

MT. LASSEN USER
PREFERENCE STUDY

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Lassen Volcanic National Park
Mineral, California 96063

LASSEN VOLCANIC NATIONAL PARK
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TABLE OF CONTENTS

	PAGE
List of Tables.....	111
Introduction.....	1
Review of Literature.....	2
Various Methodologies.....	11
Sociological Research at Lassen Volcanic Park.....	15
Behavioral Research.....	16
Background,.....	21
Purpose.....	21
Limitations.....	22
Definition of Terms.....	22
Procedure.....	24
Time Schedule.....	24
Design of Questionnaire.....	25
Results.....	27
Facilities Preferred.....	27
Recreational Activities Preferred.....	29
Location of Concessions.....	31
Perception as to the Type of Park.....	31
Conclusion and Recommendations.....	35
Bibliography.....	36
Appendices.....	37
A. Survey Form.....	37
B. Complete Summary of Survey Results.....	39

LIST OF TABLES

TABLES	PAGE
1. Level of Innovative Concepts and Techniques.....	8
2. Theoretical Model for Park Planning.....	18
3. Comparison of Facilities Preferred and Expected.....	28
4. Recreational Activities Preferred at Mt. Lassen National Park.....	30
5. Concession Location.....	32
6. Perception of Park.....	33

INTRODUCTION

Recently, planning literature has barraged its readers with the topic of goals and goal setting. One finds however that this process, deemed essential for meaningful planning, differs from source to source. Additionally, it seems definitive works on the aspects of actual planning methodology are lacking. Sackman (1972) defines this plea for literature on planning methodology:

"Although planning literature is immense, spilling over into almost every imaginable field of social endeavor, the literature on planning methodology is conspicuous by its absence." (p. 17)

Throughout the first half of this paper the author shall compare various planning philosophies and their views on goal setting and the problems it presents, ending with justification for the selection of one particular method. The second half will be devoted to the analysis and outcome of this particular method--social research; used by the author in recent research studying the preferences of users at Lassen Volcanic National Park.

REVIEW OF LITERATURE

Gold (1973) describes a goal as "an end to which a design trends, a direction not a destination, an ideal expressed in abstract terms, a value to be sought after, not an object to be achieved." (Appendix) Gold feels that historically goals have been by passed in the fever of planning. Too often, planners would leap into the process without distinguishing the communities preferences and values or aspirations. This led to conflict and duplication of effort; resulting in programs which failed to accomplish their intended purposes. If however, one agrees that planning deals with the future, developing alternatives for more rational decisions, then planning ought to be representative of what people want and creative in projecting what might be. Goals are such statements of highly desirable conditions towards which a society should be directed as opposed to objectives which are the realistic element determining what is possible for attainment.

Gold (1973) suggests Robert Young's model for meaningful planning:

"1) Establish perimeter of concern; 2) Establish a range of choice; 3) Examination of relationship of goals; 4) Relative examination of goals or sets of goals; 5) Establish of goals as policy." (p. 78)

Simply stated then planning may be described as the process of devining goals and designing means by which they may be achieved. This process involves continual analysis of alter-

native methods to reach goals.

Gold suggest the method of social research due to the fact that goals are conditioned by the values which members of the community, collectively or individually, hold to be important. Such research will measure and analyze these values and test various goals and objectives for community support. Additionally, Gold suggest different quantitative methods but warns that, though valuable, these techniques must not totally substitute human imagination, perception and commitment necessary to solve problems. These quantitative methods will be discussed later in the paper.

Faludi (1973) defines goals in such a fashion that the planning structure is seen as nothing more than the desired goal plus the impediment to obtaining that goal. However, he suggests that the environment has no problems, only people do. This leads to a tension relationship in that both individuals and organizations exist for the attainment of certain ends and when impediments to their objectives are discovered, they experience tension alike. This tension is the motivating element to remove the source which is what problem solving means.

But Faludi warns that goal attainment is not simple. He suggests that for any goal there may be several paths to successful attainment. Formulating an objective, most often requires a selection between alternate methods of achieving the goal to which it relates. This planning problem involves evoking other criteria than just a choice between two goals

when one chooses a direction between them. This could be done by adding one's personal preference to a choice. Immediately one confronts the problem of evaluating the original goals in turn and the worth of each. Faludi feels this argument will either appear to have no end or, that one must invoke some notion of "ultimate goals." Faludi explains this is a dilemna because there seems to be no basis for declaring anything as beyond argument. However, it seems impractical to go on questioning the reasons underlying the choice of ends indefinitely. Therefore, under pressure people simply become dogmatic.

Additionally Faludi feels that professionals are extremely susceptible to succumbing to "ultimate goals" due to work pressure, and the general assumption that they will lend a solid base for basing program proposals on. Such goals will increase autonomy from others (especially politicians) and enhance their role as "professional guardians." In contrast, Faludi advocates provisional assumptions which don't involve labeling anything as absolute so that they may change as evidence becomes available or as new preferences are formed. This route will hopefully become utilized more often with the realization that environment and economy change public input and preferences.

Simon (1957) suggests perhaps a more cynical view on decision making. It is his conclusion that all decision is a matter of compromise:

"The alternative that is finally selected never per-

mits a complete or perfect achievement of objectives, but is merely the best solution that is available under the circumstances. The environmental situation inevitably limits the alternatives that are available, and hence sets a maximum to the level of attainment of purpose that is possible." (p. 278)

Perhaps as is later suggested by Davidoff (1965), these compromises which often lead to incremental planning are effective in generating public interest in that the public is more readily motivated by shorter more foreseeable gains for their own expressed values and goals.

The psychological environment then limits human rationality leading to more of a stimulus response pattern of choice than a choice between alternatives. However by manipulating the stimuli of decisions they can be controlled so as to serve broader ends, and a set of individual decisions can be integrated into a well conceived plan.

Ewing (1969) in accord with Gold's historical interpretation of planning, argues that human aspects have been left out of the first phase of planning which he labels; goal setting, until the second phase; implementation. It was assumed that if the goal made good sense in terms of economical or other material considerations, then surely the people could be manipulated to pursue them; especially if the proper carrot and stick approach is utilized. Unfortunately, this is untrue and many plans have failed because resultant goals are not realistic to the people involved.

Ewing outlines what he calls the inside-out approach which begins with an internal assessment of resources and constraints before turning to the external environment to determine

where opportunities exist to exploit these resources. The basic steps involved are outlined:

"1) Analyze talents and abilities of people and material resources. 2) Consider possibility of beefing up or supplementing abilities so that they will be still more effective. 3) Examine goals that would be in reach of your organization. 4) Check the marketing picture or other environment of organization to see if there are any constraints affecting the feasibility of goals. 5) If no goal or set of goals appears, then go thru the process again." (Erving, 1969, pp. 79)

Sackman (1972) describes the past situation in planning failure. His discription typifies that of the parks and recreation field as a whole, in the past, and unfortunately, in many current planning endeavors. He states the problem as one of planning's failure to achieve scientific status due to human culpability.

"Free wheeling arm chair speculation is safer, faster, easier, and for many, more fun than careful experimentation." (pp. 17)

Unfortunately good demand data, and future participation projections have not surfaced from the parks and recreation sector. Due to the failure to employ experts in economic and social research, and to the above attitudes, parks have only recently begun to consider social research of their clientele rather than altruistic assumptions by the administration.

Further critisisms of techniques in the parks and recreation field were summed up by Simon (1957) who stated:

"Generally the organizational structure," (a specific park for example), "will include specification of a formal system of communication....supplemented by informal communications based on the social relationship that develops within an organization. Personal

motives may lead the organization members to try to divert the communication system to their own uses, and may lead them also to withhold information from supervisors and colleagues. Personal motives also influence the reception given to those communications that are transmitted." (pp. 198)

Davidoff (1965) puts forth a diagram of past, present and future development of innovative concepts and techniques. Table 1 (p. 8) suggests the need for a more future oriented, continual planning process which utilizes public input to define its goals. Davidoff, like Gold suggests the social research and survey method to best utilize public input. The isolation of explicit goals of various groups would open several other research areas such as policy formation, cost-benefit analysis, and time budgets. Further it would be an incentive for the application of systems analysis techniques to leisure behavior.

"These techniques could be used to identify and help solve many other problems now generally avoided by pros for lack of information on goals, objectives, policies, and criteria, standards or principles which they imply." (Davidoff p. 256)

Rittel (1972) in describing the dilemma set before today's planners, suggest that in the past public relied on professionals where as today there appears to be the prevailing attitude that "every profession is a conspiracy against laity." (p. 1)

The planner is faced with a pluralistic society made up of many diverse need and a history of iniquity. Rittel argues that the professional has done his job successfully in the past; his job being defined as eliminating those conditions that predominant opinion judged undesirable. Further Rittel

TABLE 1
Level of Innovative Concepts
and
Techniques

Approach	Time	Concept/Techniques
Traditional	Past ¹	Population + a standard + allocation.
	Present ²	Population → demand + a standard → allocation.
Innovative	Future	Population → demand + goals ³ + alternatives + standards ⁴ → programs → allocation → review → revision.

