMPLEMENTATION

The general question to be answered by this research is how can information on recreation visitors and their experience preferences be used to develop a marketing strategy useful in recreation management and planning activities? More specifically, the intent is to demonstrate how this information can be incorporated into a wildland recreation marketing plan.

To help answer that question, data on wildland recreationists and their preferences were gathered and used to identify and characterize four market segments. Members of each segment had similar preferences for recreation experiences but were enough different from the other segments to represent distinct market segments, as proposed in Research Proposition I. Further characterization of the four experience segments revealed differences in their recreation participation activities on the forest as well as their socio-demographic characteristics, providing support for Research Propositions II and III.

The task remaining is to discuss how information on these recreation segments can be used as part of a marketing strategy for recreation planning and management. The intent is not to suggest that managers adopt an entirely new and

different way of dealing with recreation visitors. In many respects a marketing strategy is simply another name for a recreation planning strategy. The key difference is that a marketing strategy focuses explicitly on customers and meeting their needs. All actions undertaken as part of the strategy have that as the primary goal.

What follows is an illustration, using results of the Inyo N.F. survey, of how market segmentation data fit within a marketing plan and a marketing strategy. Suggestions are based on assumptions made about the Inyo National Forest's policies and goals regarding recreation based on limited information and are notably incomplete. Ideally a marketing strategy and a marketing plan would be developed internally by recreation management staff more familiar with agency policies, management objectives, and the resources available to achieve those objectives.

The chapter concludes with suggestions for future related research.

#### A Marketing Plan for Wildland Recreation

A marketing plan is a central document used to coordinate all activities related to meeting the needs of customers. It provides a guide for allocating human and economic resources, a timetable for scheduling activities, and a focus for communicating goals and strategy.

The design of a marketing plan can take a variety of forms but the basic elements are fairly consistent. The

arrangement used in this discussion and described earlier shows a marketing plan as a series of steps (see p. 48). Each step will be discussed in relation to managing wildland recreation opportunities on the Inyo N.F.

#### Step 1: Market Situation Analysis

This first step is an analysis of the current market situation which includes an examination of the agency's internal situation as well as the external environment. This includes consideration of "uncontrollables" such as the current economic environment, the agency's regulatory rules, current social lifestyles and the agency's competitive situation.

When evaluating the internal environment of any organization, one of the first questions that must be answered is, "What business are we in?" The answer to this question should define the mission or goal of the agency and the scope of its activities. The answer should include not only what the agency is currently doing, but should also state what the agency is trying to do and what it hopes to do in the future (Stern 1966). The statement of agency goals provides the basic direction for all planning activities.

Unlike private companies whose goals are related primarily to making a profit, government agencies such as the U.S. Forest Service have more complex, often vaguely-

worded goals related to providing services as well as commodities. The 1988 Inyo N.F. Land and Resource Management Plan (USDA Forest Service 1988c) states that the goal of the U.S. Forest Service for the Inyo N.F. is to:

protect and enhance environmental and recreation benefits provided by the Inyo N.F. while providing moderate levels of grazing use, minerals development and timber harvest to support the local economy (p. 1).

The fact that recreation is a dominant use of the Inyo N.F. provides the focus for management. Although the goal to "protect and enhance environmental and recreation benefits" is somewhat broad and general, it provides a basic direction for planning and management activities.

In order to accomplish that goal, recreation managers need to know what benefits recreationists are seeking from their experiences on the forest. Identifying and describing market segments based on experience outcomes is one way managers can assess visitor wants and then use that information internally to meet their goal of protecting and enhancing opportunities to realize benefits.

Once managers know what it is that visitors are seeking, they can provide settings and activity opportunities so that visitors have a high probability of realizing desired experiences. Managers can also provide access to recreation sites and information which enable recreationists to learn about and find the opportunities they desire. This approach, described earlier as

experience-based management, is a means recreation managers can use to achieve their goal of enhancing recreation benefits on the forest.

With the overall goal for recreation on the forest identified, a second internal component important in developing a marketing plan is the agency's regulations having to do with forest recreation planning and management. These regulations provide guidance and limitations on the types of management activities appropriate in developing a recreation marketing strategy. For example, the formal planning process used by the U.S. Forest Service dictates that the forest must consider other forest outputs along with recreation and that multiple interest groups must be involved in management decisions. There are regulations concerning recreation facilities development and management, visitor safety, and a host of other issues related to recreation management, all of which must be considered in developing a marketing strategy and be included in the marketing plan.

Identifying the internal strengths and weakness of the Inyo N.F. relative to providing and enhancing recreation benefits is the third component of an internal market situation analysis. In other words, Inyo N.F. recreation management staff members need to identify "what we do best" in providing recreation experience opportunities for visitors. Strengths and weaknesses can be looked at within

two broad categories of agency resources: organizational resources and natural resources.

Two of the organizational strengths of the Forest Service are its visibility and reputation. Recreationists know and respect it as an agency and have an overall positive image of its management of public lands. Its employees are generally viewed as skilled and dedicated. Facilities are high quality and usually well-maintained. Because of its size, the Forest Service has comparatively large amounts of capital and human resources from which to draw, although on an individual forest level, the amount of these resources available for recreation may be somewhat limited. However, compared to a private entrepreneur, the forest has considerable organizational resources at its disposal. On the other hand, the size of the bureaucracy can be a weakness, as it may inhibit the ability of recreation managers on the forest to quickly respond to changes in visitor demands.

Other organizational weaknesses are characteristic of many government agencies answerable to a national clientele. For example, politically-influenced budget and policy constraints may limit the development of recreation programs as well as staff available for recreation planning and management. The Inyo N.F. must not only be responsive to recreation users but those concerned with other, perhaps conflicting, uses of the forest such as timber, mining, and

grazing. Although these resource uses are less dominant than recreation, managers must nevertheless include them in management decision-making.

Natural resources are abundant on the Inyo N.F. and are what draw visitors to the forest. There is abundant clean air, clean water, and a diversity of vegetation and bird and wildlife species. The scenic beauty of the area is outstanding, as are the opportunities to participate in a variety of recreation activities ranging from picnicking to mountain climbing. The comparatively large land base provides year-round opportunities to recreate at a highly developed ski area such as Mammoth Mountain as well as backpack in a pristine, undeveloped wilderness area. There are also opportunities to fish, hike, cross-country ski, camp, sightsee, study nature, take photographs, and numerous other activities. The natural environment provides an important backdrop for all recreation activities on the forest.

