

INTERPRETIVE ACTIVITY INVENTORY
INSTRUCTIONAL HANDBOOK FOR MT. RAINIER

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INSTRUCTIONAL HANDBOOK

The purpose of this handbook is to explain to you, the Park Service interpreter, why and how the "Interpretive Activity Inventory Card" being tested this summer in Mount Rainier National Park is to be used. If, after reading this, you have any questions pertaining to this booklet or to the card, please contact:

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WHY?

The Interpretive Activity Inventory Card is designed to meet two objectives.

First, it will facilitate the preparation of the Annual Public Contact Report required of all national parks by providing a systematic method for recording the number of visitors using various interpretive activities.

Second, it can help collect important information on park visitors which should prove invaluable in planning future park interpretive efforts.

A basic truth relating to the use of national parks is that park visitors form a diverse population. Different types of groups use parks in different ways and a variety of interpretive approaches are required to "connect" NPS service with various visitor publics. A park-wide interpretive policy aimed at any single audience, or at an all-encompassing "average" audience will fall short of "connecting" for the following reasons:

1. Different group types affect behavior differently. Parents and children interact and communicate interpretive information between themselves in a way quite distinct from that found among peers of a single generation, for example, or among strongly organized tour groups, and...
2. Children have levels of understanding and behavioral patterns different from those of adults. Therefore, interpretation must mold itself to fit these differences.
3. Traditionally, males fill different roles in our society than do females, especially in the family setting, and this differentiation often influences behavior, expectations, and choice or assignment of activities within parks.
4. It is known that local visitors tend to seek different experiences in parks than do out-of-state visitors, that they often bring with them prior knowledge of the park not possessed by others, and that they do not return to static interpretive exhibits or presentations. Similarly...
5. Repeat visitors also seek activities which build upon the knowledge gained in prior visits, whereas new visitors to a park would benefit from an introductory type of interpretive message.
6. Day-use visitors in most parks far outnumber those who remain overnight, yet their participation in many types of interpretive activities is not proportional to their numbers, either because day-use visitors sightsee without leaving their cars, or because they spend their time in picnicking, fishing, photography, or other day-time activities where interpretation is not made available.

The Interpretive Activity Inventory Card can help to identify the types of visitor groups within the park and to pinpoint their times and places of concentration, allowing assumptions concerning their behavior in relation to interpretive programs to be tested. And as programs and staff are adjusted and rotated to fit visitor needs, the information collected can be used to monitor changes in use and contact patterns both within a single season and from year to year. This information will provide feedback to the manager, indicating who is being contacted, as well as how many. Such feedback is indispensable in bringing the public and interpretive programs closer together.

HOW?

A card will be filled out for each interpretive activity offered. In those cases where a block of time is sampled, a separate card should be completed for each sampling period. The card is small enough to fit in your shirt pocket, but it should not be bent, creased, or torn. Make every effort to record information accurately and as soon as it is practical to do so. The card should take only a very few minutes to complete, and it should be turned into the district headquarters as promptly as possible.

You will no doubt discover that much of the information asked for on the card can be recorded before an interpretive presentation is made. These items will be preceded by an asterisk (*) when described in this handbook.

When marking on the card, use a ballpoint pen if available. Draw a single diagonal line from corner to corner across the appropriate square. For example, if you were leading an interpretive walk you would find the shaded section titled "Conducted Trips" on the card and draw a line through the square labeled "Walks & Hikes" in that section. The same would be done for the sections pertaining to day of the week, time of day, and weather conditions. Do not disturb the holes along the margin. They are used in a mechanical data processing operation called "needlesorting".

Those sections calling for numerical estimates can be filled out either by entering the number on the line provided (e.g., 27 under "Number of Visitor Contacts") or by drawing a diagonal line through the square including the total within its range (26-50). This latter option allows for an estimation to the nearest 25 visitors rather than calling for an exact count.

The sections on the right-hand side are filled out the same way, but the numbers in the squares refer to percentages (as do those in the bottom two squares on the left-hand side). A typical entry might be 50% male, 50% female which could be entered either on the lines provided under the headings "Male" and "Female", or by marking the appropriate squares in the two columns to the right (41-60% in both cases). This latter entry allows for an estimation to the nearest 20%.

If an error is made while filling out the card, color in the incorrect square completely and enter a new mark in the correct square.

DEFINITIONS OF THE VARIABLES

The card you will be using consists of three basic types of variables, described in the following order:

1. Situational Variables.
2. Interpretive Activity Variables.
3. Composition Factors.

The situational variables are scattered around the front of the card (day of week, time of day, weather conditions) and are also found on the reverse side. These are variables which have been shown to influence the number and type of visitors attending interpretive activities.

The interpretive activity variables are divided into shaded categories (except for "Number of Visitor Contacts") and are located on the left-hand side of the front of the card. All National Park Service areas are required to submit an Annual Public Contact Report listing the number of visitors contacted by each of these activities. However, not all of the variables included will apply to your park or duty assignment. Read through the definitions of the variables and familiarize yourself with those you will be most concerned with.

The composition factors are found on the right-hand side and in the bottom two squares on the left-hand side; they are recorded in percentages. The reasons for their inclusion are listed in the first section of this booklet, entitled "WHY?"

Situational Variables

* Day of Week (top of card) - Mark the square corresponding to the day on which the activity is given. If it is a national holiday (e.g., Independence Day, Labor Day) mark the "Holiday" square in addition to the week day square. Do not mark as holidays those days which are part of a holiday weekend but are not the actual holiday (e.g., Saturday, July 3). This information can be recovered later if needed.

* Time of Day (top of card) - A.M. means dawn to 12:00 noon. P.M. means 12:00 noon to 6:00 P.M. Eve. means after 6:00 P.M.

* Weather Conditions (Left side of card front) - These should be recorded for every interpretive activity for which a card is filled out, whether held indoors or outdoors. If weather conditions change during the program or activity this should be noted in the "Remarks" section on the back of the card and all applicable weather condition squares should be checked on the card's front.

- A. Clear - Cloud cover at 50% or less.
- B. Over cast - Cloud cover greater than 50%.
- C. Precipitation - Including rain, snow, hail, or heavy fog.

Other unusual weather conditions that might affect attendance at interpretive activities should be mentioned in the "Remarks" section, such as unseasonably warm or cool temperatures, lightning storms, wind storms, etc.

* Date (back of card, top line) - Record the month, day, and YEAR on which the activity occurs. Also list sampling periods for self-conducted activities, if applicable.

* Park - List the area within the National Park System in which the activity is offered.

* District - Enter the district within the park, if applicable (e.g., Longmire).

* Place/Location - List the location within the district and/or park as precisely as possible (e.g., amphitheater - Cougar Rock campground). For roving interpretive duty fill out a separate card for each location visited. Contacts en route to or from a location may be recorded on the card used for the closest destination point.

* Remarks - Use this space to list any other significant information, such as unusual weather conditions, specific descriptions of activities, such as puppet shows, recorded as "Other" or "General Interpretive Talks" on the front of the card, reasons why certain pieces of information were not recorded, etc.

Interpretive Activity Variables

Introduction - These variable categories are located on the shaded left-hand side of the card and consist of the interpretive activities to be recorded, beginning with "Conducted Trips" near the top of the card and running down to "Roving Interpretive Contacts". Together with "Number of Visitor Contacts", they comprise some of the most important pieces of data to be gathered.

With self-guiding or automatic interpretive facilities it is often impractical to monitor use on a full-time basis. In such cases, it may be necessary to observe and record visitor contacts during a "sample" block of time. If this is done, it is vitally important that both the date and the exact time of observation be accurately recorded in the "Date" section on the back of the card (e.g., August 17, 1976, 9:00 A.M. - 11:00 A.M.). Only visitor contacts made during this sampling period should be recorded.

Do not make casual estimates of the number of users for any interpretive activity. If you have no idea as to how many visitor contacts were made during a presentation it is best to mark the square labeled "Unknown" (UNK) in the section on visitor contacts.

Conducted Trips (Walks & Hikes, Ruins & Historic Buildings, Cave Trips, Other Conducted Trips). - Include all scheduled or nonscheduled trips conducted by Service personnel. If the "Other" square is used, specify the type of conducted trip in the section labeled "Remarks" on the back of the card, such as auto caravans (guided), boat, bus, bicycle, horseback trips, etc. Try to get a cumulative estimate for the visitor contacts section, including those who joined the trip after it began and those who dropped out before it finished. If available, a hand counter would be helpful for recording this information.

Live Talks (Information and Orientation, General Interpretive Talks, Evening Programs). - Include all illustrated or unillustrated talks given by park personnel for visitors within the park (excluding talks given as part of "Conducted Trips", "Other Conducted Activities", "Attended Stations", and "Environmental Education Programs").

These talks may include:

- A. Short introduction or orientation talks usually less than 10 minutes.
- B. Major organized talks that are at least 15 minutes long, such as evening programs.
- C. General talks, such as puppet shows, historic house, visitor center, on-site features and other interpretive talks that do not fit into categories A or B above. (List under "General Interpretive Talks" and specify on back of card under "Remarks").

Also include live talks given by non-Service speakers under Service sponsorship. For very large audiences, as might occur in some evening programs, it would be helpful to be present early and count the visitors as they arrive. Again, a hand counter would aid in getting an accurate estimate.

Other Conducted Activities -

A. Interpretive demonstrations - These are interpretive activities conducted by Service personnel to help visitors understand certain skills, customs, native handicrafts, etc. (e.g., demonstrations of living farms, living history, backpacking, fly casting, or crafts). Do not include activities conducted by concessioners, or demonstrations given as part of roving interpretive duty, or as part of an evening program. Living history presentations which are not actual demonstrations (e.g., a costumed attendant at an information station) should be recorded under "Attended Stations" or other appropriate categories.

B. Other - Other related activities which are not included in "Conducted Trips" or "Live Talks". Specify activity on back of card.

Automatic Presentations - Include automatic audio, visual, and audiovisual facilities available for visitor use within the park, either indoors or outdoors (list visual facilities under AV presentations).

A. Audio presentations - All audio stations (e.g., in museums, visitor centers, roadsides, trailsides, etc.)

B. AV presentations - Motion pictures, automated slide shows, filmstrips, and electric maps with sound.

These are instances in which it may be practical from a manpower standpoint to sample only a block of time or a small group of presentations, rather than the entire program offered. However, such sampling must be done rigorously, with the sampling period well-defined beforehand and listed with the "Date". The longer and more varied the sampling periods (e.g., measuring use on weekdays as well as on weekends), the more valid the extrapolations made from the results. Record each sampling period on a separate card.

Attended Stations -

A. Visitor centers and museums - Indicate the number of persons entering a visitor center or museum regardless of the reason for which they entered. (Use of automated presentations, audiovisual facilities or attendance at conducted activities should be recorded separately under the appropriate heading). If an estimate is derived from sampling, record the exact sampling period used in the "Date" section on the back of the card. (See introduction to Interpretive Activities Variables, above.) If automatic counting devices are used in these facilities, they should be checked regularly for accuracy by comparing counts with those obtained by an attendant during a sample period.

B. Information and Orientation Stations - These are defined as fixed structures (excluding visitor centers and entrance stations) at which there is a uniformed employee stationed for primary purpose of public contact, including ranger stations which are primarily considered public information stations.

Off-Site Programs and Services - All formal programs other than environmental education given outside the park area (e.g., special talks or programs to schools, clubs, radio, TV, etc.). No attendance figures should be estimated for radio or television programs.

A. Meetings, conventions, etc. - Record number of people who pass through the NPS exhibit area.

B. Loan materials (films, slide kits, exhibits, etc.) - Report number of persons attending these programs. Each time a package program or exhibit is sent out, it should be accompanied by an Interpretive Activity Inventory Card requiring the user to fill out the number of visitor contacts.