- 1) Pre-ORRRC Report (1900-1962)
- 2) Post-ORRRC Report (1962-1968)
- 3) Supplier or Standard
- 4) Resident Goals and Standards

argues that the professionals to the social services are now beginning to acquire professional competence.

With this in mind Rittel begins describing the difficult job of goal setting today. Interestingly, he equates the black revolt, student revolt, Viet Nam revolt and today's consumerism and conservationism to a nation striving for re-definition of values and goals. Further he sees:

"System analysis, goals commissions, PPBS, social indicators, the several revolts, the poverty program, model cities, the current concerns with environmental quality and quantities of urban life, the search for new religions among youth, and the increasing attractiveness of planning (as)... a re-definition of problems, for a reordering of priorities to match stated purposes, for the design of new goal directed actions." (Rittel p. 5)

The problem with this theory in Rittel's eyes is that though there is a current trend of optimism in seeking these direction finding instruments, there is a simultaneous loss in the credibility of traditional American faith in guaranteed progress as there is in old beliefs in social orders innate goodness and history's intrinsic benevolence. Though they have lost faith in old modes of planning, they still have hope that instruments of perfectability can be contrived.

The difficulty in making the planning idea operational, according to Rittel is in part due to planner's past practice of mimicking engineering's or sciences cognitive style. Rittel sees the problems planners work with as hard to define and actually unsolvable, and this style will only lead to dissatisfaction. Instead he sees planning problems as reliant on political judgement for resolution.

This differs radically from Sackman's conclusion that the lack of good literature on planning methodology is due to the profession's failure to make an organic link with scientific methods in the "Fundamental sense of tying planning hypotheses to experimentally controlled empirical verification of such hypotheses." (Rittel p. 17)

In conclusion he feels that due to our pluralistic nature there can be no coming together or agreeance on goals because what is problem solving to one group will be problem generating to another. This leads to de facto decision making by professional experts and politicians and though this reduces group conflict, it cannot solve problems or give better outcomes. Another, though somewhat unrealistic approach, is to promote a wide scale of different goods, services, environment and opportunities to satisfy personal preferences.

VARIOUS METHODOLOGIES

Though, as mentioned earlier, literature on planning methodology is rare, there have been various planning and forecasting methods presented relatively recently. Such methods help planners to deal with the complexity of a planning area and its users. They can translate abstract values into more tangible sets of human wants and needs. Additionally they help by letting us simulate and test variables before they are implimented. The number associated with each method below is the rank given it by Rosove (1972) according to its accuracy.

Rank 16 #1) "Brainstorming: Form of group dynamics designed to encourage creative and imaginative thinking about the future via an uninhibited exchange of ideas."

Rank 3 # 2) "Delphi Technique: A procedure for systematically selecting and collecting the opinions of experts on the future of a pre-selected subject by...usually the questionnaires."

Rank 11 #3) "Expert Opinion: The opinions of qualified specialists about the future of the phenomena within the field of expertise."

Rank 26 #4) "Literary Fiction: Novels or other forms of literature which imaginatively or creatively construct future social systems or conditions."

Rank 8 #5) "Scenarios: The imaginative construction into the future of a logical sequence of events based on specific assumptions and initial conditions in a given problem area."

Rank 24 #6) "Historical Analogy: Inferring the similarity between attributes or processes of tow or more different historical developments, social conditions, or societies on the basis of other presumed similarities."

Rank 25 #7) "Historical Sequences: Formulation of the independent recurrence of similar sequen-

tial, social, economic and cultural processes and conditions in different societies, or nations, or in the treatment of socio-cultural phenomena, in general, in terms of logical historical sequential phases or stages of development."

Rank 22 #8) "Analysis: Abstracting from content speeches, novels, art forms--generalizations or trends pertaining to a wide range of phenomena."

Rank 10 #9) "Social Accounting: An effort to conjecture about the future of a nation, social system, or institution by determining the sum of a series of independent factors--a,b,c...n which comprise it at time t, resulting in profile a, and then progressing to series a', b', c'...n' at time t' resulting in profile b."

Rank 23 #10) "Primary Determinent: The interpretation of socio-cultural events, conditions, and processes in past, present and future in terms of the consequences of a single major factor or primary determinant."

Rank 19 #11) "Time-Series Extrapolation: The extension of a series of measurements of a variable over a period of time from the past into the future."

Rank 21 #12) "Contextual Mapping Analysis: The extrapolation in graphic form of the inter-relationships of functionally related developments. A map shows logical and casual inter-dependencies."

Rank 20 #13) "A systematic procedure for exploring the totality of all possible solutions to a given large scale problem;...The definition of the problem provides an initial set of parameters, and the full range of possible answers to the problems inherent in each initial parameter represents another set of parameters, and this set is then explored, and so on, until all parameters have been exhausted."

Rank 14 #14) "Relevance Trees: A procedure for determining the objective means or techniques required to implement an explicit qualitative goal e.g. to permit all students to proceed thru educational programs at their own pace. Each branch point of the tree, moving downward from the stated objective, represents a potential decision to follow a particular implementation direction. Either qualitative or quantitative criteria, or both may be used to aid selection process. Each subsequent branch level is considered in turn as a possible set of alternative goals, and each alternative is analyzed to determine the objective means required to implement it."

Rank 13 #15) "Decision Matrices: A method for allocating resources, determining priorities, or

selecting goals by graphically displaying the relationships, or multiple interdependent variables in two or three dimensions."

Rank 4 #16) "Deterministic Models: A mathematical abstraction of real-world phenomena. It is a set of relationships among quantitative elements of the following types: parameters, variable inputs and variable outputs."

Rank 6 #17) "Probabilistic Models: A probabilistic model is a mathematical representation of the interaction among a number of variables in which the value of at least one variable is assigned by a random process. The numerical results of repeated exercises of the model will yield different numerical values. The value of variables may be based on estimates of future conditions."

Rank 1 #18) "Gaming: Provides a stimulated operational present or future environment structured so as to make possible multiple simultaneous interactions among competing or cooperating players."

Rank 9 #19) "Dialectic Planning: Generation of an opposing set of 'best' plans representing conflicting values and views, followed by structural debate, using the same data base until the data bank is exhausted."

Rank 2 #20) "Operational Stimulation: The exercising of operators of a system in their actual environment by the use of selected stimulated inputs to provide education and training to the system's operation and/or to facilitate analysis and understanding of the system's operations for evolutionary design and developments."

Rank 17 #21) "Benefit-Cost Analysis: Quantitative method designed to assist decision makers to make the most efficient tradeoffs between financial resources and competing programs. The total cost of each program both direct and indirect is estimated and the programs may be evaluated in terms of the advantages, outputs or results (benefits), both short and long run, which each is estimated to have. These estimates are expressed quantitatively."

Rank 18 #22) "Input Output Tables: Models of an economy which is desegregated into sectors and in which explicit account is taken of sales and purchases between sectors. One set of parameters which is common to all such models is technical coefficients."

Rank 5 #23) "PERT/CPM: Program evaluation and review technique using critical path method. Analysis; the analytical portrayal of costs, manpower and schedules in graphic form in terms

of activities and milestones for an object system to achieve planning objectives within specified resource levels."

Rank 7 #24) "Planning, Programming and Budgeting: Technique introduced by DOD and used extensively in other government agencies since 1965; requires systems analyses of agency objectives, definition of five year plan, cost effectiveness analyses of proposed programs, with annual updating of plans and budgets for the five year projection, and continuing assessment of programs."

Rank 12 #25) "Normative Planning: Also referred to as technological planning; deliberate and critical examination of the fundamental value judgements underlying planning goals, prior to and distinguished from strategic planning for working toward specified goals, and tactical planning to achieve defined goals."

Rank 15 #26) "Confrontation Techniques: This category includes a broad class of techniques involving some element of involuntary external coercion of individuals or groups to change individual traits, group policies or plans by some form of social confrontation e.g. psychodrama, T-groups, sensitivity training, Synanon game, intervention in professional meetings, marches, strikes and sit-ins."

The use of such forecasting methods presented by Sackman (1972, p. 17) has been criticized by others. Faludi (1973) states that planners acquire a desire to understand what motivates the objects of their planning, and what forces bring upon change.

"Increased understanding, it is thought, will lead to an identification of the particular 'levers' one needs to pull to produce a certain effect any concept or technique which holds out the promise of identifying such levers is taken up enthusiastically. This was the case with the 'neighborhood community idea' and currently seems to be happening with methods like factor analysis and devices like computers and models." (Faludi, 1973, p. 5)

Therefore it is important that we do not substitute these methodologies for flexibility and the imagination and innovation which is a crucial requirement in the planning process.

SOCIOLOGICAL RESEARCH AT
LASSEN VOLCANIC PARK

First it should be noted that this paper will be addressing planning and goal setting only within the context of parks and recreational planning. This is an important differentiation stemming from the unique character of parks which are generally held to be for our leisure, recreation, relaxation or conservation, as opposed to planning for communities whose character is more attuned to our every day needs, patterns of activity and existence. However, some of the suggestions made on specific park planning could, perhaps be useful to community decision-making and may overlap.