The location of the forest relative to the large urban centers of Southern California allows access for large numbers of visitors and at the same time is far enough away that it has not experienced many of the negative impacts and problems found on national forests closer to those urban areas. The forest also provides recreation opportunities for California residents living in the region immediately surrounding the forest.

Accommodations and facilities on the forest range from primitive campgrounds and picnic areas to modern motels and lodges. Visitors can choose the relative comfort of developed facilities and services, provide for their own comforts in a tent or RV campground or carry everything on their backs into the wilderness. There is access to visitor and information centers, gas stations, restaurants, and other services at locations within and outside the forest boundaries.

In summary, the Inyo N.F. is "good at" providing visitors opportunities to participate in a variety of recreation activities in a high quality, diverse, and nature-dominated environment. The natural surroundings provide a marked contrast to the urban living and working environments of the majority of forest visitors. Maintaining the naturalness of most of the forest and ensuring that new developments and activities do not detract from that naturalness may be required to preserve the uniqueness of the Inyo N.F.

In an analysis of the market situation, it is important to look at the agency's external as well as its internal environment, particularly the "uncontrollables" that the agency cannot change but that exert influence on its activities. In the case of the Inyo N.F. this would include U.S. Forest Service agency-wide policies and regulations,

and the broader economic and political environments as they influence policy and budgetary decisions.

The external environment also includes current social lifestyles, which could be particularly important for the Inyo N.F. Survey results showed that the majority of Inyo N.F. visitors come from California, a very mobile, comparatively wealthy, large urban-dominated state with a lifestyle characterized as unique compared to other states in the U.S. If Californians continue to make up the majority of Inyo N.F. visitors, managers should continue to be aware of the California social lifestyle.

Broader social issues that could affect the production and consumption of recreation opportunities on the forest include increasing human mobility, dual career families, increasing proportions of single-parent families, and changing leisure patterns. These trends may be reflected in forest visitors whose needs and desires for recreation are different than past and present visitors. Periodic monitoring of visitors and their preferences will provide the forest with information on current visitors.

The final external variable to consider is the agency's competitive situation with regard to other regional public and/or private recreation providers. The Inyo N.F. lies in a region that includes a number of large public land recreation areas. This includes several National Park Service units: Yosemite National Park, Sequoia-Kings Canyon

National Park, Death Valley National Monument, and Devil's Postpile National Monument and three other national forests: the Sierra, Sequoia, and Toiyabe National Forests. There are also a number of recreation areas managed by the Bureau of Land Management and California and Nevada State Parks. County, city, and private recreation providers play a lesser role in the region.

There are a diversity of landscapes, vegetation types, natural, historic and cultural features in the region. These features provide a wide variety of recreation opportunities for visitors. Land management agencies offer a range of opportunities ranging from relative primitive backpacking opportunities with no facilities provided to campgrounds with no water to developed campgrounds with hookups and other amenities. National Park Service areas emphasize interpretation, learning, and sightseeing activities. National Forests such as the Inyo provide opportunities for a wider range of recreation activities. Bureau of Land Management areas in the region are primarily campsites which serve customers seeking opportunities to fish nearby small streams.

Among its land management "neighbors", the Inyo N.F. may be unique in that while it offers recreation opportunities found in some of the other areas, few other areas offer the geologic and ecosystem diversity found on the forest. Features such as Mono Lake, Mammoth Mountain,

Mt. Whitney, Convict Lake, the Bristlecone Pines, and others offer visitors opportunities to experience a variety of settings and recreation opportunities on a single forest.

However, rather than focus on competition among National Park Service, Forest Service, and other agency units in the region, emphasis should be placed on cooperation in conducting a regional inventory of wildland recreation opportunities with the goal of providing a region-wide diversity of recreation opportunities ranging from highly developed, such as Mammoth Ski Area, to opportunities to experience isolation and solitude such as in parts of the John Muir Wilderness or in Death Valley National Monument. No one unit can meet the needs of all visitors to the region. By identifying their relative "strengths" the various units can work together to provide numerous recreation opportunities and to satisfy visitor demands.

### Step 2: Marketing Objectives

Objectives are the marketing results agency managers are seeking. They provide direction and serve as a standard for measuring marketing performance. Objectives should be realistic, specific, time-oriented and measurable.

Typical marketing objectives are concerned with increased sales volume, profit rate, market share, or product awareness (Weinstein 1987). Because the Inyo N.F.

is a government agency providing service to its users, marketing objectives for the forest need to be service-related rather than profit-related and focus on providing recreation opportunities for visitors. Service-related goals are often more difficult to articulate and measure. Nonetheless, it is possible to formulate marketing objectives focused on providing recreation opportunities within the broader agency goal of maintaining and enhancing recreation benefits. Objectives can focus on providing specific types of opportunities, on increasing visitor awareness of programs on the forest, or on increasing recreation personnel. Some examples of possible marketing objectives appropriate for Inyo N.F. visitors include:

Increase backpacking opportunities<sup>6</sup> on the forest by \_\_\_% over the next 5 years (for Type 4 visitors).

Increase the number of family programs, especially for young children, on the forest by \_\_\_% during the next five years (for visitor Types 1 and 2).

Increase attendance at campground interpretive programs by \_\_\_% over the next year (to increase overall visitor awareness).

Increase the number of trails open for mountain biking by \_\_\_% during FY\_\_\_ (for Type 4 visitors).

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<sup>6</sup>Several of these objectives require the ability to measure opportunities for recreation experience and/or activity opportunities such as semi-primitive opportunities, camping, fishing, and mountain biking opportunities. This can be done using the Recreation Opportunity Spectrum (ROS) briefly discussed in Chapter II. The ROS is a recreation planning systems that enables managers to inventory lands for the supply of recreation opportunities available. The system is currently being used by the U.S. Forest Service and other land management agencies.

Increase the number of multi-family or group campsites by \_\_\_% over the next 5 years (for visitor Types 1 and 2).

Increase the number of full-time (permanent) recreation staff positions on the forest by 2 over the next 5 years (to increase recreation personnel on the forest).

Marketing objectives specify what the agency wants to accomplish from its marketing efforts. Objectives may change over time in response to forces outside the agency as well as changes within the agency itself.

### Step 3: Strategy Formulation

As soon as the agency's external and internal environment have been examined and marketing objectives laid out, it is then possible to devise appropriate marketing strategies for the agency. Market segmentation data play a key role in this step. Information on segment characteristics and preferences are used to identify target segments, specific segments upon which to focus marketing efforts. An agency or organization can choose to target one specific segment or a number of segments. That decision is based on a recognition that an organization cannot be all things to all people. The segment or segments chosen as targets should be an organization's "best prospects." In the case of the Inyo N.F., target segments would be those whose characteristics, including their desired recreation experiences, most closely match the agency's recreation goals or mission as well as its capabilities and strengths.