Environmental Education Programs - Only include environmental education programs (both on-site and off-site) in this section. Record the following:

- A. Use of NESA (National Environmental Study Area) within a park that is conducted by NPS personnel (including VIPs).
- B. Use of NESA when used by self-guided groups.
- C. NEED (National Environmental Education Development) camps within the park (conducted by NPS or others).
- D. Other - list on back of card under "Remarks". Include Environmental Living Programs, TREE, STEP, Institutes and other on-site cooperative environmental education programs (including those under special use permit) using park resources and facilities.
- E. Workshops - Teachers, organized groups, etc. using NESAs.
- F. Off-site presentations - Pre-site and post-site presentations; other special environmental education programs for schools, groups, etc.

Self-Guiding Facilities Inventory -

- A. Report number of visitors using foot trails with signs or exhibits only, with guide leaflets only, or with both signs and leaflets.
- B. Report number of visitors attending building tours.
- C. Report number of visitors using self-guided auto tours.
- D. Report number of visitors using wayside exhibits and major interpretive facilities. (These are defined as roofed or unroofed structures, housing or mounting one or more exhibit cases or panels and major interpretive facilities which present interpretive or orientation information, and are located along a road, trail, or route of visitor circulation). If sampling periods are used, record times and duration of periods under "Date".

Concessioner Services - Record for those interpretive services which would have been reportable under "Conducted Trips", "Live Talks", or "Other Conducted Activities" if they had been presented by Service personnel, instead of by a concessioner or his employees (e.g., Indian dances at Grand Canyon, grist mill operations on the Blue Ridge parkway).

Roving Interpretive Contacts - Estimate the number of people contacted during roving interpretive duty at viewpoints, roadside attractions, campgrounds, parking lots, picnic areas, etc. List the duration of the roving interpretive duty in the "Date" section on the back of the card (e.g., 3:30 P.M. - 5:00 P.M.). Do not include in this period time spent enroute to or from the duty station unless interpretive contacts are made along the way. For more information, see "Place/Location" under Situational Variables.

Composition Factors

These categories are listed on the front of the card down the right-hand side and in the bottom two squares on the left-hand side. Estimates of group-type ratios (family, friendship, or organized), age ratio (adults vs. children under 18), and sex ratio should be arrived at through observation.

Residence of visitors, new visitors vs. repeat visitors to the park, and percent of day-use only visitors will have to be elicited through the informal questioning that is a part of most interpretive activities.

As stated previously, it is not necessary to arrive at exact percentages, although they may be recorded if obtained. Otherwise, an estimate to the nearest 20% is sufficient. If a reasonable estimate of a composition factor is not obtained, check the box marked "Unknown" (UNK). Do not make careless guesses of these percentages.

As with the section on "Visitor Contacts", it may be necessary to use sampling procedures with self-conducted activities. Additionally, circumstances may at times make the collection of this information difficult (e.g., extremely large groups, or outside evening programs delivered in reduced visibility). Whenever this is the case, such circumstances should be mentioned in the "Remarks" section. Thoughtful comments on such problems will be of great help in evaluating this card.

Group Type - It is important to keep the three group-types as mutually exclusive of one another as possible. Do not record single visitors in this category except as they might be members of "friendship" or "organized" groups.

A. Family - A "family" is defined as a multi-generational group consisting of apparently related children, teenagers, adults, or seniors mixed in the same unit. If families appear as part of an obviously organized group (see definition below) they should be recorded under "Organized" rather than "Family". Do not record as family groups those units made up of members from a single generation. A mother, father, and two children make up an obvious family, as do one or two adults and their parents.

B. Friendship - A "friendship group" consists of a unit of visitors comprised of members from a single generation. Thus, a man and his wife would be classified as belonging to a "friendship group" under this definition, if they were not accompanied by their children or their parents. Similarly, three brothers, or a man, his wife, and a friend from the same generation travelling together would also be recorded as "friendship groups". But friendship groups within organized groups are recorded under "Organized".

C. Organized - "Organized groups" are defined as those groups, such as charter tours, boy scout troops, organizations on field trips (Audobon Society, DAR, etc.), or groups attending environmental education programs, that are strongly organized, perhaps with an accompanying guide or leader, and remain more or less together during an interpretive activity. All other group-types are subsumed within "organized groups". However, if a family or friendship group at any time breaks off from the organized group to attend a separate interpretive activity, it should no longer be listed under "Organized", but rather under one of the other two headings.

In many instances, a single organized group may comprise 100% of the attendance at a particular activity.

Age Ratio - Estimate ratio of Adults (18 and over) to Children under 18 as best as you can. It is not a critical mistake if you include a nineteen-year old under "Children" or a seventeen-year old under "Adults". In most cases, age distinctions should be obvious.

Sex Ratio - Record percentage of males vs. percentage of females attending the activity.

Residence of Visitors - Try to obtain from your audience an accurate estimate to the nearest 20% of those from the following areas (for Mount Rainier National Park only):

- A. Sub-Region - The state of Washington
- B. Region - Oregon, Idaho, and southern British Columbia (but not Washington).
- C. Outside Region - Beyond the boundaries listed above.

In those instances when sample observations are being taken for activities such as visitor centers, wayside exhibits, or self-guided trails where parking lots are provided, vehicle license plates may be used as an indicator of residence.

Frequency of Visits to the Area - Estimates of this ratio must also be obtained through informal questioning. Ask for and record the percentage of:

- A. New visitors to the area (first time within the boundaries of the park).
- B. Repeat visitors to the area (those who have visited the park at least once previously).

In cases where unobtrusive sample observations are being taken it may be difficult to obtain this information. If so, mark the square labeled "Unknown" (UNK) in both the "New Visitor" and "Repeat Visitor" sections.

Day-Use Visitors - Day-use visitors visit the park and participate in interpretive activities only during the daylight hours. They are mutually exclusive of those who are camping overnight or staying at lodges within the park, or of those who spend the night at nearby public or private campgrounds or resorts.

Estimates of the percentage of these visitors must be arrived at through informal questioning. If the information cannot be obtained, mark "Unknown". If it is obtained from only a fraction of an audience, note this in the "Remarks" section on the back of the card.

INTERPRETIVE ACTIVITY INVENTORY:

ANALYSIS OF THE 1976 DATA FROM MT. RAINIER NATIONAL PARK
AND PERRY'S VICTORY AND INTERNATIONAL PEACE MEMORIAL

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PREFACE

In November of 1976 an interim report on the Interpretive Activity Inventory was distributed for the purpose of presenting a review of the first season of testing. Specifically, the report dealt with the problems associated with implementing the Inventory system in a park setting while evaluating the workability of the McBee card as an in-the-field data gathering device. As expected, several "bugs" appeared during the initial shakedown period. We do not view these problems as insurmountable and are presently working to reduce or eliminate them during the second year of testing.

The test sites for 1977 include the Ohanapecosh and Sunrise areas of Mount Rainier National Park and Whitman Mission National Historic Site in southeastern Washington. Although the card will remain a flexible tool, its design will be streamlined in order to facilitate its use by seasonal interpreters while making it more responsive to the needs of the manager.

INTRODUCTION

This report is divided into two sections: a discussion of the uses to which the Interpretive Activity Inventory can be put, followed by a presentation of the data collected during 1976. In the latter section, only information from the Ohanapecosh area of Mount Rainier and that from Perry's Victory and International Peace Memorial is analyzed extensively since these areas seem to have produced the most accurate and complete records. The use of highly questionable data is avoided whenever possible. Even so, in the following tables the numbers presented should be regarded as approximations only. Where percentages are used, differences of five or six percentage points between categories should not be construed as significant, since it is possible that such differences may be entirely due to measurement or sampling error. Where percentage tallies are based on a small sample number (say less than 50) differences of up to ten percent should also be treated as insignificant. With such a sample size a shift of only five cases between any two categories would result in a shift in audience composition figures of ten percent. But with a sample of 200 it would require a shift of twenty individuals to produce the same change in percentages.

Although large samples yield more stable percentages from which to derive consistent patterns of use, it is important to note that they do not minimize the effect of systematic measurement errors. For example, if the number of children in attendance at a particular type of interpretive event is consistently underestimated, such a bias will only become more stable as the sample gets bigger.

We have not made every breakdown and comparison that the amount and character of the data would allow. Some comparisons are simply not interesting or did not seem applicable to any real problem. For this reason there is no analysis of the sex ratio of visitors. In addition, technical problems limited the use of some of the data which otherwise would have been analyzed. The group information is not considered sufficiently accurate to use because of conflicting instructions on how it was to be measured. A study of the distribution of visitor types across different monthly periods is not attempted because the system was tested less than two months in each area.

An oversight in coding the data for computer analysis makes it impossible to use the information collected on day-use visitors. This information is not terribly interesting in the case of Perry's Victory, but would have been extremely so for Ohanapecosh. The distribution and occurrence of day-use visitors can still be recovered from the original Inventory cards at Mount Rainier, However.

The Perry's Victory cards are at the University of Washington and some of the tables in this report were constructed by sorting through them instead of by using a computer. In fact, all of the information contained in the succeeding pages could have been generated employing the needle-sort method with no more error, expense or time than that involved in coding and keypunching IBM cards and running a computer program.

USES OF THE INTERPRETIVE ACTIVITY INVENTORY

The purpose of this second report is to make use of the data collected during the summer of 1976 to demonstrate how the Interpretive Activity Inventory can serve as an aid to three interpretive management functions: program accounting, program evaluation, and program planning.

Program Accounting. The first purpose of the Inventory system is to provide a standard methodology at the area level for collecting, storing, and processing the attendance figures required on the National Park Service's Annual Public Contact Report. At the present time no such methodology exists. The Interpretive Activity Inventory allows managers to break a park's activities down into the types for which attendance figures must be reported, and to then sum individual attendance figures to arrive at the overall number. In addition, a special "summary card" feature to be designed into the 1977 version of the system will make it possible to condense figures for a long period (such as a month) onto a single needle-sort card for easier handling at the end of the season. The new design will also reduce the number of punches that have to be made on a card before it can be processed from the present eighteen to six. This will significantly increase the speed with which the cards can be prepared.

Program Planning and Evaluation. Since in practice it is difficult to separate these two on-going activities they will be considered together here.

One of the goals of the Interpretive Activity Inventory is to provide a system for evaluating and planning programs in such a way that an efficient allocation of interpretive resources is achieved. The Inventory system can be used to evaluate current program content and scheduling in this light and, if it is found to be deficient, to plan avenues for reducing this deficiency.

The Inventory accomplishes this by allowing managers to discover patterns of visitor use within their park or area. Generally speaking, certain months of the year will have higher visitation rates than other months; the same may be true for days of the week and times of the day. Adverse weather conditions can also exercise an influence on visitor use patterns, depressing attendance figures for otherwise well-attended programs. The Interpretive Activity Inventory allows interpreters to systematically record such variations in use patterns across individual programs. When combined for analysis at the end of a season or accounting period, these individual variations often will reveal larger patterns of

visitor concentration at interpretive activities, the knowledge of which would be helpful to managers in evaluating and planning program schedules.

Consider the following table:

OHANAPECOSH - 1976 TEST PERIOD
AVERAGE ATTENDANCE AT GUIDED WALKS BY WEEKDAY

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
Avg. Contacts	7	14	5	12	11	16	9	11
No. Walks	(8)	(8)	(7)	(8)	(8)	(15)	(18)	(72)

Although the overall average attendance figure for the walks is 11, those walks offered on Wednesdays attracted on the average less than half that number. It would seem that Wednesdays at Ohanapecosh deserve particular attention. One might wish to experiment by adjusting the time or the location of the walk in order to reach more people in the area with the interpretive message.