Historically, like planners, park managers considered themselves to be professionals endowed with the necessary expertise to provide efficient and satisfying park planning to their visitors. Much like city planners, their decision-making was based on the welfare of the people but inevitably tinged by the managements personal judgement and values.

The field of Parks and Recreation has been one of the last fields to incorporate social or behavioral research in their planning. Often times their clientele have paid the price of over or under intensive management, because the park managers assumed this was what they desired.

Behavioral Research

Today new and exciting break-throughs have been made in the area of behavioral research in parks. Studies have found that characteristics of visitors of each park site are substantially different from visitors of other sites.

It was found that thru behavioral research parks could begin to adequately address and answer such questions as: Who are the public? What type and quality of experience do they seek? What types and amounts of facilities do they desire and at what price? (Gallagher 1977) The answers to these questions help managers in meeting the expectations and preferences of their users. On the other side of the coin they may help the managers explain why these expectations and preferences cannot be met.

Gallagher states that "providing quality recreations, a legitimate management objective, requires meeting the needs that motivate that objective, whatever they be." (p. 1) He adds that managers cannot always base their planning on popular preference but the awareness of these user needs help to "ensure a quality experience," (p. 2) and help set priorities in the decision-making process.

Government has a dual responsibility in managing parks:

- 1) Providing a quality outdoor experience to its users and
- 2) Maintaining the land in as nearly a natural state as possible.

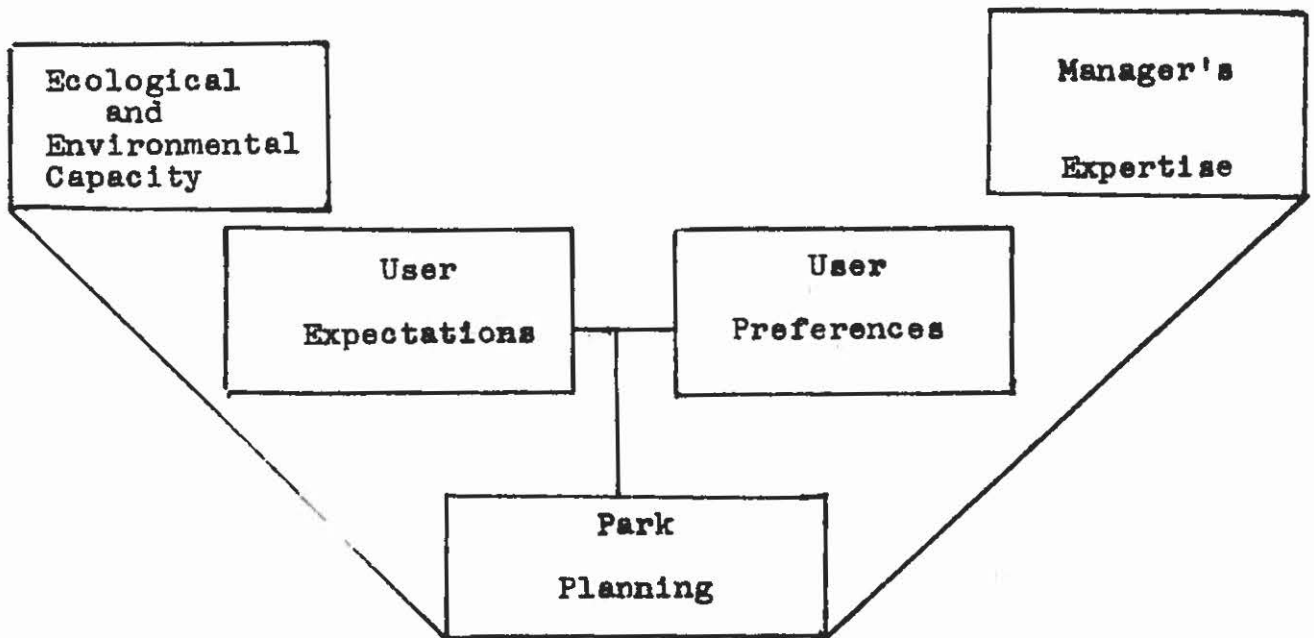
This last responsibility causes conflicts when utilizing solely citizen input in the planning process. Peoples wants, expectations or preferences may be detrimental to the future

future enjoyment of the park to other people. It is here where the manager must step in and exercise his professional expertise. National Parks, especially, are seen as preserves to be enjoyed by the people but more importantly as preserving our option demand. Many people fail to recognize the economic value of parks for the future and it is here that management must override citizen demands.

However, the reverse has been occurring too. Park managers have over-developed areas in the name of public demand and have found they have incorrectly assessed their clientele. MCA's notorious Master Plan for Yosemite is one such example. Hendee (1970) stated that managers perception of camper's views appear to a great extent to be merely a reflection of their own feelings.

Table 2 (p. 18) is a suggested model for park planning. First the ecological and environmental capacities of the site are determined. Secondly, the user expectation are surveyed--what types of experiences and facilities do they expect in the park? Thirdly, user preferences are surveyed. The subtle change in wording can have a tremendous affect on the response. For example what one may expect at Yellowstone National Park (i.e. crowds, noise) may be far different from what one prefers (i.e. quiet and seclusion). Often people surveyed had misconceptions of the park and expected something very different but preferred what they had found. Lastly, the manager analyzes the above data and determines what is feasible and desirable according to park service's organic act, their experience, knowledge and budget constraints.

TABLE 2
Theoretical Model for Park
Planning



This process gives citizens the ability to participate in the planning process and help develop goals in the early stages of the planning process. The managers come in later and though they can reduce proposals, they have effectively left a large part of the goal setting to the people.

In summary, behavioral research conducted both on the expectations and preferences of the users, becomes an effective tool for management to review past development and planning and critique future planning while giving strong emphasis to public participation. Such research, unlike planning, must be a flexible on going process where seasonal differences in clientele can be measured, and changes in goals and objectives can be altered if they are no longer meeting the needs.

Additionally public hearing originally offered to citizens as a input panacea, have not only failed in meeting their needs, but have offered little helpful information to the management. It is understandable why planners and public administrators regard this tool as a waste of time. Generally, in park planning, the public hearings are attended by a few motivated interests groups, who may or may not use the park, and can address no more than two and most often only one issue. Can this really be called citizen participation?

The park planning model suggested in this paper allows the average user who perhaps lacks the motivation, resources or ability, to impact the planning process of the park in a meaningful way.

It appears that many of the earlier described "scientific forecasting" techniques leave little room for legitimate public input. Such planning necessitates blind trust of the 'experts' objective non ideological positions on the part of the public. This is not to say that there is no place for the professional experts in planning; but rather advocating their role as the last filter in the planning process.

BACKGROUND

In the summer of 1975 Tim Gallagher initiated Lassen Volcanic National Park's first sociological survey of its users. Gallagher's study was geared solely at user expectations in different parks as measured by the experience expected (aesthetic, educational, physical, social, psychological) and the number of facilities expected. He surveyed in a wilderness park (Yosemite Backcountry), a low-density park (Lassen), a high-density park (Yosemite Valley) and an urban recreation area (Golden Gate National Recreation Area). It was hypothesized that experiences expected at each would differ from one another and that facilities expected would increase as did the park density.

Purpose

Of the four areas where the study was conducted Lassen became the most interested in the survey results. They began to wonder if such a sociological research study couldn't help them better understand their users. Lassen was in the initial phases of its Master Plan process and frustrated by the traditional public hearings which were dominated by one or two interest groups concerned with no more than one or two issues. The management felt there was a lack of true user input from these proceedings.

Concerned with learning more about the actual park visitors

a user preference study was designed, along with the guidance of Mr. Gallagher, for the visitors of Mt. Lassen. The decision to do a preference study was based on the assumption that what a user might expect in a park (due to word of mouth) might not be what the user preferred to find. It was felt that this type of comparison of facility preference and their location was necessary in determining the real feelings of the users towards the park.

Limitations

The limitations of this study are fairly obvious. Initially there is the sampling period. Surveying was done from June through September, so the results are only representative of the summer users. Though this limits the applicability of the results it is important to remember it is the park's longest and largest season. Lassen has relatively little spring or fall visitation and the winter visitors will be surveyed this year by myself and Mr. Gallagher. Above all this effort must be looked at as a starting point for a whole new planning tool for the park.

Further limitations are the surveys restriction to only the park surveyed and are not applicable to any other site no matter how similar in classification and geographical distribution. Finally, the use of sociological research cannot be looked at as a panacea to planning problems, but rather, one of the management's planning tools.

Definiton of Terms

- 1) User Expectations: Looking forward to an experience

and the looking forward to finding certain types of facilities during a visit to a park and recreation area.

2) User Preferences: The result of the free choice of an individual on experience and certain types of facilities, which they prefer to find during a visit to an outdoor recreation area.