In other words, target segments are those whose needs most closely match what the Inyo N.F. chooses to and is best able to provide.

Three of the four segments identified in the market segmentation analysis of Inyo N.F. visitors might be selected as target segments. These include: Type 1-- Passively Motivated Family Visitor, Type 2--Highly Motivated Family Visitor, and Type 4--The Rugged Individualist Visitor.

These three were selected based on four criteria: substantiality, measurability, accessibility, and compatibility. The first three criteria were proposed by Kotler (1980) and are described in Chapter II. The fourth criterion, compatibility, was discussed above and has to do with matching a segment with the desires and capabilities of the managing agency.

An added consideration in selecting target segments was the fact that the Inyo N.F. is a government agency managing lands that are essentially owned by the public, including those who visit as well as those who do not. Forest managers must accommodate visitors with no intent to cater to specific users at the exclusion of others. Target segments were therefore selected in part to reflect the range of visitors using the forest while focusing on those that most closely met the selection criteria. Type 3 was not selected as a target segment for this reason. Their

characteristics and preferences fell between the extremes of the other three target segments. It was assumed that if managers provided for the needs of the three selected target segments, the services supplied would likely meet the needs of Type 3 visitors. The extent to which each of the target segments met the four selection criteria is described below.

Substantiality. Target segments must be sufficiently large (and/or sufficiently important) to be worth the time and cost of developing distinct programs, services, and strategies. Types 2 and 4 easily meet this criterion, making up 43 and 19 percent of the visitor sample, respectively. Type 1, the smallest of the four segments with 5 percent of visitors, when viewed from the context of the total 1989 summer visitor population of the Inyo N.F. visitors, is sufficiently large to be considered a target segment. In addition, it was felt that this segment was unique and should be included.

Measurability. This criterion concerns the ability to gain needed information on specific characteristics of target segments. As evidenced by the data gathered on each of these three segments, it is possible to gather such information using either formal visitor surveys such as the one conducted here or other methods such as focus groups or casual contacts with visitors.

Accessibility. Managers must be able to identify and effectively communicate with target market segments. This

criterion was of particular concern in designing this research project given the ethnic diversity found in Southern California's urban areas, the origin of the majority of Inyo N.F. visitors. There was concern that if there were substantial numbers of minority group visitors, they would have difficulty making their desires known. Results of the survey found that the large majority of Inyo N.F. visitors surveyed were White and language problems were not an issue. However, results of an analysis for nonresponse bias found the relatively small proportion of minority visitors on the Inyo may be underrepresented in the survey and it is possible that language may be a contributing factor. Future studies of Inyo N.F. visitors should be sensitive to ethnic differences among visitors, as the number of visitors from minority groups coming to the forest is likely to increase in response to their increasing numbers among Southern California urban dwellers.

Compatibility. The desires, behaviors, and characteristics of the three target segments are compatible with the objectives of the Inyo N.F. regarding recreation and are within the capability of the forest to provide. For example, being in a natural setting was of most importance to members of all segments. This suggests that it is not only important to forest managers to preserve the natural resource, but it is critical for meeting the needs of visitors. Compatibility was not a particularly critical

issue in the selection of target segments because visitors expressed a general satisfaction with conditions on the forest as they are now.

After target segments have been selected, the next step is to develop marketing strategies for those segments. Typically this involves developing strategies for the four elements of the "marketing mix" which includes product, price, promotion, and distribution. The focus of these strategic efforts is to satisfy target markets' needs while keeping in mind the dynamics of markets and the objectives, resources, and "personality" of the agency.

A government agency such as the U.S. Forest Service does not produce, promote, and distribute recreation services in the same way that a company manufactures a more tangible product, breakfast cereal for example, that is produced by the company and distributed to retailers where it is purchased by customers and ultimately consumed in a household. Nevertheless, it is worthwhile to examine relevant elements of the marketing mix and identify strategies appropriate for the selected recreation target market segments.

Product strategy. Customers' views toward a product are the driving force in shaping product strategies. In this case the product is a service, recreation experience opportunities. The experience-based model of recreation management characterizes the means by which managers provide

experience opportunities. Experience-based management is based on the notion that recreationists engage in particular activities in specific settings to realize desired experiences. Managers increase the probability that recreationists will realize desired experiences by providing settings and activity opportunities which afford those experiences. In addition, managers provide access and information to help visitors find the recreation opportunities they desire.

A product marketing strategy should be based on the characteristics and preferences of the three target segments related to the key experience opportunity components, specifically settings and activities, as well as access and information. Information strategy is discussed in the section on promotional marketing strategy.

The three target segments share preferences for some experience opportunities. For example, all three had a strong interest in being in a natural setting and escaping the physical and social pressures of work and home environments. This suggests that in order to meet the desires of all three visitor segments, care should be taken to maintain the natural feel and appearance of Inyo N.F. settings. The forest has traditionally and continues to offer recreation opportunities emphasizing nature and spectacular scenery, environments which are markedly different from work and home environments. Any new

developments and activities undertaken on the forest should not detract from the overall naturalness of the forest setting.

In addition to shared preferences, preferences of those in the three target segments for settings and activities provide further input to the product marketing strategy. Type 1 visitors tend to be somewhat passive in their activity and experience preferences. They frequent settings on the forest that have relatively easy access. In addition to preferring natural settings away from work and home environments, they are family-oriented in their experience preferences as well as their group composition.

To satisfy the desires of Type 1 visitors, managers need to provide opportunities for relatively passive family-oriented activities such as sightseeing, fishing, and easy hiking. Vehicular and pedestrian access to selected sites should be relatively easy. Camping facilities also should be readily accessible and accommodate family groups. Type 1 visitors are also likely to use RV-accessible campsites, lodges or cabins, and restaurants. Their relatively high income levels indicate that cost may not be a limiting factor in their choice of services. The kinds of facilities currently being provided at Mammoth and June Lakes are the type that could profitably be maintained for Type 1 visitors.

Type 2 visitors are somewhat similar to Type 1 visitors in their preference for natural settings and opportunities to spend time with family members away from their living and working environments, although their preference means were much higher than those of Type 1. In addition, they showed a relatively high preference for using their recreation equipment. Unlike Type 1 visitors, this group has very active activity participation patterns that include a range of activities such as sightseeing, wildlife viewing, fishing, picnicking, hiking, and tent camping.