We also propose that the Inventory system can be used to evaluate and plan program content as well as program schedules. It is for this reason that we included the audience composition variables on the card. If analysis shows that certain kinds of people, such as repeat visitors, are underrepresented in interpretive audiences, then adjustments in programming can be made in an attempt to increase their participation. The Interpretive Activity Inventory can pinpoint which kinds of activities attract repeat visitors and also indicate the times and places where such visitors tend to gather. Once this is known, then an interpretive message other than a simple introduction to the park or area can be provided to build on the previous knowledge and experiences of these visitors.

At Perry's Victory only 23 percent of the visitors sampled at an introductory audiovisual program were repeat visitors, although the average percentage for several combined activities was 42 percent (complete table, page 16). Obviously, this type of program does not appear to be an effective medium for reaching people who have visited the park before.

On the other hand, evening campfire programs at Ohanapecosh attracted more repeat visitors than any other type of activity offered in the area. As an example, only 41 percent of those sampled on guided walks were repeat visitors, while an estimated 52 percent of those sampled at evening programs had been to the campground before. And on Friday and Saturday nights this proportion rose to 63 and 59 percent respectively, as compared to 41 percent on Thursday nights. Clearly, if a manager were interested in disseminating an introductory or overview message, Friday and Saturday nights at Ohanapecosh would not be the best time to do it. Because of the character of the audience the opportunity exists to present a more

in-depth program on the area. If this is the time and place repeat visitors congregate, it might as well be taken advantage of.

Of course, there is no reason why the visitation pattern described above should remain especially stable throughout a season. The overall concentration of repeat visitors may increase or decrease, or it may shift from one day or time to another. The point is that the Inventory system allows for a monitoring of these changes in audience composition and makes such information immediately accessible for quick and on-going analysis throughout the season. Programming can thus be modified as the season progresses to conform to changes in visitor use patterns.

The Inventory as a Quasi-User Survey. Since the Interpretive Activity Inventory identifies only users of interpretation in an area under normal circumstances, it cannot define the characteristics of those not attending an interpretive event. One way to obtain this information would be through the use of a formal visitor survey. However, it has become increasingly difficult of late to obtain OMB approval for such full-scale surveys of all an area's visitors, although such information is often desirable from a management and planning standpoint. In lieu of a formal questionnaire or interview an interesting possibility presents itself for combining the use of the Inventory system with a measure like the Field Observation Guide currently being tested in John Day Fossil Beds National Monument. This latter is a needle-sort card which in intent is similar to the Interpretive Activity Inventory except that it is used to gather informal observational data on all the visitors to John Day. While a park was using the Field Observation Guide to develop a profile of its visitors in general, the Inventory could be doing the same for those contacted through interpretation. Together, the results could then be used to identify those people who are in the park but are not attending interpretive activities, such as local day-users, repeat visitors, etc. This information would be essential to managers who view interpretation as a tool for influencing visitor behavior within a protected area. It provides an indication of the efficiency with which interpretive messages are being communicated to the entire range of a park's visitor population.

In some instances, the Interpretive Activity Inventory itself can fulfill the role of a user survey. Small historical sites or monuments, such as Perry's Victory, are generally interpretive in nature, so sampling a variety of activity foci throughout the area and combining the results would provide a great deal of information on the users of interpretation while coincidentally supplying a picture of the park's visitors, since it is doubtful that many visitors to such areas fall into the "non-participant" category as far as interpretation is concerned.

At Perry's Victory, ten minute periods were set aside when users of different visitor services within the park were sampled for the purpose of collecting the compositional data on the Inventory card. This type of sampling strategy has several advantages for areas where it is practical to undertake.

First, it reduces the visitor-to-interpreter ratio, thus making it logistically easier to collect accurate information. For example, each day one could sample the first six people to come through the door of a visitor center at 10:00 A.M. and 2:00 P.M., or thereabouts. (Any other times would probably do just as well. The principal concern is that some visitor types are not systematically excluded from the possibility of being represented in the sample.) This would certainly be an easier task than sampling 250 people while attempting to present an evening program.

Second, a little bit of accurate information collected on many days is much more useful for generalizing to the overall user population than a great deal of questionable data gathered from a few large activities. If the above example were put into operation, then at the end of a 90 day season a manager would have reasonably accurate information on 1,080 users of his visitor center. Without delving into probability theory, we can say that if this sample were unbiased (i.e., every visitor type had a chance of being contacted equal to its proportion in the population) then a manager could be adequately assured that a sample of this size was reasonably representative of all those using his visitor center. If the sampling were done at other activity sites as well, then combining the results would yield a good overall picture of visitor characteristics, while comparing the results would point out differences in use patterns between activity sites.

Third, such a project would not have to be undertaken on an annual basis, since in only the most unusual of circumstances would we expect the characteristics of the visitor population to shift significantly in the period of one or two years.

The following analyses represent only a part of what could be done with the Inventory data. If any questions arise about this, or other information please contact James Gramann at the Cooperative Park Studies Unit, College of Forest Resources, University of Washington AR-10, Seattle, Washington 98195.

MOUNT RAINIER NATIONAL PARK

TOTAL NUMBER OF VISITOR CONTACTS BY ACTIVITY AND AREA
(for test period only)

	Ohanapecosh	White River	Sunrise	
Conducted Walks	779 (72)	258 (17)	1273 (101)	No. contacts No. Activities
Information and Orientation	297 (6)	32 (3)	1225 (40)	
General Interpretive Talks*	1661 (13)	-	214 (5)	
Interpretive Demonstrations	50 (5)	-	72 (3)	
AV Presentation	90 (1)	-	24 (1)	
Children Activities	187 (15)	80 (10)	-	
Evening Programs**	10123 (54)	2982 (38)	-	
Roving Contacts	3970 (23)	417 (18)	1601 (25)	

* General interpretive talks at Ohanapecosh include evening puppet shows.

** Incomplete record for Wednesday evening programs at White River.

*** White River roving contacts principally at Tipsoo Lake.

AVERAGE ATTENDANCE AT GUIDED WALKS BY DAY OF THE WEEK

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall	
Ohanapecosh	7 (8)	14 (8)	5 (7)	12 (8)	11 (8)	16 (15)	9 (18)	11 (72)	Avg. Visitors No. Walks
White River	6 (1)	12 (1)	14 (3)	-	12 (3)	13 (2)	24 (7)	17 (17)	
Sunrise	11 (14)	10 (12)	14 (9)	9 (4)	9 (9)	15 (31)	13 (22)	13 (101)	

Note first that the White River averages are based on a very small number of cases. At Ohanapecosh, Wednesdays deserve particular attention. Perhaps the time or location of the walk could be adjusted to contact more of the people in the area.

OHANAPECOSH

AVERAGE ATTENDANCE AT EVENING PROGRAMS BY WEEKDAY

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
Ohanapecosh	157 (6)	182 (5)	191 (8)	177 (8)	216 (8)	276 (8)	126 (11)	187 Avg. Visitors (54) No. Programs

OHANAPECOSH

AGE OF VISITORS CONTACTED

Children	3687	(33%)
Adults	7343	(67%)

Roving contacts at Box Canyon and one AV program are excluded from the above tabulation.

OHANAPECOSH

GUIDED WALKS - AGE BY WEEKDAY

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
Children	23 (44%)	31 (31%)	21 (55%)	16 (17%)	34 (38%)	95 (41%)	57 (34%)	277 (36%)
Adults	29 (56%)	69 (69%)	17 (45%)	76 (83%)	55 (62%)	138 (59%)	111 (66%)	495 (64%)
	52	100	38	92	89	233	168	772

Children's hikes are excluded from the previous table and the Wednesday percentages are probably unstable. One might consider offering a children's activity on Thursdays in an attempt to reach more children on this day.

OHANAPECOSH

GUIDED WALKS - AGE BY TIME OF DAY

	A.M.	P.M.	Overall
Children	62 (35%)	187 (36%)	249 (36%)
Adults	113 (65%)	329 (64%)	442 (64%)
	175 (100%)	516 (100%)	691 (100%)

Children's hikes are excluded from the previous table. Time of the day has no effect on whether or not children attend guided walks. Differences in total attendance between mornings and afternoons is due to the fact that more walks were offered in the afternoons. Average attendance at morning walks was 9 and at afternoon walks 11. Irregardless of the time, about 36 percent of those attending were children.

OHANAPECOSH
RESIDENCE OF VISITORS SAMPLED

Washington	3546 (61%)
Oregon, Idaho, British Columbia	691 (12%)
Everywhere else	1575 (27%)

	5812 (100%)
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Based on the residence of people contacted by interpretive programs, Ohanapecosh appears to be primarily a local use area. For this reason it might be worth exploring the option of involving Washington residents in the development and presentation of interpretive programs.

OHANAPECOSH
RESIDENCE OF VISITORS SAMPLED BY ACTIVITY

	Guided Walks	Evening Programs
Washington	385 (59%)	2691 (59%)
Oregon, Idaho, British Columbia	63 (10%)	607 (13%)
Everywhere else	204 (31%)	1241 (27%)

	652 (100%)	4539 (100%)
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In-state residents do not appear to prefer one type of activity over another at Ohanapecosh. This is in marked contrast to the distribution of new vs. repeat visitors (table, page 11) where the evening programs draw a significantly higher percentage of the repeat visitation than the guided walks.

If there is a pattern to the occurrence of Washington residents at Ohanapecosh it seems to be one of decreased attendance at interpretive events just before and just after the weekend. This coincides with the occurrence of repeat visitors, although it must be noted that repeat visitors are not necessarily Washington residents and that Washington residents can be new visitors. For Ohanapecosh, this latter case is visible in the fact that while 52 percent of those sampled at evening programs were repeat visitors, 59 percent were Washington residents. Obviously then, some of the Washington residents had to be new visitors. It would be interesting to see if Ohanapecosh receives as many of these in-state first-time visitors as some other areas in the park.

The following table presents the residence of visitors at evening programs by day of the week. Monday was never sampled and the Friday figures are based on only one program. The general pattern, though, is one of a decline in local visitors on Thursdays and Sundays - just before and just after the weekend.

OHANAPECOSH								
EVENING PROGRAMS - SAMPLE RESIDENCE BY WEEKDAY								
	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
Washington	-	260 (65%)	939 (69%)	509 (44%)	180 (80%)	372 (61%)	431 (54%)	2691 (59%)
Oregon, Idaho B.C.	-	20 (5%)	130 (10%)	312 (27%)	22 (10%)	52 (9%)	71 (9%)	607 (13%)
Everywhere else	-	120 (30%)	289 (21%)	326 (28%)	22 (10%)	183 (30%)	301 (37%)	1241 (27%)
	-	400 (100%)	1358 (100%)	1147 (100%)	224 (100%)	607 (100%)	803 (100%)	4539 (100%)

OHANAPECOSH	
FREQUENCY OF VISITS - ALL ACTIVITIES	
New Visitors	4035 (49%)
Repeat Visitors	4283 (51%)
	8318 (100%)

Overall, Ohanapecosh programs contact about an equal number of new and repeat visitors. However, there are important differences between types of activities in this regard.

OHANAPECOSH

SAMPLE FREQUENCY OF VISITS BY ACTIVITY TYPE

	Guided Walks	Evening Programs	Children's Activities
New Visitors	342 (59%)	3255 (48%)	26 (25%)
Repeat Visitors	236 (41%)	3542 (52%)	76 (75%)
	573 (100%)	6797 (100%)	102 (100%)

Notice the contrast between guided walks and evening programs. The figures for children's activities can be explained by the fact that younger people have had fewer years available in which to make a previous visit.

The following table examines the variation in the percentage of repeat vs. new visitors across different days of the week for evening programs only.