3) Facilities: A development which provides a service or supports a recreational opportunity

4) Outdoor Recreation Area: A resource which can be natural or developed, which provides the opportunity to recreate.

5) Low-density National Park: A semi-wilderness area with light use and development.

PROCEDURE

Time Schedule

The following steps depict the time schedule utilized from the beginning to the end of this report.

Step one (May) was the conceptualization and preparation of the study. This included meeting with Chief Park Naturalist and Tim Gallagher to outline the strategy of investigation. This also included step two, design of the survey schedule. This entailed deciding upon the best form of questionnaire that would obtain the most reliable information. It was decided that the personal interview method was best due to its success in the first survey. Additionally, the areas to be surveyed at Lassen were selected in order to tap three types of users: 1) Campers, 2) Day use visitors and 3) Backcountry users. Also formulated was a coding system so that the questionnaire responses could be key punched for later tabulation.

In step three (June thru September), visitors were interviewed by random selection. Additional copies were kept at the visitor center, with a total of 517 visitors surveyed.

Step four (October thru November) consisted of key punching and tabulation.

Step five (November thru December), included analysis of data, and step six, the completion of the final report.

Before discussing the questionnaire design, it must be mentioned that no pilot test was given on a sub-sample of the survey sample. It was felt that because the questionnaire utilized essentially the same basic format of the expectation survey such pretesting was not necessary.

Design of Questionnaire

The questionnaire was aimed at gathering factual data on some basic visitor demographics, the type of visitor, the types of facilities and recreation activities the visitor preferred, where the visitor would like to see such services located (inside or nearby the park), and finally whether the users perceived the park as a wilderness, low-density or high-density park.

Although the park management realized the main goal was in assessing the preferences for various facilities and activities, they also wished to use the opportunity to get public information on a issue of recent critical importance: Location of park concessionaire facilities and whether or not to allow or offer certain recreational activities, snowmobiling and downhill skiing. This issue has emerged recently due to the closing of Manzanita Lake concessions and the current park master plan process.

The data gathered from this questionnaire was tabulated and analyzed using the SPSS computer program (Statistical Package for the Social Sciences). Cross tabulations of data

were run for the park's use but do not appear in this report.

RESULTS

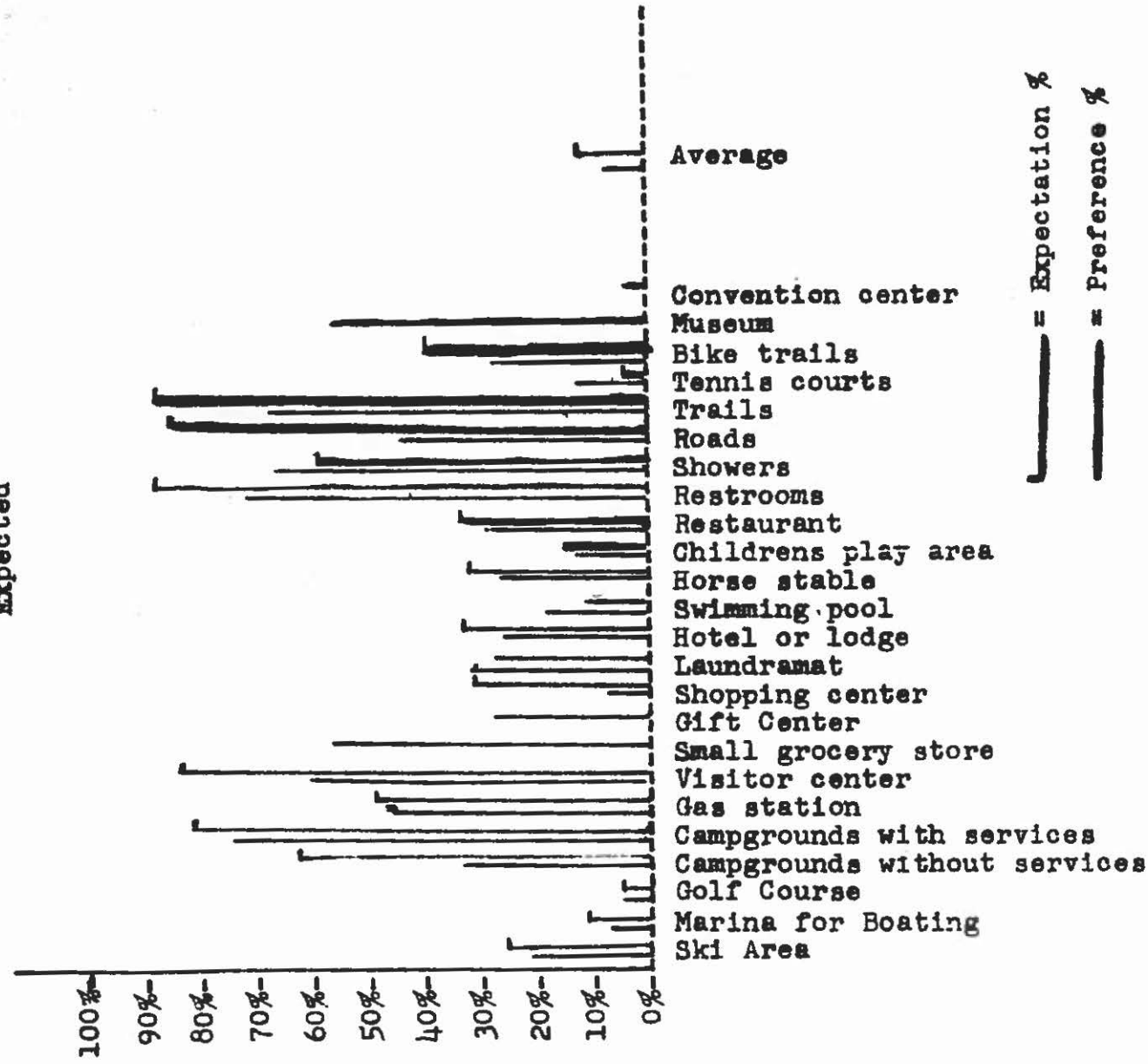
The objectives of this study was to analyze visitor preferences in Lassen Park, to determine if there would be a difference in number of facilities expected and preferred. Additionally, the objective was to compile information on the parks users dealing with recreational activities they preferred, what type of park they saw Mt. Lassen as, where they preferred to find the concessionaire facilities, in addition to general data on the user (age, sex, previous visit, point of origin), to facilitate the use of SPSS sub-program crosstab; thus allowing Mt. Lassen the ability to research the preferences of the various types of visitors.

These four areas of preferences to be commented on are:
1) The amount of facilities preferred; 2) The amount of recreational activities preferred; 3) The preference on concessionaire location; and 4) Whether the users saw Lassen as a wilderness, low-density, or high-density park.

Facilities Preferred

From the 24 facilities listed the visitor was asked to name those (even if already present in the park) that he would prefer to find at Mt. Lassen National Park. Table 3 (p. 28) gives the averages for the 24 facilities as compared with those expected.

Table 3
Comparison of Facilities Preferred
and
Expected



Not all 24 facilities were asked on the expectation study.

This data is most interesting when compared with results from public hearings on visitor preferences, which tended to be much higher. Case-in-point would be the overwhelming pressure at the meetings for a ski area at Lassen and the infinitesimal amount found in favor of that activity. This perhaps suggests the phenomena of one-sided public hearings. However, it is important to remember the users represented in this report are summer visitors and perhaps the discrepancy accrues to this. Further surveying of Lassen's winter users along with essential cost data will be initiated this fall and will hopefully clear up this discrepancy.

Of main interest here is the relatively low number of facilities preferred by the users of Mt. Lassen less than those expected in the last survey. Such information is vital to a park struggling to decide whether a replacement for the Manzanita facilities are truly desired by their visiting public.