Consequently, in addition to providing settings that emphasize scenery and the natural beauty of the forest, managers need to provide opportunities for families to engage in the variety of activities preferred by these visitors. This includes providing access to fishing lakes and streams, picnic areas, and opportunities to view wildlife. Camping facilities should include tent camping sites where visitors can use and test their camping equipment. Hiking trails used by these visitors could be more challenging than trails used by Type 1 visitors but should be easy enough for families with smaller children to use.

Type 2 visitors currently frequent areas of the forest that provide opportunities to hike, fish, sightsee, and camp such as the Whitney Portal, Mono Lake, and Tioga Pass areas. Managers should continue to provide access to such areas and

maintain the range of setting and activity opportunities desired by these active visitors.

Like the other two target segments, Type 4 visitors place great value on being in a natural setting and escaping social and physical pressures, among the highest of the three target segments. However, unlike the other two groups, these visitors are not concerned about spending time with family members and came to the forest primarily with friends or alone. They value exercise, autonomy, and achievement. Their primary activities are backpacking, hiking, and tent camping. This group contained the greatest number of mountain bikers. The areas of the forest used by many in this group are those providing access to backcountry and wilderness areas. Type 4 visitors are also likely to visit the more remote areas of the forest such as the ancient bristlecone pine forest.

To satisfy the desires of Type 4 visitors, managers must provide relatively uncrowded backcountry recreation opportunities where backpacking and hiking are common activities. In addition, there may be a need to provide opportunities for nontraditional activities such as mountain biking.

Naturalness in the appearance and feel of recreation places is particularly important to these visitors. Wilderness areas within and adjacent to the Inyo N.F. provide the types of opportunities this group is seeking,

while the entry points, such as Whitney Portal, should provide opportunities for other preferred activities such as fishing and sightseeing.

Facilities and access should reflect the desires of these visitors for physical exercise and independence. It is not necessary to make conditions comfortable and easy for this group, but they need access to wilderness and backcountry areas on the forest. Providing ample parking areas with information on backcountry and wilderness areas will help this group realize their desired experiences.

The three target segments share preferences for settings and activities on the forest in addition to preferring somewhat distinct setting and activity opportunities based on their desires for particular recreation experiences. Their needs for access to the different parts of the forest are also different. A product strategy based on providing the settings and activities preferred by the three groups, along with access to them, will help these visitors realize their desired experiences.

Pricing strategy. Pricing strategy deals with how much to charge customers for goods or services. Factors to consider in deciding on a pricing strategy include the agency's operating philosophy, the image it is trying to convey, the competitive situation, other external factors, the target markets the agency is pursuing, customer price

expectations, product factors, and promotional strategies used (Weinstein 1987).

Charging visitors for recreation experience opportunities is not a major issue on the Inyo N.F. Although the practice of charging user fees is widespread among park and recreation agencies, the Forest Service does not currently charge visitors a user fee to enter the Inyo N.F. Overnight visitors may pay a fee to stay in Forest Service or concessionaire-operated campgrounds or for other privately provided opportunities such as guided horse trips into the backcountry in the summer or skiing at Mammoth Mountain in the winter. Visitors also pay indirectly for services provided on the forest through federal taxes.

The question of whether charging user fees is appropriate for a public land management agency such as the Forest Service has been debated at length and will not be addressed here. In a recent summary of research on the issue, Warren (1986) suggests that fees may be a valuable supplement to other fiscal resources available to an agency. Should the Forest Service decide to initiate such a program, the factors described above should be considered in developing a pricing strategy.

Promotional strategy. Typically a promotional strategy includes four promotional elements: personal selling (face-to-face), advertising (paid for by a sponsor), publicity

(not paid for by a sponsor), and sales promotion (exhibits, displays, and demonstrations) (Weinstein 1987).

The U.S. Forest Service does not engage in personal selling as a means of publicizing recreation on the forest. Contact between Forest Service personnel and visitors is less formal, and occurs as part of the agency's administrative or information distribution role. These contacts do, however, leave an impression with visitors, both of the Forest Service as an agency and of the Inyo N.F. specifically. These impressions could, among other things, influence visitors' decisions to return to the forest. Consequently, it is important that agency personnel be aware of the potential impact of formal and informal conversations with visitors.

There is little paid advertising done to attract Inyo N.F. recreationists. Advertising done by the Forest Service has primarily targeted a national audience and focused on forest fire prevention (e.g., Smokey Bear) and anti-litter campaigns (e.g., Woodsy Owl). Advertising done at the forest level can include written, visual, and verbal information provided at visitor centers, interpretive displays and programs, nature talks and walks, and other information-dissemination activities. Such information not only educates visitors but also lets them know what recreation opportunities and services are available on the forest and where they can be found.

Research has shown that information provided to recreationists, including information on recreation experience opportunities, can also be used to distribute visitors in the backcountry (Krumpe and Brown 1982, Roggenbuck and Berrier 1982, Lime and Lucas 1977), at roadsides (Brown and Hunt 1969), and to create awareness of recreation being provided (Baas et al. 1989). First-time visitors are more responsive to communication strategies than repeat visitors with much experience (Manfredo and Bright 1991, Williams and Huffman 1986, Krumpe and Brown 1982, Roggenbuck and Berrier 1982). Two of the three target segments included 13 percent first-time visitors while Type 4 was made up of 20 percent first-time visitors. Given Type 4's interest in backcountry and wilderness recreation opportunities, a brochure or other information on such opportunities and activities on the forest could be effective in guiding these visitors to their preferred opportunities and away from backcountry areas managers may consider unsuitable for visitors. The Inyo N.F. receives publicity from newspaper and magazine articles written about recreation activities and opportunities on the forest. For example, articles that highlight particular natural features on the forest such as Mono Lake or Mt. Whitney or recreation activities such as fishing, backpacking, or downhill skiing might attract visitors, particularly first-time visitors.

The Inyo N.F. may take part in local and regional fairs or conventions where promotion of Forest Service activities may include publicizing recreation opportunities on the forest. In this instance the primary focus is often not on promoting recreation on the forest but increasing public awareness of Forest Service land management activities and educating people about conservation and wise use of national forests in general.

Any advertising or publicity about recreation opportunities undertaken by the Inyo N.F. should be designed with the three target market segments in mind. Experience and activity preferences and sociodemographic characteristics are both useful in designing promotional materials.

Promotional materials designed to target all three groups could profitably emphasize the natural scenic beauty of the forest, the opportunity to experience the natural environment, the contrast to urban environments, and the opportunity to engage in multiple recreation activities. This information could legitimately be distributed in the large urban areas in Southern California, as close to half of all Inyo N.F. visitors are Californians living in large cities. Promotional materials should be well designed and reflect a level of quality that would appeal to these generally well educated visitors.