OHANAPECOSH

EVENING PROGRAMS - FREQUENCY OF VISITS BY WEEKDAY

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
New Visitors	223 (63%)	200 (50%)	643 (47%)	590 (59%)	298 (37%)	754 (41%)	547 (53%)	3255 (48%)
Repeat Visitors	130 (37%)	200 (50%)	719 (53%)	416 (41%)	499 (63%)	1087 (59%)	491 (47%)	3542 (52%)
	353 (100%)	400 (100%)	1362 (100%)	1006 (100%)	797 (100%)	1841 (100%)	1038 (100%)	6797 (100%)

Contrast the distribution above with that for guided walks below. Note that the percentages for Monday, Tuesday, and Wednesday guided walks are unstable.

OHANAPECOSH

GUIDED WALKS - FREQUENCY OF VISITS BY WEEKDAY

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
New Visitors	28 (82%)	2 (10%)	16 (42%)	49 (64%)	33 (60%)	135 (60%)	79 (61%)	342 (59%)
Repeat Visitors	6 (18%)	18 (90%)	22 (58%)	27 (36%)	22 (40%)	91 (40%)	50 (39%)	236 (41%)
	34 (100%)	20 (100%)	38 (100%)	76 (100%)	55 (100%)	226 (100%)	129 (100%)	578 (100%)

On the high visitation days of Friday and Saturday the distribution of new and repeat visitors on guided walks is almost directly opposite that for evening programs. To a lesser degree, this is also true of Sundays. The more dramatic decline of repeat visitors at evening programs on Sundays can probably be explained by the afternoon departure of Washington residents who were only staying for the weekend.

If one were interested in the best time to offer an introductory type of message, Mondays and Thursdays would appear to be the best days for evening programs while any day would probably suffice for guided walks.

The above analyses represent only a fraction of what could be done with the Inventory data. If any questions arise about this, or other information please contact James Gramann at the Cooperative Park Studies Unit, University of Washington AR-10, Seattle, WA. 98195.

PERRY'S VICTORY AND INTERNATIONAL PEACE
MEMORIAL NATIONAL MONUMENT

TOTAL NUMBER OF VISITOR CONTACTS BY ACTIVITY
(for test period only)

	No. of contacts	No. of Activities
Other Conducted Trips (elevator sample)	1137	61
Information and Orientation (gallery sample)	939	69
General Interpretive Talks	5080	174
AV Presentation (sample only)	423	65
Visitor Center (sample only)	531	75
Evening Programs	581	6
Roving Contacts	42	7
	8733	457

The average number of contacts per activity or sample is 19, which is lower than the average for any of the Mount Rainier areas analyzed. This demonstrates how a sampling strategy such as that employed at Perry's Victory can lower the visitor-interpreter ratio and thus facilitate the collection of accurate Inventory data.

PLAZA TALKS

AVERAGE ATTENDANCE BY WEEKDAY

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
Average attendance	28	27	34	27	26	31	30	29
No. of talks	(32)	(23)	(26)	(20)	(16)	(30)	(27)	(174)

Average attendance does not vary greatly by day of the week, even though we might have expected higher attendance on the weekends. But 37 of the 174 plaza talks sampled did attract ten or fewer visitors, so in planning schedules it would be useful to know if the sparsely attended talks fall in any sort of pattern.

DISTRIBUTION OF PLAZA TALKS ATTRACTING 10 OR FEWER VISITORS

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
CLEAR A.M.	2	1	0	0	1	0	2	6
DAYS P.M.	2	3	1	1	0	1	3	11
NON-CLEAR A.M.	1	0	4	3	1	2	2	13
DAYS P.M.	0	1	1	3	0	2	0	7
	5	5	6	7	2	5	7	37

There does not appear to be any significant difference in the distribution of such talks across weekdays; each day seems to get a share. By combining totals in the "Overall" column we also learn that 19 of the talks were in the morning and 18 in the afternoon - again no difference. Similarly, 17 were on clear days and 20 were on nonclear days (either overcast or raining) so again there is no significant difference in the distribution.

The only pattern that appears is when we examine weekday, time of day, and weather simultaneously. Of the 37 talks, 24 (65%) fell on the afternoons of clear days or on the mornings of nonclear days. It seems doubtful, however, that a manager would want to plan a schedule on the basis of a factor as capricious as the weather. The distribution of the poorly attended walks should probably be regarded as essentially random in nature. Therefore, no adjustments in the schedule are called for.

AGE OF VISITORS SAMPLED

All Activities

Children	1950 (28%)
Adults	5024 (72%)
	6974 (100%)

It is interesting to compare these figures with those from Ohanapecosh. On the whole (assuming no measurement error) Perry's Victory tended to contact an "older" audience with their programs. All activities in the park appeared to be roughly equal in their power to attract children.

AGE OF VISITOR SAMPLED BY ACTIVITY TYPE

	Elevator	AV Program	Visitor Center	Gallery	Plaza Talks
Children	353 (33%)	136 (32%)	139 (27%)	258 (27%)	955 (26%)
Adults	710 (67%)	288 (68%)	379 (73%)	684 (73%)	2690 (74%)
	1063 (100%)	424 (100%)	518 (100%)	942 (100%)	3645 (100%)

There is no variation in the percentage of children by time of the day or by weather conditions, although overall visitation is higher in the afternoon than in the morning.

AGE OF VISITORS SAMPLED BY TIME OF DAY

All Activities

	A.M.	P.M.	Overall
Children	474 (29%)	1367 (28%)	1841 (28%)
Adults	1158 (71%)	3593 (72%)	4751 (72%)
	1632 (100%)	4960 (100%)	6592 (100%)

AGE OF VISITORS SAMPLED BY WEATHER CONDITIONS

All Activities

	Clear	Nonclear	Overall
Children	1334 (28%)	616 (28%)	1950 (28%)
Adults	3464 (72%)	1560 (72%)	5024 (72%)
	4798 (100%)	2176 (100%)	6974 (100%)

Perry's Victory receives an overwhelming amount of local use. This rate is fairly constant across all variables: activity type, time of day, and weekday. Because of the composition of the audience, this is an area that might give serious consideration to involving local people in the development and presentation of interpretive programs.

RESIDENCE OF VISITORS SAMPLED

All Activities

Ohio and Michigan	3287 (86%)
Everywhere else	515 (14%)

SAMPLE RESIDENCE BY ACTIVITY TYPE

	Elevator	AV Program	Visitor Center	Plaza Talks	Overall
Ohio and Michigan	645 (83%)	131 (87%)	375 (83%)	1764 (88%)	2915 (86%)
Everywhere else	132 (17%)	20 (13%)	79 (17%)	250 (12%)	481 (14%)
	777 (100%)	151 (100%)	454 (100%)	2014 (100%)	3396 (100%)

SAMPLE RESIDENCE BY WEEKDAY

All Activities

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Overall
Ohio and Michigan	895 (88%)	451 (88%)	503 (83%)	482 (88%)	378 (81%)	208 (90%)	370 (85%)	3287 (86%)
Everywhere else	119 (12%)	60 (12%)	100 (17%)	63 (12%)	86 (19%)	23 (10%)	63 (15%)	514 (14%)
	1014 (100%)	511 (100%)	603 (100%)	545 (100%)	464 (100%)	231 (100%)	433 (100%)	3801 (100%)

A minor drop in the percentage of Ohio and Michigan visitors may be occurring on Fridays, the day before the weekend, but given the immensity of the majority it hardly matters for practical purposes. (Analysis note: It should be pointed out that the reason we were able to construct this table for all activities combined, and thus present a larger picture of the visitation to the park, is that the previous table had shown little difference in sample residence by activity type. If such differences had been significant we would have been forced to examine residence by weekdays separately within each type of activity, instead of combining them.

This is because certain programs contributed a much greater proportion to the overall sample size on some days than on others. It would not be valid to compare days when a high "Ohio and Michigan" activity type made up 29 percent of that day's sample with days when it only contributed 15 percent. Overall percentage total on the former days would be more strongly influenced by such activities than on the latter days.)

The following table plots the distribution of new and repeat visitors by activity type. Overall, about 57 percent of the visitors sampled at Perry's Victory were there for the first time.

SAMPLE FREQUENCY OF VISITS BY ACTIVITY TYPE

	Elevator	AV Program	Visitor Center	Plaza Talks	Overall
New Visitors	459 (50%)	189 (77%)	277 (60%)	1029 (57%)	1954 (57%)
Repeat Visitors	452 (50%)	58 (23%)	183 (40%)	761 (43%)	1454 (43%)
	911 (100%)	247 (100%)	460 (100%)	1790 (100%)	3408 (100%)

Repeat visitors are found most often at the elevator ascending to (or descending from) the top of the Memorial, and least often at the audio-visual presentation. They are also in the minority at plaza talks and the visitor center. Apparently, having sampled these activities before the tendency is to skip them on subsequent trips and head straight for the top, so to speak. As a consequence, repeat visitors are underrepresented in the attendance at other types of interpretive activities.

An interesting finding is that repeat visitors are much more prominent in the afternoon than in the morning. In fact, in contrast to the overall distribution, they are actually in the majority at the elevator later in the day.

SAMPLE FREQUENCY OF VISITS BY TIME OF DAY AND ACTIVITY

		Elevator	Visitor Center	Plaza Talks
A.M.	New Visitors	178 (62%)	67 (80%)	276 (68%)
	Repeat Visitors	111 (38%)	17 (20%)	131 (32%)
P.M.	New Visitors	281 (45%)	210 (56%)	753 (54%)
	Repeat Visitors	341 (55%)	166 (44%)	630 (46%)

Since 86 percent of the visitors to Perry's Victory are Ohio and Michigan residents and since only 48 percent are repeat visitors, a great many Ohio and Michigan residents must be making their first visit.

On the other hand, it's probable that a significant number of the repeat visits during the test period were made by local resident living in nearby vacation homes. It is also quite possible that because of their proximity to the Memorial, these people tend to be leisurely about their visits and arrive late in the day, explaining their tendency to be present in a higher concentration at afternoon programs.

The data seem to bear this out. Ohio and Michigan residents who are repeat visitors are concentrated in the afternoon. Ohio and Michigan residents who are first-time visitors make up the higher percentage in the morning.

OHIO AND MICHIGAN RESIDENTS SAMPLED

	A.M.	P.M.	Overall
New Visitors	310 (67%)	316 (43%)	626 (52%)
Repeat Visitors	154 (33%)	418 (57%)	572 (48%)
	464 (100%)	734 (100%)	1198 (100%)

(Analysis note: Ordinarily, the Inventory data cannot identify single visitors as simultaneously belonging to more than one category, such as being Ohio and Michigan residents and also repeat visitors. The only way such a table can be produced is by tabulating only those activities in which 100 percent of the visitors sampled were either new or repeat visitors, or 100

percent were either from the region or outside the region. For example, if we know all ten visitors at a particular activity were from the region and that 50 percent were new visitors, then five of the visitors must be both region residents and repeat visitors. Because of the great number of activities with 100 percent new visitors, the Perry's Victory data lent itself to the use of this kind of "trick".)

Since repeat visitors are underrepresented in attendance at most interpretive programs (except at whatever talk may be given while riding in the elevator), and since the majority of repeat visitors seem to be local residents, then the strategy of involving these people in the development and presentation of interpretive programs designed to interest their neighbors would seem to be an excellent way to increase overall local and repeat visitor participation in interpretation. Based on the data, afternoons would be the best time of the day to schedule such programs.

The above analyses represents only a fraction of what could be done with the Inventory data. If any questions arise about this, or other information please contact James Gramann at the Cooperative Park Studies Unit, College of Forest Resources, University of Washington AR-10, Seattle, Washington 98195.