Recreational Activities Preferred

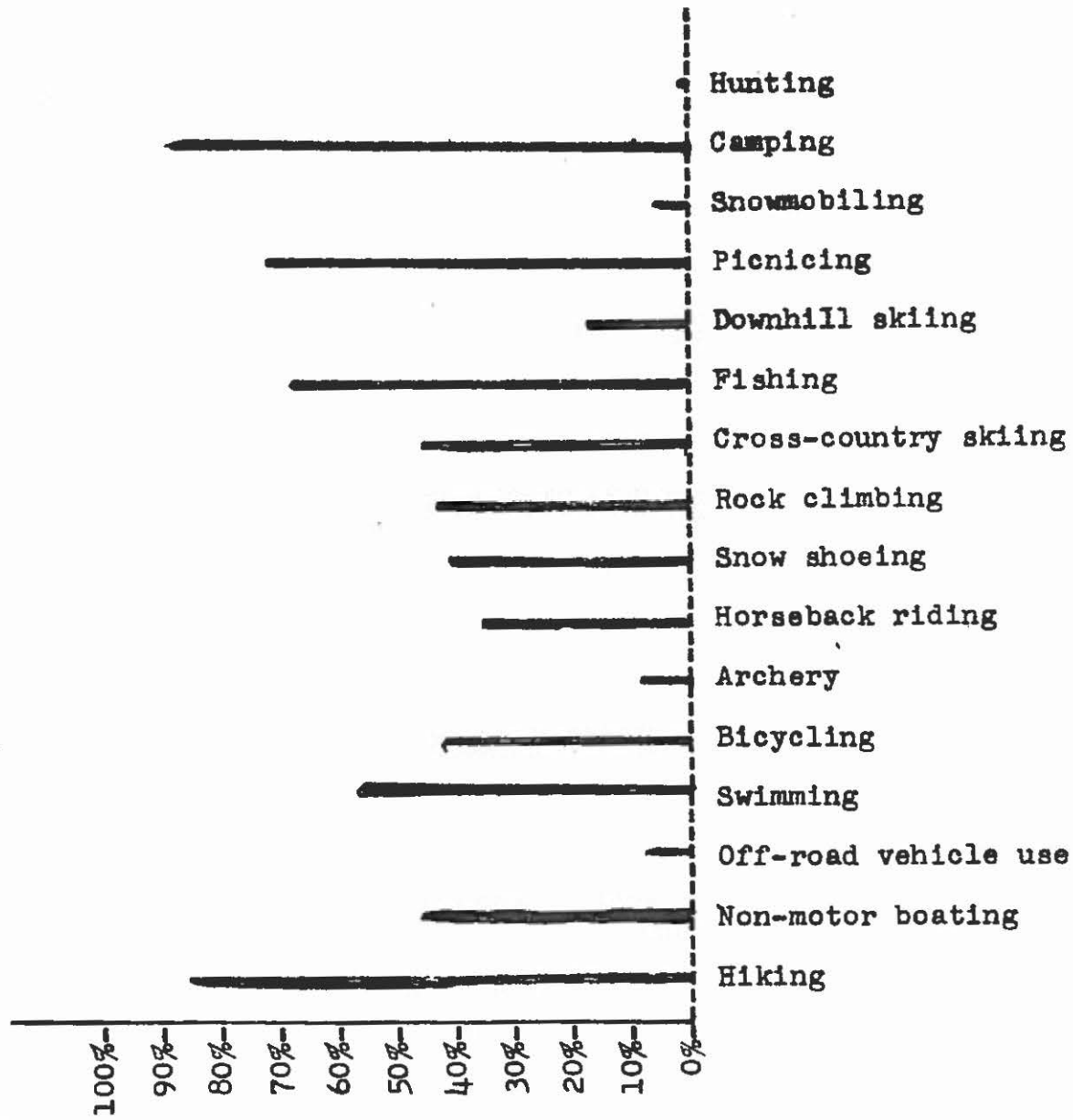
From the 16 recreational activities listed on the survey, the users were asked to list those they would prefer to find at Mt. Lassen National Park. Table 4 (p. 30) gives those percentages.

Of interest is the discrepancy between the user preferences and those presented at public hearings where such activities as snow-mobiling and downhill skiing were given much support.

TABLE 4
Recreational Activities Preferred

at

Mt. Lassen National Park



Location of Concessions

Lassen Park has received much criticism since the closing of the Manzanita concession facility (Museum, cabins, lodge, restaurant, store, gas station, etc.) Recently, the park was funded two million dollars to replace that facility which was closed due to its geologically hazardous position. After the expectation study and several perceptions of the management, doubt arose as to whether the facility should be at all replaced, and if so whether they should be relocated nearby rather than within the park. The expectation study revealed that a large portion of the park's users viewed Mt. Lassen as a semi wilderness park which seemed to contradict the need for a large concessionair operations.

Table 4 (p. 32) shows the preferences of the visitors as to where the concessions should be located. The nearby catagory is of a substantial enough portion to draw doubts as to rebuilding within the park.

Perception as to the Type of Park

The responses in this area strengthen the earlier study which found that Lassen was perceived to be a semi wilderness park by its users. (See Table 5, p. 33) This makes sense coupled with the earlier study's finding that the average trip to Lassen was taken for a highly physical-aesthetic experience. (Gallagher 1975) This information is very useful to the National Park Service. National Parks often are all lumped into one catagory where similar planning goals are expected. But this information shows us that perhaps

TABLE 5
Concession Location

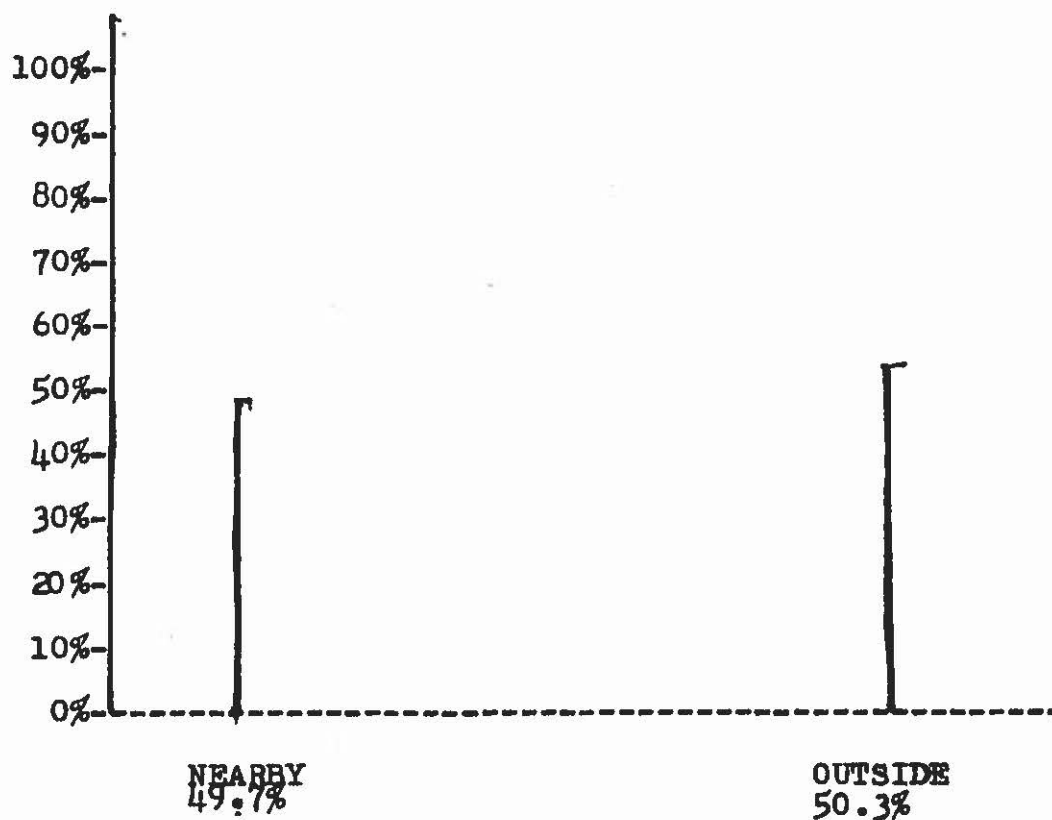
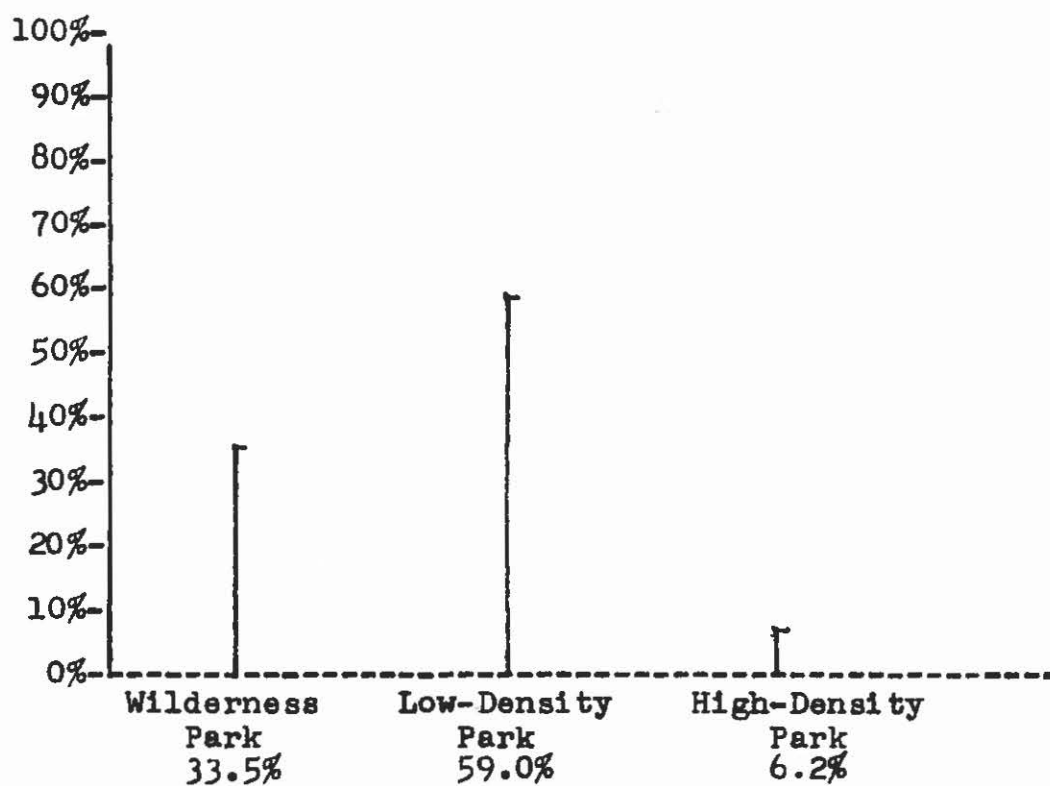


TABLE 6
Perception of Park



there are some special factors which make Lassen very different from other National Parks, Yosemite for example. It is not to difficult then to presume that such factors as location, individual character and available oppotunities of each site may greatly affect expectations or preferences of that site's users.