Materials designed specifically for Type 1 visitors should emphasize experiences and activities that would appeal to these visitors in addition to those described above. For example, information should emphasize generally passive recreation activities such as sightseeing, fishing, and wildlife viewing. Pictures and written information could depict families spending time together relaxing or engaging in recreation activities. Areas with easy access that are generally naturally appearing with a mix of open spaces, low density use areas, and higher density facilities such as lodges, general stores, and campgrounds could be emphasized.

In addition to targeting large cities, off-site promotional materials could be sent to small cities and rural areas in California, where close to 30 and 20 percent, respectively, of these visitors live. Newspapers as well as magazines could be used for advertisements, specifically magazines read by young families and/or people fifty years old and older, the two dominant age groups among Type 1 visitors.

Promotional materials targeting Type 2 visitors should also feature family-oriented opportunities and activities, although a much wider range of activities could be featured, particularly fishing, hiking, and camping. The natural environment should be emphasized in all promotional

materials, as it is a particularly important experience component.

In addition to their primarily urban origins, thirty-eight percent of these visitors come from small cities, a second potential off-site distribution point. The ages of these family-oriented visitors primarily range between 30 and 50 years old and they have relatively large incomes. Advertisements targeting these visitors could appear in newsletters and magazines designed for that particular audience, Sunset Magazine for example.

A promotional strategy for Type 4 visitors should emphasize the backcountry and wilderness opportunities on the forest. While all three segments had strong preferences for naturalness and scenic beauty, these visitors were particularly interested in being in predominately natural settings. Promotional and information materials designed with this group in mind should include pictures and written descriptions of such settings that depict opportunities to get away, exercise, be alone or with friends, and challenge oneself. Relatively young backpackers hiking alone or in small groups in primitive settings could be featured in photographs, for example. Information on hiking and backcountry access points should be included and information on tent camping opportunities on the forest. Type 4 visitors also include the greatest number of mountain bikers

on the forest and this activity could also be featured in promotional materials.

More than half of Type 4 visitors come from large cities and promotional materials should be focused there. The outdoor section of newspapers as well as magazines of possible interest to this group, such as Backpacker Magazine and Outdoors, are potential targets for information and promotional materials. Promotional activities should be coordinated with other agencies in the region who also provide backcountry and wilderness recreation opportunities such as nearby Yosemite and Sequoia-Kings Canyon National Parks. Such an effort could provide visitors with better information on regional wilderness and backcountry opportunities and avoid duplication of effort.

In addition to the traditional promotional elements discussed above, there is one more promotional element that is probably the most powerful form of publicity about Inyo N.F. recreation opportunities. Word of mouth was the dominant source of information for members of the three target segments. Among the three groups, at least 78 percent and as high as 85 percent of members listed friends and family as the principal source of information about Inyo N.F. recreation opportunities.

Because word of mouth is a significant promotional tool for the Inyo N.F., it is important that visitors have positive experiences while visiting the forest. This

responsibility extends beyond promotional activities and belongs in all levels of management on the forest. Those involved in recreation management who come in contact with visitors should be particularly sensitive to providing quality experiences for visitors but in a broader sense, this should be the goal for the entire management staff.

Distribution strategy. Market distribution has to do with the flow of goods from production site to intermediaries, and finally to the ultimate consumer. Distribution is not an issue in this case. The service provided by the Forest Service, recreation experience opportunities, is being provided and consumed on-site and does not require a distribution strategy.

#### Step 4: Implementation

In this step, strategies are translated into action. The marketing plan advances from a report to a working document. Specific timetables, budgets, and assignment responsibilities are carried forth.

#### Step 5: Evaluation

While the implementation phase is the "how it will be done" part of a marketing plan, evaluation defines "how well you are actually doing." Control measures are maintained to check whether specific objectives are being met, changes in activities have occurred, whether efforts are on schedule,

and what changes may be needed (Weinstein 1987). Inyo N.F. managers must test the activities developed during each phase of strategy formulation against the marketing objectives laid out in Step 2 of the planning process. These objectives are based on experience-based management and focus on providing opportunities for satisfying activities and experiences for Inyo N.F. visitors. Thus managers can use these objectives in conjunction with knowledge of the characteristics and preferences of target segments to evaluate the activity opportunities, setting characteristics, access, and information they provide.

Marketing planning is not a one-time process but a recurring part of business activities. As such it requires regular review, monitoring, and updating. As changes occur in the forest's visitor population, such as increased numbers of ethnic minorities or senior citizens, or as other management activities occur that affect recreation opportunities on the forest, objectives and strategies can be revised to reflect those changes.

Periodic visitor surveys could provide valuable information on changes in the character and desires of forest visitors. Impacts from other resource uses on the supply of recreation opportunities can be assessed using an experience-based Recreation Opportunity Spectrum inventory. This information can be used to make necessary adjustments in marketing strategy that are consistent with the forest's

management and marketing objectives. Additional suggestions for research that would strengthen the usefulness of a marketing strategy are described below.

#### Future Research

Two general areas of research are needed to strengthen the usefulness of a recreation opportunity marketing strategy. The first area has to do with the marketing strategy proposed in the study and the second concerns the concepts underlying experience-based recreation.

Implied within a marketing strategy is the intent to modify various components of that strategy as new information is obtained and in response to changes within the organization and its clientele. In the case of the Inyo N.F., this would require periodic assessment of the facilities, activities, and recreation experience opportunities available on the forest to account for any new developments that may alter experience opportunities on the forest. Periodic surveys should also be made of the characteristics, behaviors, and preferences of visitors. The methods used to survey visitors should be similar to those used in this study so that valid comparisons can be made.

The marketing strategy described here could be expanded to include potential Inyo N.F. recreation users. Given the changes in cultural and social values occurring in Southern

California's large urban areas due to the influx of ethnic minorities, it seems only a matter of time before the Inyo N.F. will experience increased demand by minority visitors. Research described earlier suggests that these visitors may have different needs and preferences than the predominately White visitors who have traditionally used the forest. A survey of Southern California urban households would provide information about current use of the forest, possible barriers to recreating on the forest, and preferences for recreation activities and experiences. Care should be taken in designing such a survey that non-English language and communication issues are addressed.