INTERPRETIVE ACTIVITY INVENTORY SYSTEM

INTERIM REPORT

DATE: November 23, 1976

PRINCIPAL INVESTIGATOR: Donald R. Field

GRADUATE RESEARCH ASSISTANT: James H. Gramann

National Park Service
Cooperative Park Studies Unit
College of Forest Resources
University of Washington
Seattle, Washington 98195

FORWARD

This is a preliminary report on the testing of the Interpretive Activity Inventory system at Mount Rainier National Park and Perry's Victory and International Peace Memorial during the summer of 1976. Its purpose is to explain the inventory system and to summarize our work program for the past year. We will focus upon the problems and potential of this inventory system as a management tool for use by interpretive staffs within the National Park system.

Only a limited analysis of the actual information gathered will be attempted at this time. A final report will be ready for distribution by April, 1977. This final report will contain a detailed analysis of information gathered from one district in Mount Rainier National Park and from Perry's Victory.

It is hoped that such an examination of the Interpretive Activity Inventory will illustrate the merits of this system for parkwide adoption.

INTRODUCTION

The Interpretive Activity Inventory system tested during the summer of 1976 at Mount Rainier National Park and at Perry's Victory and International Peace Memorial is designed as a management tool for use by interpreters in areas managed by the National Park Service.¹ The tool's main purpose is to identify the type of people that interpretive programs are contacting in order that program dimensions may be assessed to determine if they are ef-

¹While currently being tested by the National Park Service, the inventory system can be used by all land management agencies who have a mandate to provide for public recreation. Our close working association with the Wildland Recreation Research Program, USDA Seattle, will allow their evaluation of the system for possible Forest Service consideration

fectively tailored to those diverse audiences which visit parks. An important assumption inherent in this statement is that programs so tailored will provide more effective communication channels for conveying the agency message.

A valuable secondary role of the Interpretive Activity Inventory is that of accounting for programs by providing the raw numbers managers so frequently find necessary in selling their ideas. The system can likewise act as a "baseline data bank" with which a constant eye can be kept on changes in audience trends, either in response to Park Service manipulations or as a result of some larger outside change. It is anticipated that with the information this inventory system can provide, interpretation will be more successful in competing for funding with other divisions.

DESCRIPTION OF THE TEST AREAS

By choosing test parks of very dissimilar natures it was intended that the utility of the inventory system would be demonstrated to be limited not to one particular type of area or one set of management problems, but instead to as wide a range of situations as can be found within the National Park system.

Mount Rainier National Park

Mount Rainier is a medium-sized "natural" park in Washington State dominated by the 14,410 foot volcanic peak of the same name. It offers a diversity of interpretive activities at seven different developed front-country locations: Carbon River, Longmire, Cougar Rock, Paradise, Ohanapecosh, White River, and Sunrise. The seasonal interpretive staff, including volunteers, numbers about 35 people, the majority of whom work during a period lasting from the final week in June through to Labor Day.

There are five developed campgrounds in the Park, plus an overflow campground at Longmire and a "walk-in" campground at Sunrise. Overnight visitors are also accommodated at two hotels within the Park and at a large Forest Service campground located just outside its southeast entrance. Evening interpretive programs are offered each night of the week during the summer season at three campgrounds and at the Paradise visitor center. Ipsut Creek, a rather isolated campground, holds evening programs on the weekends only.

A number of conducted activities are offered each day at most areas and eight self-guided trails also receive heavy use. There are four visitor centers in the Park and numerous wayside exhibits. Located 70 miles from Tacoma, 90 miles from Seattle, and 103 miles from Yakima, Mount Rainier attracts considerable local day-use, especially on clear days, but even so, its visitation retains a significant national, even international, flavor.

Perry's Victory and International Peace Memorial

Perry's Victory, in contrast to Mount Rainier, is a small historical area located on a 1500 acre island in Lake Erie, five miles from the Ohio mainland. It consists principally of a granite column 352 feet high built to commemorate Oliver Hazard Perry's victory over a British naval fleet on Lake Erie during the War of 1812. Visitors may avail themselves of a variety of interpretive activities, either at a temporary visitor center, or at the monument itself where short talks are given by seasonal personnel. For a twenty-five cent fee the visitor may ascend the column by elevator. At the top of the monument is an audio station giving a brief two minute synopsis of the Battle of Lake Erie. During the summer of 1976 evening programs were presented three nights a week, weather permitting. Although no overnight facilities exist within the Park itself there are several summer cottages, resorts, and a state park

with campsites on the island. At the height of the summer season the staff is made up of fifteen people, including VIP's. Visitors are drawn predominantly from the states of Michigan and Ohio.

DESCRIPTION OF THE INVENTORY SYSTEM

The Interpretive Activity Inventory system used at both of these parks consists of an edge-punch card on which the interpreter records a value for 15 variables associated with each interpretive activity offered, (see figure 1, next page). The front of the card contains a list of all the activity types listed on the Park Service's annual public contact report. One of these is checked to identify the activity offered (walks and hikes, interpretive demonstration, evening programs, etc.). There are also spaces on the front for indicating the day of the week, time of the day, weather conditions, and for filling in the number of visitor contacts. The remainder of the front of the card is taken up by spaces for entering six audience composition variables: group type, age ratio, sex ratio, residence, frequency of visits, and the percentage of day-use only visitors in the audience. The reverse side of the card contains spaces for entering the date on which the particular activity is offered, the park, the district, the specific location of the activity (i.e., Trail of the Shadows), and a space for remarks.

The card was designed to give the interpreter three options for each audience composition variable to be measured. If an exact percentage was obtained, it could be entered on a line under the appropriate heading. Otherwise, an estimate to the nearest twenty percent could be made by marking a slash in the quintile square containing that estimate within its range. If no value was obtained the interpreter could mark "Unknown".

USE OF THE KEYSORT FEATURE

The card itself is a keysort card printed by McBee Systems of Bellevue, Washington and Athens, Ohio. It is designed to act as an "in-the-field" data processing system, allowing the rapid hand-sorting of a large amount of stored information. An easily mastered "needle-sorting" technique utilizes a double rank of holes along the margins of the card, each hole corresponding to a specific piece of information or value printed on the card's face. When a needle is inserted through a particular hole position in a stack of these cards, those cards containing a previously punched hole in that position will fall out of the stack.

In the case of the Interpretive Activity Inventory card, a needle inserted through the topmost outer hole on the left-hand side would sort out all the "walks and hikes" cards if that hole had been hand-punched previously. These in turn could be sorted by day of the week, weather conditions, number of walks with at least 61 percent children in attendance, or any of a number of other possible cross-tabulations.

The use of the McBee card by natural resource management agencies is not unique to the Park Service or to the field of interpretation. The Forest Service has used the card in its Code-a-site and Codinvolve systems to inventory the number and character of dispersed recreation campsites, and to sort out public input to proposed land management decisions. The Park Service has been using a system similar to Code-a-site to inventory backcountry campsites in Olympic National Park.

The keysort card does have disadvantages. Sorting a great many of them can be an awkward procedure and making complex cross-tabulations is time-consuming, and consequently susceptible to human error. For this reason, a

duplicate set of cards was made at Mount Rainier, and the Perry's Victory cards were returned to Seattle after Labor Day, in order that they could be subjected to computer analysis at the University of Washington. A complete analysis of the information collected will be presented in a report due out in April, 1977.

It is not anticipated that managers (being concerned primarily with their own park or area) will ever find it necessary to sort through as many cards as are being analyzed at the University. Even so, it might be helpful if monthly "summary cards" are kept, condensing pertinent information from many cards onto one. Cards could be prepared summarizing the number of visitor contacts for each type of activity, number of children attending children's activities versus the number attending general activities, attendance by day of the week, or anything else the manager sees as useful information.

SUMMARY OF THE METHODOLOGY

In total, 512 usable cards were collected from Mount Rainier covering a period from July 10 to September 6, 1976. One hundred ninety-eight cards were filled out at Ohanapecosh and 324 at Sunrise-White River. In addition, approximately 300 cards were collected from the Paradise and Longmire-Cougar Rock areas. However, they are not being used in data summations since it is felt they represent an incomplete record of interpretive activities conducted during the test period. As a result, any conclusions drawn from them would be based on inadequate information. The reasons for the less than successful performance of the system in the latter two areas will be discussed in the following section.

Perry's Victory produced a total of 465 cards spanning a period from August 9 to September 6, 1976. At first glance, this may seem like an unusually large

number for so small an area, especially when compared with the totals from Mount Rainier. The explanation lies in the fact that the two parks used the cards in very different ways to achieve a similar goal, the identification of the interpretive audience. It was the practice at Mount Rainier to fill out a card for each interpretive activity offered during the course of a day. The card was completed by the interpreter after the activity ended. At Ohanapecosh cards were also filled out for cancelled activities and for activities at which no visitors appeared.

Perry's Victory, on the other hand, in addition to completing cards for their staff-conducted interpretive activities, set up a sampling schedule through which information on park visitors not attending these activities could be gathered. Ideally, ten minute periods were set aside three times daily when the information asked for on the inventory card was to be solicited from all people entering the visitor center, riding the elevator to the top of the Memorial, entering the gallery within the Memorial, and using the audio-visual exhibit. For this reason, Perry's Victory generated many more cards than it would have had it used the Mount Rainier method. It seems likely some people were surveyed twice and it is certain many were not surveyed at all. Whether or not this sampling procedure gives a reasonably accurate picture of the visitation at Perry's Victory is a question that will hopefully be answered during a statistical analysis of the information gathered there.

Nevertheless, the potential for success of the inventory system in small parks where few staff-conducted activities are offered was demonstrated by this test. Memorials such as Perry's Victory, and similar parks in the Pacific Northwest region, including Whitman Mission, Fort Vancouver, and Fort Clatsop, are almost entirely interpretive in their orientation. There are no backcountry

or campground operations as occur at Mount Rainier, for example. Wherever the visitor happens to be in such areas, he is involved to some extent in an interpretive experience, even with no interpreter present. By sampling designated activity foci within these areas, the park is indeed sampling its interpretive audience.

It is important to note that no formal questionnaire was used in this study. Most of the audience variables could be observed by the person filling out the card. Those pieces of information that had to be solicited, such as residence of the visitors and the frequency of their visits, were obtained through the informal questioning that is a part of most interpretive activities. At no time during the summer did this observer notice any reluctance on the part of the visitors to provide this information. They often volunteered it before they could be asked. Indeed, on one occasion when the audience for a guided walk was told outright about the inventory, they willfully supplied all the information needed and more.

Importance of Administrative Support

It is inevitable that in the first year of testing any system will encounter snags. One of the principal objectives of this year's study was to pinpoint these problem areas and to revise the Interpretive Activity Inventory in an effort to eliminate them.

The system did not function equally well in all areas within Mount Rainier National Park. As has been stated previously the data from the Paradise and Longmire areas is incomplete. The information from Carbon River, while not of great quantity, was nonetheless considered to be fairly accurate. Unfortunately, half of the cards were misplaced at the end of the season and have yet to be recovered. On the East Side, at Sunrise and Ohanapeosh, the

card was relatively successful.

The principal reason for this uneven performance within a single park can be traced to the presence or lack of administrative support. When the seasonal staff at Mount Rainier was first presented with the Interpretive Activity Inventory, they were generally skeptical that they could get such information from their audiences while simultaneously making a good program presentation. This skepticism was apparently combined with a feeling on the part of some that the system was merely an academic exercise designed to get a graduate student his Master's degree. Therefore, it was only in areas where the interpretive supervisors were fully behind the system, emphasizing it was a National Park Service project, that it performed satisfactorily. In the case of Mount Rainier this meant the East Side, where a permanent supervisor, himself an interpreter, is in charge of interpretive activities both at Ohanapecosh and at the Sunrise-White River areas. In the other areas, permanent interpretive supervisors with a direct line of control over the seasonal interpreters simply did not exist. Since they are the people who will find the inventory information most useful, they have the greatest stake in its success. In their absence the inventory floundered, as it became obvious to the seasonal staff that even if all the information requested were obtained, no one would ever use it. Accordingly, there was no incentive for them to fill out the card on anything approaching a regular basis. Hopefully, this problem has been solved with the appointment to the permanent staff of two new interpretive supervisors for the Longmire and Paradise areas.