CONCLUSION AND RECOMMENDATIONS

The researchers found strong evidence that the users of Mt. Lassen tended to view the park as a semi-wilderness or low-density park. Also, they preferred, as they had expected, few facilities and few recreational activities--especially those requiring motorized equipment or facility development. Of further importance, it was found that over fifty percent of the visitors preferred to find the concession facilities and certain recreational activities nearby as opposed to inside Lassen Volcanic Park.

It is recommended that the Lassen Management utilize these conclusions within the planning model presented earlier. Initially the ecological and environmental capacity of the park should be objectively determined. Next the information compiled on user expectations and preferences should be reviewed and given lengthy consideration. Finally, based on analysis of the previous data, the management should act as the last filter using their expertise to coordinate the first two and determine what is feasible and desirable according to the 1) park's organic act, 2) their experience, 3) their knowledge, and 4) budget constraints.

After this process is completed the park can feel safe in drawing up a Master Plan that represents the true clientele, while keeping within the operational guidelines set for them by the Federal Government. Such a planning model as this will increase the ability of the average user to make his views heard and considered in a much more substantial way.

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Age	%	Sex	%	Previous Visit	%
Minus 20	14.3	Male	49.3	Yes	51.8
20-29	27.9	Female	50.3	No	47.0
30-39	26.3	Type of Camper			
40-49	17.0				
50-59	6.0	Day use visitor			
Over 60	7.7	Camper			
		Backcountry user			

Length of Stay	%	Point of origin	%
Less than 12 hours	24.0	City over 20,000	71.0
One to two days	31.3	City under 20,000	27.7
Three to five days	26.9		
Over five days	17.8		

Concessionaire Facility Location	%
Inside	49.7
Nearby	50.3

Facilities	%	Facilities	%
Ski area	16.1	Trails	69.1
Marina	7.5	Tennis courts	7.2
Golf course	2.7	Bike trails	25.0
Campgrounds without	32.3	Museum	57.4
Campgrounds with	64.8	Convention center	2.5
Gas station	47.4		
Visitor center	69.6		
Sm. grocery store	62.9		
Gift center	25.1		
Shopping center	8.9		
Laundramat	31.1		
Hotel or lodge	22.4		
Swimming pool	15.7		
Horse stable	22.8		
Childrens play area	17.8		
Restaurant	26.3		
Restrooms	72.9		
Showers	63.1		
Roads	40.6		

Recreational Activities	%
Hiking	85.1
Non-motor boating	46.6
Off-road vehicle use	7.4
Swimming	57.8
Bicycling	40.8
Archery	7.7
Horseback riding	32.3
Snow shoeing	36.0
Rock climbing	40.0
Cross-country skiing	42.0
Fishing	61.5
Downhill skiing	15.9
Picnicing	71.4
Snowmobiling	5.0
Camping	87.6
Hunting	3.7

As with facilities the percentages listed represent yes responses.

Type of Park	%
Wilderness	33.5
Low-density	59.0
High-density	6.2

If any questions do not add up to 100%, this is because of the exclusion of missing data.

General Frequencies for Survey

Sex: Male- 49.3% Female- 50.3%
Previous Visit: Yes- 51.8% No- 47.0%
Point of Origin: Over 20,000- 71.0% Under 20,000- 27.7%
Age: under 20- 14.3% 20-29- 27.9% 30-39- 26.3%
40-49- 17.0% 50-59- 6.0% over 60- 7.7%

Type of Visitor: Day use- 25.7%
Camper- 60.5%
Backcountry- 13.2%

Length of Visit: Less than 12 hrs.- 24.0%
1 to 2 days- 31.3%
3 to 5 days- 26.9%
over 5 days- 17.8%

Facilities--% of yes responses.

Ski area- 16.1	Pool- 15.7
Marina- 7.5	Horse stable- 22.8
Campground without services- 32.3	Childrens Play- 17.8
Campground with services- 64.8	Restaurant- 26.3
Golf course- 2.7	Restroom- 72.9
Gas station- 47.4	Showers- 63.1
Visitor center- 69.6	Roads- 40.6
Small grocery store- 62.9	Trails- 69.1
Gift center- 25.1	Tennis courts- 7.2
Shopping area- 8.9	Bike trails- 25.0
Laundramat- 31.1	Museum- 57.4
Hotel- 22.4	Convention center- 2.5

Facility Location: Inside- 49.7 Nearby- 50.3

Recreational Opportunities--% of yes responses.

Hiking- 85.1	Rockclimbing- 40.0
Non-motor boating- 46.6	X-Skiing- 47.0
ORV's- 7.4	Fishing- 61.5
Swimming- 57.8	Downhill skiing- 15.9
Bicycling- 40.8	Picnicing- 71.4
Archery- 7.7	Snowmobiling- 5.0
Horseback riding- 32.3	Camping- 87.6
Snow shoeing- 36.0	Hunting- 3.7

Type of Park: Wilderness park- 33.5
Low density park- 59.0
High density park- 6.2

Comparison Between Expectation and Preference

Expectation survey results are in the right coulumn, preference left

Age		Difference	
Minus 20	11.6%	14.3%	+2.7%
20-29	30.9	27.9	-3.0
30-39	23.6	26.3	+2.7
40-49	15.0	17.0	+2.0
50-59	8.3	6.0	-2.3
60 plus	10.3	7.7	-2.6
Sex			
Male	55.8%	49.3%	-6.5%
Female	44.2	50.3	+6.1
Previous Visit			
Yes	40.9%	51.8%	+10.9%
No	59.1	47.0	-12.1
Facilities			
Ski area	25.6%	16.1%	-9.5%
Marina	13.6	7.5	-6.1
Golf course	2.3	2.7	+0.4
Camp without	60.1	32.3	-27.8
Camp with	79.1	64.8	-14.3
Gas station	48.2	47.4	-0.8
Visitor center	83.7	69.6	-14.1
Small store	----	62.9	-----
Gift center	----	25.1	-----
Shopping center	32.6	8.9	-23.7
Laundramat	24.6	31.1	+7.5
Hotel	36.9	22.4	-14.5
Pool	9.0	15.7	+6.7
Stable	30.9	22.8	-8.1
Play area	19.6	17.8	-1.8
Restaurant	32.2	26.3	-5.9
Restrooms	88.4	72.9	-15.5
Showers	56.1	63.1	+7.0
Roads	79.7	40.6	-39.1
Trails	88.0	69.1	-18.9
Tennis courts	2.7	7.2	+4.5
Bike Trails	37.2	25.0	-12.2
Museum	----	57.4	-----
Convention	----	2.5	-----

Sample Survey Form

Age Below 20___ 20-29___ 30-39___ 40-49___ 50-59___ Over 60___

Sex Male___ Female___ Previous Visit Yes___ No___

Point of Origin Population over 20,000___

Population under 20,000___

#1-In general, during a visit to Mt. Lassen, would you consider yourself to be:

1-Day use visitor___

2-Camper___

3-Backcountry user___

#2-How long will your visit to Mt. Lassen National Park be?

1-Less than 12 hours___

2-One to two days___

3-Three to five days___

4-Over five days___

#3-Which of the below facilities do you prefer to find at Mt. Lassen National Park?

- | | |
|--|--|
| ☐ 1. Ski area | ☐ 13. Swimming pool |
| ☐ 2. Marina for boating | ☐ 14. Horse stable |
| ☐ 3. Golf course | ☐ 15. Childrens play area |
| ☐ 4. Campgrounds without services | ☐ 16. Restaurant |
| ☐ 5. Campgrounds with services | ☐ 17. Restrooms |
| ☐ 6. Gas station | ☐ 18. Showers |
| ☐ 7. Visitor center | ☐ 19. Roads |
| ☐ 8. Small grocery store | ☐ 20. Trails |
| ☐ 9. Gift center | ☐ 21. Tennis courts |
| ☐ 10. Shopping center | ☐ 22. Bike trails |
| ☐ 11. Laundramat | ☐ 23. Museum |
| ☐ 12. Hotel or lodge | ☐ 24. Convention center |

#4-Where should concessionaire facilities be located?