The recreation opportunity marketing strategy should be expanded to the regional level. A coordinated effort is needed among the public land management agencies surrounding the Inyo N.F. to conduct a region-wide inventory of outdoor recreation opportunities. This information would provide valuable input to the recreation opportunity marketing plan for not only the Inyo N.F. but for any of the agencies involved. This effort could be modelled after a regional recreation resource system developed in the Pacific Northwest, where a number of public recreation agencies are working together to meet the needs of a regional clientele (Hospodarsky 1988).

The second area of needed research relates to experience-based recreation, the conceptual framework upon

which the recreation marketing strategy is based. A number of other researchers have suggested the need to continue research on the underlying tenets of experience-based recreation, in other words, on the extent that recreation experiences realized by recreationists are facilitated by different activities and settings (Driver et al. 1987, Brown and Haas 1980, Manfredo et al. 1983). Examples of relevant research inquiries include the dependency of particular experiences upon specific activities or settings, the relevant setting attributes that promote specific experiences, and the extent that choice of recreation setting or activity depends upon expected experience outcomes.

Research in this area is ongoing and is needed to more clearly define recreation experience opportunities as the major products of recreation resource management. Such information allows managers to make better decisions in their role as facilitators of satisfying recreation experiences.

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**APPENDICES**

APPENDIX A  
ON-SITE INTERVIEW FORM

OREGON STATE UNIVERSITY VISITOR SURVEY  
SUMMER, 1989

- 1a. How many people are in your group? \_\_\_PEOPLE
- 1b. Is this your first visit to the Forest?  
\_\_\_YES (GO TO Q-4) \_\_\_NO (GO TO Q-2)
2. How many times have you visited the Inyo National Forest in 1989?  
\_\_\_FIRST TIME THIS YEAR  
\_\_\_2-3 TIMES  
\_\_\_4-5 TIMES  
\_\_\_6-10 TIMES  
\_\_\_11-15 TIMES  
\_\_\_more than 15 TIMES
3. How long have you been visiting the Inyo National Forest?  
\_\_\_LESS THAN A YEAR  
\_\_\_1-5 YEARS  
\_\_\_6-10 YEARS  
\_\_\_11-15 YEARS  
\_\_\_MORE THAN 15 YEARS
4. What is the primary purpose of your visit today?\_\_\_\_\_
- 5a. How many days do you plan to spend on this trip?\_\_\_\_\_DAYS
- 5b. If you are staying overnight, where are you staying?  
\_\_\_PRIVATE CAMPGROUND  
\_\_\_U.S. FOREST SERVICE CAMPGROUND  
\_\_\_BUREAU OF LAND MANAGEMENT CAMPGROUND  
\_\_\_MOTEL OR RESORT  
\_\_\_CAMP ON SIDE OF THE ROAD  
\_\_\_PRIVATE CONDOMINIUM OR HOME
- 5c. Do you own a vacation home on or near the Inyo National Forest?  
\_\_\_YES  
\_\_\_NO
6. Name?\_\_\_\_\_
- Address?\_\_\_\_\_
- \_\_\_\_\_
- LOCATION \_\_\_\_\_
- DATE \_\_\_\_\_

APPENDIX B  
MAIL-BACK QUESTIONNAIRE

Department of  
Forest Resources



Peavy Hall A108  
Corvallis, Oregon 97331-5703

SUMMER 1989

Dear National Forest Visitor,

We need your help! We would like to know more about your most recent trip to the Inyo National Forest. Information from this survey will help recreation managers better meet public preferences for recreation.

Please take about 10 to 15 minutes to complete the questionnaire. Your responses are very important to us. All responses you give will remain confidential. When you have finished the questionnaire, please seal it and drop it in the mail. Postage will be paid by Oregon State University. If you have any questions or comments about this survey, feel free to contact me.

Sincerely,

John M. Baas  
Project Director

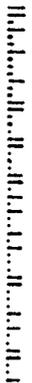
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UNITED STATES



OREGON STATE UNIVERSITY VISITOR QUESTIONNAIRE  
SUMMER, 1989

We would like to know a little bit more about your most recent visit to the Inyo National Forest.

1. How many days did you spend recreating on the Inyo National Forest? \_\_\_ DAYS

1b. Please refer to the map and then indicate the zones you visited and the number of days spent in each. If you did not visit a zone, write a zero for the number of days spent there.  
ZONES---

#DAYS    1   2   3   4   5   6   7   8  
\_\_\_\_\_

#DAYS    9   10   11   12   13   14   15   16  
\_\_\_\_\_

#DAYS    17   18   19   20  
\_\_\_\_\_

2. Did you visit the Inyo with: (Please check all which apply)  
 your family?  
 your friends?  
 organized group?  
 by yourself?

3a. Did you visit:	YES	NO
Death Valley National Monument	___	___
Sequoia National Park	___	___
King's Canyon National Park	___	___
Yosemite National Park	___	___
Devil's Postpile National Monument	___	___
Bodie Historical State Park	___	___
Bureau of Land Management lands	___	___

4. Did you visit any Inyo National Forest attractions?

	YES	NO
Ancient Bristlecone Forest	___	___
Mono Lake Scenic Area	___	___
Minaret Vista	___	___
Other (PLEASE SPECIFY) _____	___	___

5. How did you first learn about recreation opportunities on the Inyo National Forest?

<input type="checkbox"/> from family or friends	<input type="checkbox"/> ski advertisement
<input type="checkbox"/> from newspaper	<input type="checkbox"/> recreation show in Anaheim
<input type="checkbox"/> radio	<input type="checkbox"/> recreation show in San Francisco
<input type="checkbox"/> Chamber of Commerce	<input type="checkbox"/> U.S. Forest Service flyer

6. Please indicate if you have visited the following National Forests during the last 12 months.

FOREST	YES	NO	NOT SURE
Sequoia	___	___	___
San Bernardino	___	___	___
Angeles	___	___	___
Cleveland	___	___	___
Los Padres	___	___	___

6a. Was this your first visit to the Inyo National Forest?

YES (GO TO Q-7)  
 NO (GO TO Q-6b.)

6b. Do you use the Inyo National Forest more often now, than you did previously?