It is difficult to assess the extent of any incentive problem at Perry's Victory since the only communication link with them was by mail and no observers were present at the park during the summer.

Reliability Assessments

Besides the concern over whether or not the staff would fill out the card, another concern dealt with how accurately they would do the job. Thus, one of the main focuses of the study this summer addressed the accuracy, or reliability, of the interpreter's observations. Altogether, 27 reliability checks were attempted. Five were not completed because the interpreter involved failed to turn in a card for the activity checked. A greater number of checks were scheduled, but a very wet August resulted in the cancellation of many outdoor interpretive programs and a consequent reduction in the opportunity to make these checks.

Two methods to assess reliability of observations were employed. One used primarily for evening amphitheater programs, consisted first of an attempt to record gross attendance as accurately as possible with the aid of a hand counter. Then, whenever possible, the observer independently estimated the value of the other audience composition variables and compared these to the ones the interpreter made when the cards were duplicated at a later date. It was assumed that if the two estimations were not far apart, some degree of accuracy had been obtained. This, however, seemed a less than perfect test of the instrument and was replaced rather quickly by the second method. Here, a tally sheet was used to take the process of estimation one step farther. The compositions of the various groups as they entered the amphitheater. This required two people. One would be given the responsibility for recording the size of the group and the number of children, while the other would record group type and the number of females, or some similar arrangement, in order that as exact a count as possible of all variables could be obtained to serve as a sound basis for comparison. The "comparison of estimations" method still had to be used if residence or frequency of visits

were asked of the audience during the program, and the "exact" count was really not that exact due to poor visibility and the constant coming and going that characterized evening programs. But by and large it was thought that this type of reliability checking would provide a better indication of the accuracy of the interpreter's observations than the first method.

Checks of guided walks and hikes always employed the second method discussed above, since attendance at these activities was usually small enough to get an exact count.

Interpretive demonstration checks consisted solely of an audience count using a hand counter, as did the evening auditorium checks at Paradise. It was felt very early in the season that an accurate recording of all the information on the card would be very difficult to get for some types of activities. Experience confirmed this.

In certain instances reliability checks themselves did not attempt a total audience inventory. An interpreter was never told, "this is a reliability check. You have to get all the information so we can see how good you are." In some instances, they were not even told a reliability check was being made. As a result, a painstaking effort to record the exact number of children at a puppet show, or the exact percentage of people from Washington on a guided walk would sometimes be wasted because the interpreters would enter "unknown" for these variables when filling out their own card. It soon became apparent which kinds of information could be expected from certain people for a given type of activity, and this is what was recorded in making the checks.

Although as stated above, interpreters sometimes did not know a reliability check per se was being made, this was the exception rather than the rule, and they always knew that they were being observed. Therefore, the data presented in the tables in the following section must be qualified by stating

that it represents how well the interpreters performed when they were aware of the presence of an observer. Actually, the indications are that there may not be that great a difference between observed and unobserved performance, since in five cases where reliability checks were made the interpreter did not even bother to turn in an inventory card for that particular activity.

Accuracy of the Data

The table on the next page records the percentage of time agreement occurred between the observer and interpreter for an "exact" value entry and for a quintile entry (values within the same twenty percent increment). An extra column is included, that of reliability check values within five percent of each other, because it was often observed that the interpreter and observer would not agree on an exact value, nor would they agree on the same quintile, but they would still be very close in their respective counts. An example of this would be a case where the number of males in an audience was estimated by the interpreter at 40 percent and counted by the observer at 42 percent. Obviously, these are not the same number nor are they within the same quintile (40 lies within the 21-40 quintile and 42 lies within the 41-60 quintile), but they are nevertheless within five percentage points of each other.

The first table is a summary of all reliability checks taken and presents the accuracy of observations for each inventory variable. The next four tables break down the reliability checks according to activity type since it was anticipated that the inventory system would function better in some activities (guided walks) than in others (evening programs). Generally, this appears to be the case, although direct comparison between activities is difficult because interpreters simply did not record as much information for evening programs as they did for walks and hikes.

SUMMARY OF RELIABILITY FOR ALL ACTIVITIES CHECKED

	Exact Match	Same quintile	Values w/in 5%
No. Visitor Contacts	33 (7/21) ¹	not applicable	43 (9/21)
Weather	77 (17/22)	not applicable	not applicable
Family	0 (0/8)	44 (4/9)	0 (0/8)
Friendship	0 (0/8)	22 (2/9)	0 (0/8)
Organized	90 (9/10) ²	100 (10/10)	100 (10/10)
Adults	30 (3/10)	65 (9/14)	50 (5/10)
Children	20 (2/10)	65 (9/14)	50 (5/10)
Male	40 (2/5)	63 (5/8)	60 (3/5)
Female	40 (2/5)	63 (5/8)	60 (3/5)
Sub-region	33 (2/6)	60 (6/10)	50 (3/6)
Region	50 (3/6)	44 (4/9)	50 (3/6)
Outside Region	33 (2/6)	56 (5/9)	50 (3/6)
New Visitors	0 (0/2)	43 (3/7)	0 (0/2)
Repeat Visitors	0 (0/2)	43 (3/7)	0 (0/2)
Day-use Visitors	100 (5/5) ³	100 (5/5)	100 (5/5)

¹ Entries refer to percent and fraction of time agreement occurred between interpreter and observer. See text for further explanation.

² Most activities checked had no organized groups in attendance.

³ Four of these estimates are from evening programs, where there are no day-use visitors by definition.

RELIABILITY CHECKS - WALKS AND HIKES

	Exact Match	Same quintile	Values w/in 5%
No. Visitor Contacts	57 (4/7) ¹	not applicable	57 (4/7)
Weather	100 (7/7)	not applicable	not applicable
Family	0 (0/5)	50 (3/6)	0 (0/5)
Friendship	0 (0/5)	17 (1/6)	0 (0/5)
Organized	100 (6/6)	100 (6/6)	100 (6/6)
Adults	40 (2/5)	71 (5/7)	80 (4/5)
Children	40 (2/5)	86 (6/7)	80 (4/5)
Male	50 (2/4)	50 (3/6)	50 (2/4)
Female	50 (2/4)	50 (3/6)	50 (2/4)
Sub-region	50 (2/4)	67 (4/6)	75 (3/4)
Region	75 (3/4)	67 (4/6)	75 (3/4)
Outside Region	50 (2/4)	67 (4/6)	75 (3/4)
New Visitors	0 (0/2)	50 (1/2)	0 (0/2)
Repeat Visitors	0 (0/2)	50 (1/2)	0 (0/2)
Day-use Visitors	100 (1/1)	100 (1/1)	100 (1/1)

¹ Entries refer to percent and fraction of time agreement occurred between interpreter and observer. See text for further explanation.

RELIABILITY CHECKS - CAMPFIRE PROGRAMS

	Exact Match	Same Quintile	Values w/in 5%
No. Visitor Contacts	11 (1/9)	not applicable	33 (3/9) ¹
Weather	70 (7/10)	not applicable	not applicable
Family	0 (0/3)	33 (1/3)	0 (0/3)
Friendship	0 (0/3)	33 (1/3)	0 (0/3)
Organized	67 (2/3)	100 (3/3)	100 (3/3)
Adults	0 (0/4)	80 (4/5)	25 (1/4)
Children	0 (0/4)	60 (3/5)	25 (1/4)
Male	0 (0/1)	100 (1/1)	100 (1/1)
Female	0 (0/1)	100 (1/1)	100 (1/1)
Sub-region	0 (0/2)	50 (2/4)	0 (0/2)
Region	0 (0/2)	0 (0/3)	0 (0/2)
Outside Region	0 (0/2)	33 (1/3)	0 (0/2)
New Visitors	X ²	40 (2/5)	X
Repeat Visitors	X	40 (2/5)	X
Day-use Visitors	100 (4/4) ³	100 (6/6)	100 (4/4)

¹ A better yardstick for number of visitors contacted for a campfire program, with its attendant large crowds, would be estimates within 10% of the actual count. This was accomplished 67% of the time (6/9).

² No comparisons were made.

³ Day-use visitors by definition did not attend evening programs.

RELIABILITY CHECKS - INTERPRETIVE DEMONSTRATIONS

	Exact Match	Same Quintile	Values w/in 5%
No. Visitor Contacts	50 (1/2)	not applicable	50 (1/2)
Weather	33 (1/3)	not applicable	not applicable
Family	X ¹	X	X
Friendship	X	X	X
Organized	100 (1/1)	100 (1/1)	100 (1/1)
Adults	X	0 (0/1)	X
Children	X	0 (0/1)	X
Male	X	100 (1/1)	X
Female	X	100 (1/1)	X
Sub-region	X	X	X
Region	X	X	X
Outside Region	X	X	X
New Visitors	X	X	X
Repeat Visitors	X	X	X
Day-use Visitors	X	X	X

¹No comparisons were made.

RELIABILITY CHECKS - AUDITORIUM PROGRAMS

	Exact Match	Same Quintile	Values w/in 5%
No. Visitor Contacts	50 (1/2)	not applicable	50 (1/2)
Weather	100 (2/2)	not applicable	not applicable
Family	X ¹	X	X
Friendship	X	X	X
Organized	X	X	X
Adults	0 (0/1)	0 (0/1)	0 (0/1)
Children	0 (0/1)	0 (0/1)	0 (0/1)
Male	X	X	X
Female	X	X	X
Sub-region	X	X	X
Region	X	X	X
Outside Region	X	X	X
New Visitors	X	X	X
Repeat Visitors	X	X	X
Day-use Visitors	X	X	X

¹No comparisons were made.

Even so, a brief examination will show that in most cases reliability was rather low. Even with weather, in which there was a rather straightforward choice given between "clear", "overcast", and "precipitation", agreement between the interpreter and the observer over weather conditions occurred only 77 percent of the time (17 out of 22 cases). With virtually every other category the number of times agreement occurred was much less. For example, there was never any concurrence between the interpreter and the observer over the percentage of "family" or "friendship" groups in the audience when the entries were compared using either the "exact value" or "within five percent" yardsticks. However, these results do not necessarily indicate that seasonal interpreters are unable to perform such a task. There are several other factors which contributed to the low reliability.

CONSTRAINTS ON THE DATA

First, there was some confusion among the staff over variable definitions. What exactly is a "family" group, a "sub-region", a "visitor contact", or, for that matter, an "overcast" day? Many times during reliability checks the seasonal staff and the observer would give different interpretations to the same numbers. The same guided walk of ten people may have been recorded as composed of 50 percent family groups by one and 33 percent family groups by another, depending on whether one counts the number of groups on the walk or the number of people in the groups. An instruction booklet was given out defining how to measure each category, but the handbook itself did not anticipate all the problems to be encountered. Also, at nine pages it was apparently too long to hold the attention of any but the most dedicated interpreters, and as a result was not widely read. A shorter and simpler booklet will be prepared for next summer.

Another factor affecting reliability, discussed previously, was the lack of commitment to the inventory system on the part of the staff in some areas. Hopefully, this problem will also be corrected next season with the addition of new permanent interpretive supervisors, and more care will be taken in filling out the card.