1-Inside Mt. Lassen National Park___

2-Nearby Mt. Lassen National Park___

#5-Would you call Mt. Lassen National Park a:

* 1-Wilderness area__

2-Low use area__

3-High use area__

4-Recreation area__

Sex _____ Male _____ Female _____ Previous visit Yes _____ No _____

Point of Origin _____ Population over 20,000 _____

Population under 20,000 _____

#1-In general, during a visit to Mt. Lassen, would you consider yourself to be:

1-Day use visitor _____

2-Camper _____

3-Backcountry user _____

#2-How long will your visit to Mt. Lassen National Park be?

1-Less than 12 hours _____

2-One to two days _____

3-Three to five days _____

4-Over five days _____

#3-Which of the below facilities do you prefer to find at Mt. Lassen National Park?

- | | |
|--------------------------|---------------------------------|
| ☐ | 1. Ski area |
| ☐ | 2. Marina for boating |
| ☐ | 3. Golf course |
| ☐ | 4. Campgrounds without services |
| ☐ | 5. Campgrounds with services |
| ☐ | 6. Gas station |
| ☐ | 7. Visitor center |
| ☐ | 8. Small grocery store |
| ☐ | 9. Gift center |
| ☐ | 10. Shopping center |
| ☐ | 11. Laundromat |
| ☐ | 12. Hotel or lodge |

- | | |
|--------------------------|-------------------------|
| ☐ | 13. Swimming pool |
| ☐ | 14. Horse stable |
| ☐ | 15. Childrens play area |
| ☐ | 16. Restaurant |
| ☐ | 17. Restrooms |
| ☐ | 18. Showers |
| ☐ | 19. Roads |
| ☐ | 20. Trails |
| ☐ | 21. Tennis courts |
| ☐ | 22. Bike trails |
| ☐ | 23. Museum |
| ☐ | 24. Convention center |

#4-Where should concessionaire facilities be located?

1-Inside Mt. Lassen National Park _____

2-Nearby Mt. Lassen National Park _____

#5-Would you call Mt. Lassen National Park a:

1-Wilderness area _____

2-Low use area _____

- 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69

Sex Male____ Female____ Previous Visit Yes____ No____

Point of Origin Population over 20,000____

Population under 20,000____

#1-In general, during a visit to Mt. Lassen, would you consider yourself to be:

1-Day use visitor____

2-Camper____

3-Backcountry user____

#2-How long will your visit to Mt. Lassen National Park be?

1-Less than 12 hours____

2-One to two days____

3-Three to five days____

4-Over five days____

#3-Which of the below facilities do you prefer to find at Mt. Lassen National Park?

- | | |
|--------------------------|---------------------------------|
| ☐ | 1. Ski area |
| ☐ | 2. Marina for boating |
| ☐ | 3. Golf course |
| ☐ | 4. Campgrounds without services |
| ☐ | 5. Campgrounds with services |
| ☐ | 6. Gas station |
| ☐ | 7. Visitor center |
| ☐ | 8. Small grocery store |
| ☐ | 9. Gift center |
| ☐ | 10. Shopping center |
| ☐ | 11. Laundramat |
| ☐ | 12. Hotel or lodge |

- | | |
|--------------------------|-------------------------|
| ☐ | 13. Swimming pool |
| ☐ | 14. Horse stable |
| ☐ | 15. Childrens play area |
| ☐ | 16. Restaurant |
| ☐ | 17. Restrooms |
| ☐ | 18. Showers |
| ☐ | 19. Roads |
| ☐ | 20. Trails |
| ☐ | 21. Tennis courts |
| ☐ | 22. Bike trails |
| ☐ | 23. Museum |
| ☐ | 24. Convention center |

#4-Where should concessionaire facilities be located?

1-Inside Mt. Lassen National Park____

2-Nearby Mt. Lassen National Park____

#5-Would you call Mt. Lassen National Park a:

1-Wilderness area____

2-Low use area____

3-High use area____

Sample interview form for winter survey at ~~Mt.~~ Lassen, Volcanic N.D.

Sex Male____ Female____ Previous Visit Yes____ No____

Point of Origin Population over 20,000____ County____
Population under 20,000____ City____

Age -20 29 39 49 59 60+

#1-In general during a winter visit to Mt. Lassen do you consider yourself to be:

X-skier____
Snowshoe____
Downhill skier____
Other____
First visit____

#2-Which of the below facilities do you prefer to find at Mt. Lassen National Park?

(We will use the same 24 facilities used on the preference survey.)

#3-Where should concessionaire facilities be located?

Inside ~~Mt.~~ Lassen NP____
Nearby ~~Mt.~~ Lassen NP____

#4-Which of the below recreational activities do you prefer to find in Mt. Lassen NP?

(We will use the same 16 recreational activities used on the preference study.)

#5-Would you call Mt. Lassen NP a:

Wilderness park____
Low density park____
High density park____

#6-Do you, have you, or would you like to learn how to downhill ski?

Yes____ No____

#7-Martial status Single____ Married____

#8-Do you consider yourself to be a: (skier)

Beginner____
Intermediate____
Advanced____

#9-How often during a winter season do you ski, in a normal year?

0-1__ 2-3__ 4-6__ 7-10__ 11-15__ 16-20__

#10-How often during a winter season do you ski Mt. Lassen, in a normal year?

0-1__ 2-3__ 4-6__ 7-10__ 11-15__ 16-20__

#11-Are the ski slopes at Mt. Lassen challenging enough for you?

Not applicable_____

Yes_____

No_____

#12-If Mt. Lassen were expanded to an inter-advanced ski area with chair lifts, would you be willing to pay:

0 additional \$s_____

\$1 additional_____

\$2 additional_____

\$3-4 additional_____

\$5-6 additional_____

\$7-10 additional_____

#13-If Mt. Lassen were expanded would you be willing to stay overnight at local accommodations, assuming their cost to be similar to other resorts. (i.e. Tahoe, Mammoth, Shasta)

Yes_____

No_____

#14-Income

0-5,000_____

5,001-7,500_____

7,501-10,000_____

10,001-15,000_____

15,001-20,000_____

#15-Do you want to see Mt. Lassen ski area expanded?

Yes_____

No_____

#16-Educational Background

Less than High School_____

1 year college_____

2-3 years college_____

BA or BS_____

MA or MS_____

Dr._____

#17-If still in college what school do you attend?_____

#18-Where should the winter concessionaire facilities be located?

Inside Mt. Lassen NP_____

Nearby Mt. Lassen NP_____

Tim Gallagher
916-342-1037
Box 108A Cohasset Stage
Chico CA. 95926

and CSC interest and
for park technician.

Total Facility Summary

Money Breaker

Facility	Wilderness	National Park	Urban Rec. Area
Ski area	14.2	40.7	27.6
Marina	1.4	24.9	61.2
Golf course	1.2	14.1	74.2
Campgrounds without	48.8	63.0	28.5
Campgrounds with	20.7	83.4	57.2
Gas station	10.3	57.5	61.1
Visitor Center	13.2	81.0	60.9
Shopping area	3.8	49.8	58.8
Laundromat	1.2	39.8	52.3
Hotel	8.9	67.1	54.0
Swimming pool	3.1	28.2	74.0
Horse Stable	9.6	47.4	52.4
Childrens play	1.7	30.6	79.0
Restaurant	3.5	44.2	59.5
Restrooms	15.1	87.4	79.7
Showers	7.0	53.6	54.2
Roads	28.7	84.5	68.0
Trails	83.1	87.3	66.2
Tennis Courts	0.8	16.2	74.4
Bike Trails	7.2	49.7	68.1

Summary Of Wilderness Question

Facility	Wild	Mt. L	Yos.	GGNRA	Total
Ski area	7.0	2.7	14.8	22.3	14.2
Marina	0.0	0.3	1.3	2.4	1.4
Golf course	0.9	0.0	0.7	2.4	1.2
Campgrounds without	55.7	41.9	45.1	55.5	48.9
Campgrounds with	10.4	9.3	21.3	29.2	20.7
Gas station	0.9	4.0	7.5	19.3	10.3
Visitor center	4.3	12.0	10.7	18.7	13.2
Shopping area	3.5	0.7	3.6	6.0	3.8
Laundramat	1.7	0.0	1.5	1.4	1.2
Hotel	3.5	0.7	7.7	16.5	8.9
Swimming pool	2.6	0.0	1.3	7.0	3.1
Horse stable	4.3	2.7	11.4	13.1	9.6
Childrens play	1.7	0.7	2.8	1.2	1.7
Restaurant	2.6	0.3	3.7	5.4	3.5
Restrooms	12.2	14.6	16.5	14.7	15.1
Showers	8.7	4.7	6.2	8.9	7.0
Roads	4.3	15.3	24.0	47.3	28.7
Trails	93.9	69.8	86.0	85.9	83.2
Tennis Courts	0.9	0.7	0.7	0.8	0.8
Bike trails	3.5	3.3	6.4	11.3	7.2
Mean-----	11.13	9.18	13.66	18.46	14.18