YES (GO TO Q-6c)  
 NO (GO TO Q-7)

6c. Please check THE MOST IMPORTANT REASON why you are using the Inyo more often.

wanted to recreate in a new place  
 to get away from crowds  
 there is more to do here than in other recreation areas  
 other \_\_\_\_\_ (PLEASE SPECIFY)

7. What would be your second choice for recreation if you COULD NOT come to the Inyo? (PLEASE CHECK ONE RESPONSE)

would stay home  
 the beach  
 a county or state park near my home  
 another National Forest closer to home  
 Sequoia National Forest  
 Yosemite National Park  
 Bureau of Land Management area  
 other \_\_\_\_\_ (PLEASE SPECIFY)

8. During this trip, in what ACTIVITIES did you participate?

camping w/tent-in campground       sightseeing  
 camping w/RV-in campground       OHV use  
 dispersed camping w/ OHV       motorcycling  
 backpacking       mountain biking  
 picnicking       hiking/walking  
 hang gliding       hot air ballooning  
 collecting       wildlife viewing  
 nature study       fishing  
 hunting

9. From those activities you checked above, please list the one which you enjoyed doing the most \_\_\_\_\_ FAVORITE ACTIVITY

10. There are many factors which can affect a person's recreation experience, some of those are more important than others. FOR EACH FACTOR BELOW, think about how important it was for your favorite activity. Then, PLEASE CIRCLE ONE RESPONSE for each factor indicating how important it was in contributing to a high quality recreation experience for YOUR FAVORITE activity.

FACTOR	UNIMPORTANT	IMPORTANT
A. Taking it easy physically	-3 -2 -1 0	+1 +2 +3
B. Being able to try new equipment	-3 -2 -1 0	+1 +2 +3
C. Being in a natural setting	-3 -2 -1 0	+1 +2 +3
D. Gaining a sense of self-confidence	-3 -2 -1 0	+1 +2 +3
E. Doing something with your family	-3 -2 -1 0	+1 +2 +3
F. Experiencing peace and quiet	-3 -2 -1 0	+1 +2 +3
G. Viewing the mountains and lakes	-3 -2 -1 0	+1 +2 +3
H. Being able to camp by a stream or lake	-3 -2 -1 0	+1 +2 +3
I. Getting away from the usual demands of life	-3 -2 -1 0	+1 +2 +3
J. Being close to nature	-3 -2 -1 0	+1 +2 +3
K. Having a change from your daily routine	-3 -2 -1 0	+1 +2 +3
L. Using your recreation equipment	-3 -2 -1 0	+1 +2 +3
M. Being with others who enjoy the same things you do	-3 -2 -1 0	+1 +2 +3
N. Being well-equipped	-3 -2 -1 0	+1 +2 +3
O. Feeling isolated	-3 -2 -1 0	+1 +2 +3
P. Feeling your independence	-3 -2 -1 0	+1 +2 +3
Q. Improving your skills in your favorite outdoor activity	-3 -2 -1 0	+1 +2 +3
R. Experiencing open space	-3 -2 -1 0	+1 +2 +3
S. Being with other members of your group	-3 -2 -1 0	+1 +2 +3
T. Being your own boss	-3 -2 -1 0	+1 +2 +3

FACTOR	UNIMPORTANT	0	IMPORTANT
U. Getting away from crowds	-3	-2 -1	0 +1 +2 +3
V. Getting exercise	-3	-2 -1	0 +1 +2 +3
W. Experiencing new and different things	-3	-2 -1	0 +1 +2 +3
X. Chancing dangerous situations	-3	-2 -1	0 +1 +2 +3
Y. Relaxing physically	-3	-2 -1	0 +1 +2 +3
Z. Releasing some built up tensions	-3	-2 -1	0 +1 +2 +3
AA. Testing your abilities	-3	-2 -1	0 +1 +2 +3
AB. Viewing the scenic beauty	-3	-2 -1	0 +1 +2 +3
AC. Bringing your family closer together	-3	-2 -1	0 +1 +2 +3
AD. Discovering something new	-3	-2 -1	0 +1 +2 +3
AE. Being with your family	-3	-2 -1	0 +1 +2 +3
AF. Being on your own	-3	-2 -1	0 +1 +2 +3
AG. Experiencing excitement	-3	-2 -1	0 +1 +2 +3
AH. Enjoying the sounds and smells of nature	-3	-2 -1	0 +1 +2 +3
AI. Releasing tensions	-3	-2 -1	0 +1 +2 +3
AJ. Being able to avoid crowds	-3	-2 -1	0 +1 +2 +3
AK. Doing activities with your family	-3	-2 -1	0 +1 +2 +3
AL. Learning about the geology of the area	-3	-2 -1	0 +1 +2 +3
AM. Learning about the ecology of the area.	-3	-2 -1	0 +1 +2 +3
AN. Observing other people in the area.	-3	-2 -1	0 +1 +2 +3
AO. Being alone	-3	-2 -1	0 +1 +2 +3
AP. Being in control of things that happen	-3	-2 -1	0 +1 +2 +3
AQ. Being away from noise back home	-3	-2 -1	0 +1 +2 +3
AR. Keeping physically fit	-3	-2 -1	0 +1 +2 +3
AS. Experiencing solitude	-3	-2 -1	0 +1 +2 +3
AT. Experiencing exhilaration	-3	-2 -1	0 +1 +2 +3
AU. Enjoying the outdoors with your family	-3	-2 -1	0 +1 +2 +3
AV. Being near others who could help you if you need them	-3	-2 -1	0 +1 +2 +3
AW. Avoiding the unexpected	-3	-2 -1	0 +1 +2 +3

11. Federal land recreation managers are concerned about your level of satisfaction with the recreation opportunities they provide. For each item below, please CIRCLE ONE RESPONSE which indicates how satisfied you were with this item during your most recent trip.

Item	Dissatisfied							Satisfied						
___ developed campsites	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ backcountry experience	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ picnicking areas	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ bathrooms	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ hot springs areas	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ hiking trails	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ interpretive displays	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ boat launch areas	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ 14 day stay limit	1	2	3	4	5	6	7	1	2	3	4	5	6	7
___ availability of information on recreation	1	2	3	4	5	6	7	1	2	3	4	5	6	7

PLEASE FEEL FREE TO GIVE US YOUR COMMENTS ABOUT THOSE ITEMS WITH WHICH YOU WERE ESPECIALLY SATISFIED OR DISSATISFIED AND TELL US WHY.

12. If the Forest Service provided multi-family camping sites, would you use them?

- YES  
 NO

13. How would you rate your overall level of satisfaction for this last trip?

- EXCELLENT  
 GOOD  
 ABOUT AVERAGE  
 FAIR  
 POOR

14. If Federal land recreation managers could change one thing to provide you a more satisfying experience, what would that be?

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We would like to ask you a few more personal questions. Please note all responses to these questions will remain confidential.

15. What is your sex?

- MALE  
 FEMALE

16. What is your present age?

YEARS

17. Please check a category which indicates the highest level of education you have completed.

- Elementary  
 High School  
 Some college/technical school  
 4 years of college  
 post graduate work

18. Is your residence:

- A rural area or small town (10,000 people or less)?  
 A small city (more than 10,000, but less than 100,000 people)?  
 A large city (100,000 people or more)?