Also, many people had difficulty figuring the percentages called for. As a consequence, accuracy suffered. Several remedies are being considered for this, including the distribution of percentage charts and providing a space on the card for entering numerical counts rather than percentages.

Finally, the reliability of observations was reduced because the interpreters were simply unfamiliar with the card and how to use it, especially early in the season. Enough time was not allocated during seasonal orientation to adequately explain the operation. In fact, because of printing schedules, the card was not even available for examination at the orientation. Even more important, there was very little backing from administrative personnel at that time. Next season, there should be several returning seasonals who are already familiar with how the card is used. In addition, interpretive supervisors will have in hand the data from the year before and will be able to show how it is important to them. If they themselves would shoulder the greater part of the job of selling the program to their seasonal employees during the orientation period, experience from this past season suggests that performance can only improve.

By using feedback gleaned from the interpreters over the summer, and by consulting with the permanent interpretive staff at Mount Rainier this winter, it is hoped that solutions to all of the problems discussed above will be found.

USES OF THE DATA

While figures from this summer's testing have not been completely analyzed at this time, some information has been compiled using the needle-sorting method and is presented here as an illustration of how the Interpretive Activity Inventory may be used.

During 1976, Mount Rainier National Park offered a formal program of children's interpretation. At Ohanapecosh, this program consisted of children's walks and a special "children's lunch activity" scheduled on a regular basis throughout the week. The question might arise among managers as to how effective a use of staff resources such specialized programming is in contacting this particular audience.

The following table compares the number of children attending children's hikes and lunch activities with the number attending "regular" walks given on equivalent days at Ohanapecosh.

<u>CHILDREN'S ATTENDANCE</u>		
	Children Participating In Children's Activities	Children Participating In General Walks
Saturday	88 (n = 8) ¹	83 (n = 14)
Sunday	99 (n = 8)	32 (n = 15)
Total	187 (n = 16)	115 (n = 29)
Average per activity	11.67	3.97

¹Number in parentheses refers to total number of activities offered.

Examination of the table shows that children's activities were more successful in attracting children than the guided walks of a general nature at Ohanapecosh. This holds true whether one looks at the total number of children in attendance, or at the average number. The difference is especially marked for Sundays, where eight children's activities attracted 99 children, as opposed to 32 children attending the fifteen general walks offered on the same days. With these figures a manager could make a convincing case for the continuance of a formal program of children's interpretation at his area. (It is important to note that the activities at Ohanapecosh were never split into adult and children halves as was done at other areas. Children could attend the regular guided walks if they so desired).

CONTROLLING FOR INTERVENING FACTORS

What is just as important as these numbers, though, is the manner in which their analysis is undertaken. A national park is a complex laboratory where it is difficult to control for all the variables that might affect attendance. Even so, the manager can impose some controls on intervening factors in order to insure that a valid comparison is being made.

In analyzing the data in the table presented above, it was decided that comparisons would only be made between activities offered on the same date. Since children's activities occurred on the weekends, they were only compared with walks and hikes offered on those same weekends. This controlled for any variation between weekend versus weekday occupancy of the campground, and also allowed for a control to be placed on weather conditions. To use an extreme example, a comparison is not being made between sunny Saturdays when children made up fifty percent of the potential interpretive audience, and rainy Wednesdays when they made up only five percent.

A case could be made for dropping the Sunday morning Grove of the Patriarchs photo walks from the comparison because the Grove is a mile distant from the campground and cannot be reached by children unless accompanied by their parents. Also, since the subject of photography can be perceived as one more likely to appeal to adults than children, we would not expect a great many children to be in attendance. In fact, the six photo walks used in the comparison attracted a total of only ten children. This certainly held down the average children's attendance at general walks on Sundays.

However, we are not interested so much in the theoretical aspects of children's versus regular walks. We are instead looking at a very specific mix of activities to determine which of those are most effective in reaching a particular audience. Our purpose is to discover how best to use the personnel at hand to achieve a given objective. If that objective is to contact more children, then the children's programs at Ohanapecosh compare favorably with the general walks and hikes. On an average basis, these programs attracted almost three times as many children as the equivalent other activities in this area during the summer of 1976.

This is the type of information that the Interpretive Activity Inventory can yield. Before the inventory system was put to use at Mount Rainier the comparison above would have been impossible to make because information was not kept on the number of children attending regular guided walks.

Not all records are as accurate as those for walks and hikes at Ohanapecosh, and even in this comparison there is probably a certain amount of error. But an experienced manager should be aware of how much confidence he can place in each type of information available, and will be able to make his decisions accordingly.

SUMMARY

The Interpretive Activity Inventory is a management tool to aid those who must plan and account for interpretive programs. The numbers it provides should help to identify the interpretive audience as well as give interpretation the opportunity to compete for funding on a more equitable basis with other divisions within a park.

The inventory system was tested this summer at two areas of very different sizes and characteristics: Mount Rainier National Park and Perry's Victory and International Peace Memorial. At Mount Rainier a card was filled out by a seasonal interpreter for each activity offered. At Perry's Victory, in addition to this, sampling periods were set aside each day when information would be collected from visitors. No formal questionnaire was employed.

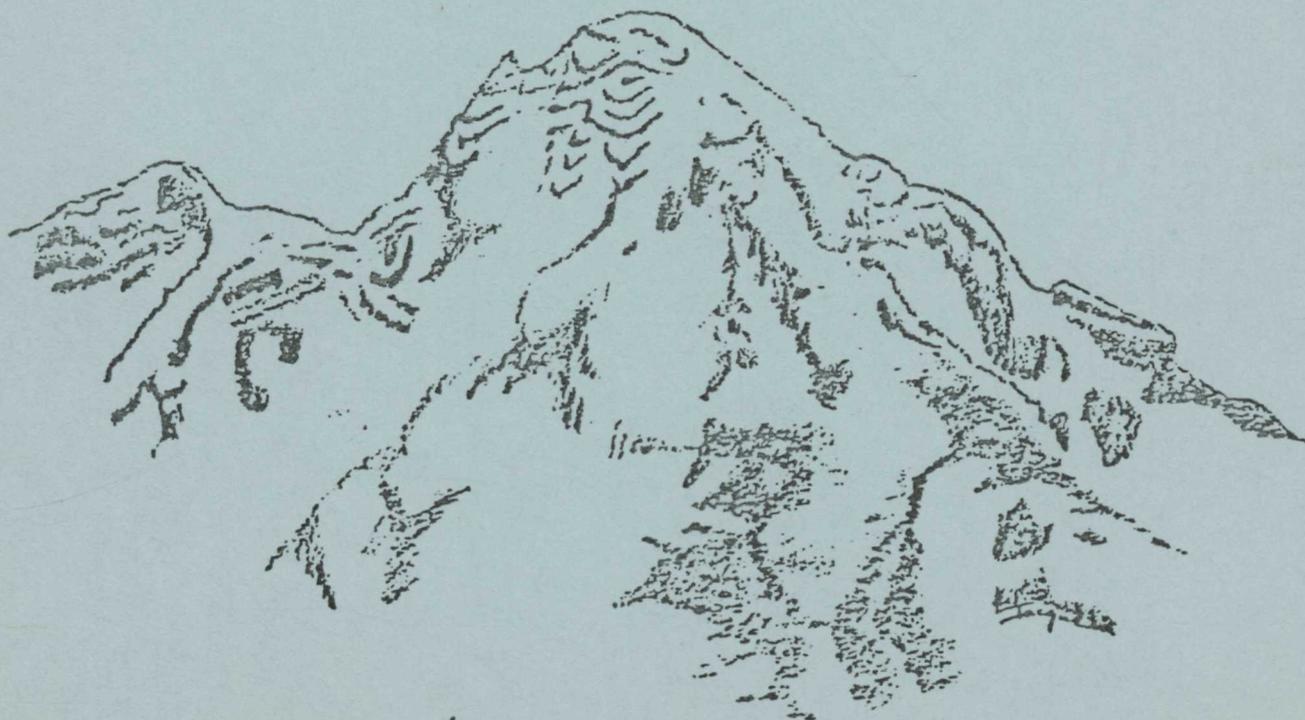
Several constraints were placed upon the accuracy of the data gathered. Because of the absence of administrative people to support the project, it did not do well in some areas. There was also confusion among the staff concerning the definition of variables. Many interpreters had difficulty figuring percentages correctly, and due to inadequate time spent explaining the inventory card to the staff during orientation many were unfamiliar with how to use it later on. Solutions to these problems are being worked out in consultation with the permanent staff at Mount Rainier. As a result, performances should improve next season.

A limited analysis of the information from Ohanapecosh shows that the formal children's interpretive walks offered there were approximately three times as effective in contacting children as were the regular guided walks offered on the same days during 1976.

A complete report on the data collected will be ready by April of 1977.

INTERPRETIVE
ACTIVITY
INVENTORY:

THE
MOUNT RAINIER
DATA
1977



INTEPRETIVE ACTIVITY INVENTORY: THE MOUNT RAINIER DATA, 1977

A Report of the National Park Service, Cooperative Park Studies Unit (Sociology Studies Program) located in the College of Forest Resources, University of Washington, Seattle.

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January, 1978

Cover design by Jacqueline Gramann

PREFACE

Interpretive Activity Inventory: The Mount Rainier Data, 1977 is one in a series of reports dealing with the testing of the Interpretive Activity Inventory System during 1976 and 1977. Other reports in this series are available upon request from the Cooperative Park Studies Unit, College of Forest Resources AR-10, University of Washington, Seattle 98195. These reports include:

Interpretive Activity Inventory System: Interim Report (1976)

Interpretive Activity Inventory: Analysis of the 1976 Data from Mount Rainier National Park and Perry's Victory and International Peace Memorial.

Interpretive Activity Inventory: The Whitman Mission Data (1977)

Interpretive Activity Inventory: The Perry's Victory Data, 1977

History and Evaluation of the Interpretive Activity Inventory, An Observational System for Use in Parks (J.H. Gramann, Unpublished, M.S. thesis, 1978)

In addition, a final report describing the Inventory System and evaluating its various uses is planned for completion by the spring of 1978.

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INTRODUCTION

The Interpretive Activity Inventory System is an observational tool designed as a management aid to those concerned with the administration of interpretive programming in parks and other recreational areas. Its purpose is to provide a systematic method for collecting, storing, and analyzing information on the users of interpretive services. As a research instrument, it is distinguished from many other information gathering tools by being under the complete control of the park interpretive staff. All aspects of the observational work are carried out entirely in-house by park interpreters, and the instrument itself is adaptable for use in a wide variety of situations.

During the summers of 1976 and 1977 the Interpretive Activity Inventory was utilized by the staff in the East District of Mount Rainier as part of a general test of its workability in park settings. The purpose of this report is to present the information on visitors that was collected during this test period. The report is divided into two sections:

The first section consists of a narrative description of the visitors to the Ohanapecosh, White River, and Sunrise areas of Mount Rainier who participated in interpretive walks. It is based on observational data collected by interpreters using the Inventory System. This section also includes a discussion of changes in audience composition occurring between 1976 and 1977.

Section two expands upon the information presented in the first section, using graphic techniques to furnish a more detailed breakdown of how different types of visitors used interpretive services during both seasons of testing.

PARTICIPANTS IN MOUNT RAINIER INTERPRETIVE ACTIVITIES

During the summers of 1976 and 1977 the Interpretive Activity Inventory was used in the Ohanapecosh, White River, and Sunrise areas of Mount Rainier National Park to measure the composition of audiences attending interpretive walks. In addition, total visitor contacts at a variety of other activities, including evening programs, general talks, and point duty were also recorded.