Summary Of National Park Question

Facility	Wild	Mt. L	Yos.	GGNRA	Total
Ski area	36.5	25.6	38.6	53.1	40.7
Marina	13.9	13.6	29.2	29.8	25.0
Golf course	9.6	2.3	13.3	23.1	14.1
Campgrounds without	63.5	60.1	59.0	69.2	63.1
Campgrounds with	87.0	79.1	83.9	84.9	83.5
Gas station	65.2	48.2	63.7	55.1	57.6
Visitor center	88.7	83.7	82.0	76.7	81.1
Shopping area	47.8	32.6	61.8	47.9	49.8
Laundramat	39.1	24.6	51.7	36.6	39.8
Hotel	74.8	36.9	71.7	78.7	67.2
Swimming pool	25.2	9.0	35.8	32.4	28.2
Horse stable	61.7	30.9	54.9	46.3	47.5
Childrens play	28.7	19.6	36.9	31.0	30.6
Restaurant	59.1	32.2	52.6	39.2	44.3
Restrooms	85.2	88.4	90.3	84.5	87.5
Showers	60.0	56.1	59.7	45.1	54.0
Roads	80.9	79.7	87.8	84.9	84.6
Trails	91.3	88.0	91.9	81.3	87.4
Tennis courts	12.2	2.7	17.8	23.5	16.2
Bike trails	59.1	37.2	61.4	42.7	49.8
Mean-----	54.47	42.52	57.19	53.3	52.6

Summary of Urban Recreation Question

Facility	Wild	Mt. L	Yos.	GGNRA	Total
Ski area	22.6	24.9	25.5	32.6	27.6
Marina	52.2	40.9	59.9	76.9	61.3
Golf course	71.3	48.8	77.2	87.1	74.3
Campgrounds without	15.7	24.3	27.3	35.4	28.6
Campgrounds with	48.7	63.5	58.6	54.1	57.3
Gas station	70.4	64.5	65.0	53.1	61.2
Visitor center	59.1	60.5	62.7	59.8	61.0
Shopping area	57.4	54.5	64.4	55.9	58.8
Laundramat	51.3	48.8	59.4	47.3	52.4
Hotel	61.7	44.9	59.4	52.1	54.0
Swimming pool	75.7	61.1	76.2	80.3	74.5
Horse Stable	50.4	41.5	58.2	53.3	52.4
Childrens play	77.4	66.8	77.0	89.3	79.1
Restaurant	66.1	52.2	67.0	54.5	59.5
Restrooms	87.8	87.7	75.1	78.3	79.8
Showers	50.4	62.1	53.0	51.9	54.3
Roads	74.8	69.4	64.6	69.6	68.1
Trails	48.7	54.8	67.2	76.1	66.3
Tennis courts	70.4	52.5	79.6	83.3	74.5
Bike trails	78.3	59.8	70.2	68.8	68.2
Mean-----	59.52	54.17	62.37	62.98	60.66

Point of Origin

Region	Mt. L 301		Wild 115		Yos 534		GGNRA 503		Total 1453	
North Coast	4	1.3	0	0.0	12	2.2	7	1.4	23	1.5
North State	56	18.6	5	4.3	36	6.7	27	5.3	124	8.5
San Joaquin	18	5.9	13	11.3	73	13.6	31	6.1	140	9.6
Coastal Reg.	7	2.3	1	0.8	24	4.5	19	3.7	51	3.5
LA/Long Beach	57	18.9	33	28.7	106	19.8	42	8.3	238	16.4
San Diego	13	4.3	6	5.2	14	2.6	13	2.5	46	3.1
Desert	5	1.6	0	0.0	5	0.9	7	1.4	17	1.1
F	66	21.9	45	39.1	117	21.9	266	52.8	494	33.9
West. States	28	9.3	5	4.3	47	8.8	30	5.9	110	7.5
Midwest St.	14	4.6	0	0.0	30	5.6	17	3.3	61	4.2
East Coast	18	5.9	5	4.3	39	7.3	21	4.1	83	5.7
South Coast	10	3.3	2	1.7	13	2.4	9	1.7	34	2.3
Law/Alaska	1	0.3	0	0.0	2	0.3	0	0.0	3	0.2
Out of Country	4	1.3	0	0.0	16	2.9	14	2.7	34	2.3

Age

Age	Mt. Lassen	Yos.	GGNRA	Wilderness	Total
Minus 20	11.6	13.7	14.1	31.3	14.8
20-29	30.9	28.5	20.9	25.2	26.1
30-39	23.6	21.5	21.5	13.0	23.1
40-49	15.0	15.0	13.7	13.0	14.4
50-59	8.3	11.6	14.7	14.8	12.3
60 plus	10.3	9.7	15.1	2.6	11.1

Sex

Male	55.8	54.1	53.3	53.9	54.2
Female	44.2	45.9	46.7	46.1	45.8

Previous Visit

Yes	40.9	60.5	50.1	50.4	52.0
No	59.1	39.5	49.3	49.6	47.8

Experience Summary

Experience	Wild	Mt.L	Yos.	GGNRA	Total
1. Companionship	3.47	3.70	7.61	13.14	8.40
2. Recr. Skills	2.60	1.79	1.81	4.24	2.71
3. Self-confidence	3.76	1.68	3.12	5.31	3.63
4. Explore	14.20	15.26	14.29	8.43	12.45
5. Natural Beauty	27.24	23.45	23.03	8.16	18.30
6. Social Recog.	0.0	0.0	0.74	0.53	0.46
7. Scholastic	0.57	0.33	0.31	1.32	0.69
8. Tension Reduction	3.18	5.16	7.74	16.75	7.89
9. Exercise	9.56	3.92	4.18	8.56	6.07
10. Part of Nature	11.30	13.13	9.42	4.78	8.72
11. Family/friend	6.08	11.44	10.79	12.94	11.30
12. Knowledge of Nature	4.92	10.88	6.05	5.97	6.92
13. Psyc. Learn	5.21	2.69	3.24	5.44	4.06
14. Health	4.92	1.68	2.37	5.37	3.47
15. Personal Senses	2.89	4.82	5.24	4.98	4.88
1. Aesthetic	41.44	41.41	37.70	17.92	31.90
2. Physical	28.69	20.87	20.84	22.37	22.00
3. Psychological	12.17	9.53	14.10	21.51	15.58
4. Social	9.56	15.15	19.16	26.62	20.16
5. Educational	13.01	8.17	11.55	8.11	10.33

Value of Mt. Lassen Preference Study

Despite policy and resource constraints, there must be latitude for managers to consider the desires of the public; and to ensure the providing of a quality experience. Behavioral research can contribute to the planning and operations of management objectives by examining the expectations and preferences of users.

Today the National Park Service has less money and manpower to cope with visitor management. Gary Soucie in an article in Audubon Magazine (1976) pointed to the fact that in 1960 each park operations employee had to cope with 27,000 visitor days. By the year 1975, the ratio had expanded to 44,000 visitor days for each employee.

At most park areas, behavioral research should be given equal considerations to resource and scientific research. Planning decisions must consider the clientele who recreate, as it has become socially and psychologically important to these users. There are a variety of ways that behavioral research can help with management and planning objectives of outdoor recreation sites.

Behavioral research can help assess who and how many individuals use each particular facility. It should be fundamental to all recreation planning that managers know the extent of the recreation resource.

Behavioral research can show possible methods in protection and management of the characteristics of the resources and facilities that give these resources their recreational value. The park area and facilities are dependent upon some type of control on the behavior of the users and control of the users is dependent upon knowing who they are and what

they expect to do during their visit.

Management must provide an appropriate level of use and an appropriate level of development; both of which must be in accordance with the area's physical and ecological needs. Behavioral research could help answer the questions of what level and rate of use are desirable? How many facilities? How much development is expected and preferred by the users? Who will pay the cost?

Managers must, when feasible, try to meet the needs and desires of the recreationist, and his use of the resource. If management knows these needs and desires as related to recreation, interpretive programs could be designed around the users' interest.

Management must plan the resource so as to ensure the satisfaction of the users' experience. In addition a resource must be planned and preserved so as to ensure the future satisfaction of users. Thus it is important to find ways of meeting the needs of recreationist while maintaining the land in a natural state.

Research could show possible misconceptions managers have about users expectations and preferences. This could aid in improved interpretive programing and facility development, while lowering cost which could result from possible miscalculations.

It is important for managers of outdoor recreation areas not to lose sight of their purpose. They must not only provide for the enjoyment and use of the public but must also preserve and protect the land they manage. Behavioral research is one possible way in which these two potentially incompatible objectives might be able to exist or act together harmoniously.

Aspects of Study

1. To arrive at basic data on users of Mt. Lassen National Park.
2. To determine if users of Mt. Lassen National Park can be divided into three distinct groups; 1) Day user, 2) Camper and 3) Backpacker.
3. To determine length of visits to Mt. Lassen National Park.
4. To determine preferences of users. To determine if groups differ on preferences.
5. To see if certain statistically different groups use the park for significantly different lengths of time.
6. To establish feeling toward possible concessionaire development.
7. Crosstabulations between numbers one thru four from the above listings.