19. What is your annual household income?

- 0-\$9,999  
 \$10,000-19,999  
 \$20,000-29,999  
 \$30,000-39,999  
 \$40,000-49,999  
 \$50,000-59,999  
 \$60,000-69,999  
 \$70,000-79,999  
 \$80,000-89,999  
 \$90,000 or more

20. What is the zip code of your permanent address? \_\_\_\_\_

THANKS FOR YOUR HELP!!

APPENDIX C  
CHARACTERISTICS OF INYO N.F. VISITORS

Table 12. Respondent residence (n = 997)\*.

Residence	Percent
California	89.8
Los Angeles, Orange County	42.2
Mohave, Owens Valley	9.8
San Diego	7.9
San Bernadino	7.4
San Francisco, Oakland	6.1
Stockton, Fresno, Bakersfield	4.8
Sacramento	2.4
Santa Barbara, Ventura	4.1
San Jose, Salinas	2.3
Sonoma, Eureka (North Coast)	0.9
Northeastern (Susanville)	0.3
Southeastern (Palm Springs)	1.4
Nevada	2.1
Arizona	1.1
Oregon	0.8
Texas	0.6
Colorado	0.4
Pennsylvania	0.4
Florida	0.4
Massachusetts	0.3
Maryland	0.3
Illinois	0.3
Utah	0.3
New Jersey	0.2
New York	0.2
Georgia	0.2
Kentucky	0.2
Ohio	0.2
Michigan	0.2
Kansas	0.2
Louisiana	0.2
New Mexico	0.2
Washington	0.2
Vermont	0.1
Virginia	0.1
North Carolina	0.1
Alabama	0.1
Tennessee	0.1
Mississippi	0.1
Minnesota	0.1

Table 12. Continued.

Residence	Percent
North Dakota	0.1
Missouri	0.1
Oklahoma	0.1
Idaho	0.1
Puerto Rico	0.1
Other foreign	

\* Missing cases = 60.

Table 13. Respondent residence type (n=1030).\*

Resident type	Percent
Rural area or small town (10,000 people or less)	15.9
Small city (more than 10,000 people but less than 100,000 people)	35.6
Large city (100,000 people or more)	48.4

\* Missing cases = 27.

Table 14. Group type (n=1057).

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Q: Did you visit the Inyo N.F. with:

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Group Type	Percent
Family	70.5
Friends	33.9
Organized group	3.7
Alone	9.9

---

\* Totals more than 100 percent due to multiple responses.

Table 15. Respondent group size (n = 1052)\*

Group Size	Percent
1 - 2 people	45.7
3 - 5 people	40.1
6 - 10 people	11.1
More than 10 people	3.1

Minimum = 1 person

Maximum = 47 people

Mean = 3.7 people      Mode = 2 people

---

\*Missing cases = 5

Table 16. Respondent ages (n = 1029)<sup>a</sup>.

Age	Percent
Less than 18 years	0.6
18-29	14.6
30-39	30.2
40-49	26.7
50-59	14.5
60+	13.4
Minimum: 12 years	
Maximum: 79 years	
Mean: 42.6 years	
Mode: 40 years	

<sup>a</sup>Missing cases = 28

Table 17. Respondent race (n=437).<sup>a</sup>

Race	Percent
White	91.3
Oriental	4.6
Hispanic	3.2
Black	0.7
Other	0.2

<sup>a</sup> Only available for respondents contacted during the second half of the summer survey.

Table 18. Respondent education (n=1034).<sup>a</sup>

Highest level of education	Percent
Elementary school	1.5
High school	10.7
Some college/technical school	34.3
Four years of college	23.7
Post graduate work	29.7

<sup>a</sup> Missing cases = 23.

Table 19. Respondent household income (n=972).<sup>a</sup>

Income	Percent
0 - \$9,999	2.1
\$10,000 - \$19,999	7.2
\$20,000 - \$29,999	12.3
\$30,000 - \$39,999	17.5
\$40,000 - \$49,999	14.9
\$50,000 - \$59,999	14.1
\$60,000 - \$69,999	9.5
\$70,000 - \$79,999	8.0
\$80,000 - \$89,999	4.8
\$90,000 or more	9.6

<sup>a</sup> Missing cases = 85.

Table 20. Trip purpose (n = 1052)\*.

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 Q: What is the primary purpose of your visit today?
 

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Primary purpose	Percent
Fishing	28.4
Camping	18.4
Sightseeing	14.8
Hiking	12.4
Backpacking	7.6
See the bristlecone pines	3.9
Climbing	2.6
Picnic	2.5
Swimming	1.1
Photography	1.0
Bicycling	1.0
Sunbathe	0.8
Visit family, friends	0.7
Relax	0.7
Boating	0.6
Nature study	0.5
Horse riding	0.4
Sailboarding	0.3
Mountain biking	0.3
4-wheeling	0.2
Shopping	0.2
Motorcycling	0.1
Hang gliding	0.1
Hunting	0.1
Bird watching	0.1
Other (golf, see Mono L., dry land ski, passing through, woodcut, explore, escape heat, smog, get away)	1.3

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\*Missing cases = 5.

Table 21. Recreation activities on Inyo N.F. (n=1057).

Activity	Percent <sup>a</sup>
Hiking	70.1
Sightseeing	67.2
Fishing	58.0
Wildlife viewing	44.9
Picnicking	43.0
Camping with a tent in a campground	41.9
Nature study	27.5
Backpacking	25.6
Camping with an RV in a campground	22.5
Collecting	7.9
Mountain biking	6.2
Dispersed camping with off-road vehicle	1.4
Motorcycling	1.4
OHV (off-highway vehicle) use	1.2
Hunting	1.1
Hang gliding	0.4
Hot air ballooning	0.2

<sup>a</sup> Totals more than 100 percent due to multiple responses.

Table 22. Percent of visitors and days spent in forest use zones (n=1057).

Zone Number	Percent of recreationists	Mean (days)
7	28.1	4.5
17	22.3	3.6
2	21.4	4.2
1	18.2	3.8
8	15.9	3.0
9	12.4	2.4
3	10.9	4.9
14	10.7	3.8
4	10.3	6.0
13	8.1	1.2
10	8.8	2.3
5	5.7	4.9
16	5.4	3.2
15	5.4	3.7
11	4.7	2.5
12	4.7	2.8
19	3.7	2.3
6	2.4	4.5
18	1.1	2.0
20	0.6	2.0