Levels of Use

In terms of the number of people utilizing conducted interpretive services, the three areas in Mount Rainier differed from each other in a great many respects. During the summer of 1977, interpreters in the Ohanapecosh area reported making over 25,000 contacts through conducted activities. In contrast, Sunrise and White River combined for less than half that amount, about 11,000. The average number of contacts per interpretive activity at Ohanapecosh was 119. At White River the figure was 46, and at Sunrise 37. During the previous summer (1976) these figures had been lower: 91, 44, and 25 respectively. The higher figures in all three areas during 1977 coincide with an overall increase in park visitation for that season over the preceding summer.

At Ohanapecosh, 67 percent of all conducted interpretive contacts were made through the medium of evening amphitheater programs. This not only explains the area's high visitor to activity ratio, but also represents an increase from a level of 59 percent for the previous year. At the White River campground, fully 85 percent of all contacts were made during evening programs, an increase from 79 percent in 1976. The principal medium for personal interpretive contacts at Sunrise (where no evening programs were offered) was point duty (45 percent).

A rise in overall visitation to Mount Rainier in 1977 also coincides with other changes in the use of interpretive services. Average attendance at evening programs in the Ohanapecosh campground increased 31 percent from 187 in 1976 to 245 in 1977. At Sunrise, participation in guided walks rose from an average of 13 to one of 16, an increase of 23 percent. The White River area seemed to be the least affected by the increase in park-wide visitation. Average attendance at guided walks actually decreased in this area in 1977, and the campfire programs, although experiencing an increase in attendance, recorded only a modest gain of five percent.

As was true during 1976, the heaviest use of conducted services in the Ohanapecosh and White River campgrounds occurred on Fridays and Saturdays. At Sunrise, Saturdays and Sundays were the busiest days of the week.

Characteristics of those people participating in guided walks in each of the three areas of Mount Rainier's East District were measured with the Interpretive Activity Inventory in 1977. Values for four compositional variables were observed by interpreters and recorded on Inventory cards: audience age (seniors, adults, children), frequency of visits (new or repeat visitors), residence (Washington or outside Washington), and length of stay in the park (day-use or overnight visitors).

Age of Participants in Interpretive Walks

Seniors over sixty years of age were the least represented age group on guided walks in all three areas. Percentage-wise, the highest proportion of seniors appeared at Ohanapecosh walks (eleven percent), while the fewest attended walks offered at White River (three percent). At Sunrise, seniors made up six percent of those on conducted interpretive walks.

The bulk of participants in each area were those between twelve and sixty years of age, however children under twelve were also well represented. At Ohanapecosh this age group accounted for more than one quarter of the conducted walk audience (28 percent). This was true even though children's walks were also offered at Ohanapecosh two days a week. Children's walks, however, still attracted on the average four times the number of children attending other interpretive walks.

At White River, children under twelve comprised 21 percent of those participating in general interpretive walks. As occurred at Ohanapecosh, though, specialized children's walks at this area drew an average of four times as many children per activity than did the general walks. Sunrise, the only area of the three not offering a children's activity, attracted the smallest percentage of children to general interpretive walks (18 percent).

New and Repeat Visitors Participating in Interpretive Walks

There was a substantial difference between the three East District areas in the respective proportions of new and repeat visitors attending guided walks in 1977. At White River, participants were divided almost equally between new and repeat visitors to the park. New visitors were in the slight majority on Ohanapecosh walks, the same as during the preceding summer, but at Sunrise more than two-thirds of those attending walks had never been to Mount Rainier before. Data from 1976 is not available for the White River and Sunrise areas so no comparisons can be made for that year and 1977.

Residence of Visitors Participating in Interpretive Walks

In all three areas of Mount Rainier's East District, visitors from outside the state of Washington made up the majority of those attending interpretive walks. This majority was only modest in the Sunrise and White River areas (51 and 52 percent respectively), although at Ohanapecosh, visitors from outside Washington accounted for 59 percent of those

participating in guided walks. This in fact represents a complete turnaround from the 1976 Ohanapecosh figures. During the previous year visitors residing *within* Washington made up 59 percent of those attending walks in this area. The reversal in 1977 may indicate an influx of non-Washingtonians into Ohanapecosh, suggesting that increased overall visitation, at least in this area, might be the result of more out-of-state visitors coming to the park.

Length of Stay of Visitors Participating in Interpretive Walks

As one might expect, there was a considerable difference between Sunrise and the two campground areas on the length of stay variable: Day-users comprised three-fourths of all those attending walks at Sunrise, but almost all participants at White River and Ohanapecosh were staying overnight in the park.

An interesting fact brought out by these percentages, when they are examined in conjunction with overall attendance figures, is that White River visitors did not participate to any great degree in Sunrise interpretive walks, even though the two areas are located only ten miles apart. Even if all overnight users attending walks at Sunrise were staying at White River campground, rather than at Ohanapecosh or some other area, they totaled only a little more than 300 people. This is 200 fewer people than participated in walks offered at the White River campground itself, where 98 percent of those in attendance were staying in the park overnight. Therefore, despite their proximity, interpretation at Sunrise and White River appears to be reaching two distinct audiences.

GRAPHIC ANALYSIS OF INVENTORY DATA

TABLE (1). Total Visitor Contacts for East District Interpretive Activities, June 17-September 3, 1977

	Ohanapecosh	White River	Sunrise
Guided Walks	1,072 ¹ (86) ²	556 (39)	1,343 (84)
"Nature Stop"	Not Offered	32 (3)	Not Offered
Gen. Interp. Talks	320 (5)	Not Offered	1,821 (38)
Evening Programs	16,905 (69)	4,191 (51)	Not Offered
Roving Contacts	6,469 (30)	24 (1)	2,604 (34)
Children's Activities	283 (19)	110 (14)	Not Offered
Offsite Presentation to Organization	160 (2)	Not Offered	Not Offered
Offsite Environ, Educ. Programs	26 (1)	Not Offered	Not Offered
TOTAL REPORTED CONTACTS	25,235 (212)	4,913 (108)	5,768 (156)

¹ Total number of visitor contacts.

² Total number of activities offered.

Levels of Use

(Figures 1 through 4 below, illustrate average attendance at East District guided walks in 1977. It can be seen in the first figure that the Sunrise area had the highest overall average (16), while Ohanapecosh, with 12 was the lowest. White River average attendance fell mid-way, between the other two areas at 14.

When these averages are examined during each day of the week, Ohanapecosh appears to have the most stable attendance pattern, with average attendance on most days near the overall figure of 12 (Figure 2). In contrast, attendance at Sunrise and White River fluctuates a great deal through the week. Sunrise is a day-use area and experienced its highest attendance levels on the weekends (Figure 4), while other days were near, or well below, the overall average figure of 16. A similar pattern is found at White River (Figure 3), except that the two above average days are Friday and Saturday, with every other day at, or below, average. This difference may be attributed to the fact that White River is a campground, rather than a day-use area, and therefore receives its greatest use on Fridays and Saturdays. Sunday being a day for breaking camp and heading home.

FIGURE 1. EAST DISTRICT - Average Attendance at Guided Walks - Summer, 1977.

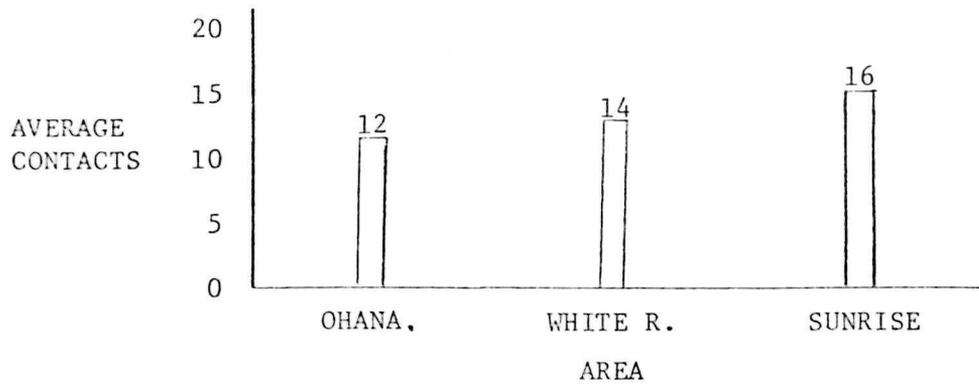


FIGURE 2. OHANAPECOSH - Average Attendance at Guided Walks by Weekday.

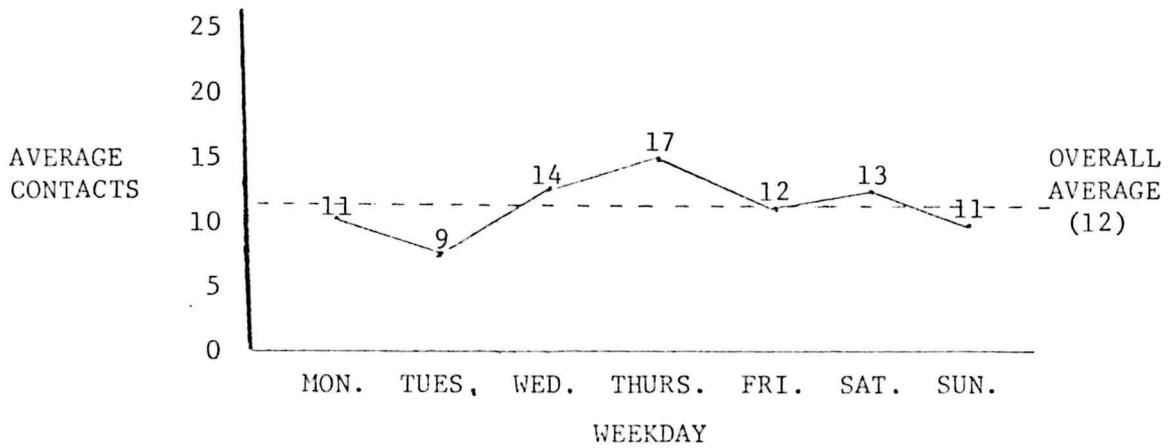


FIGURE 3. WHITE RIVER -- Average Attendance at Guided Walks by Weekday.

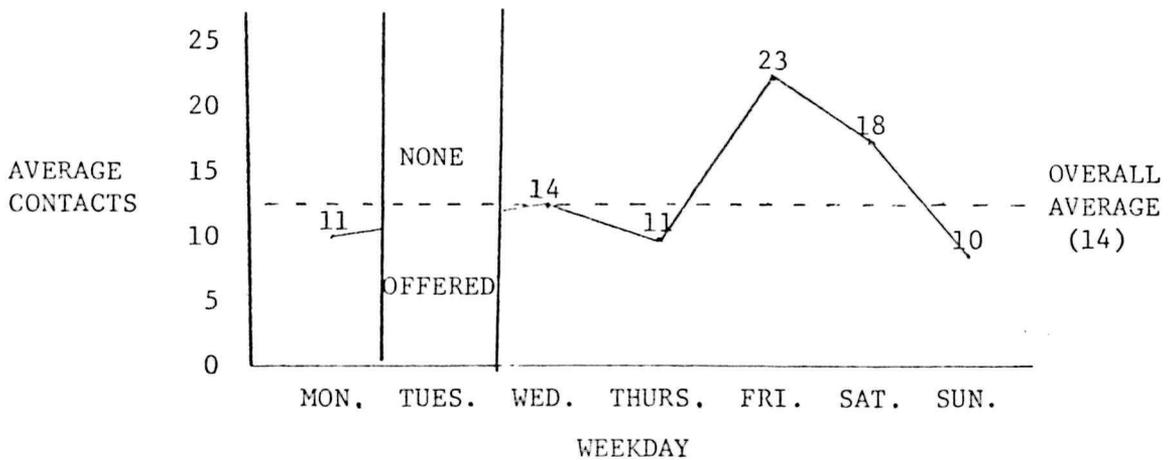
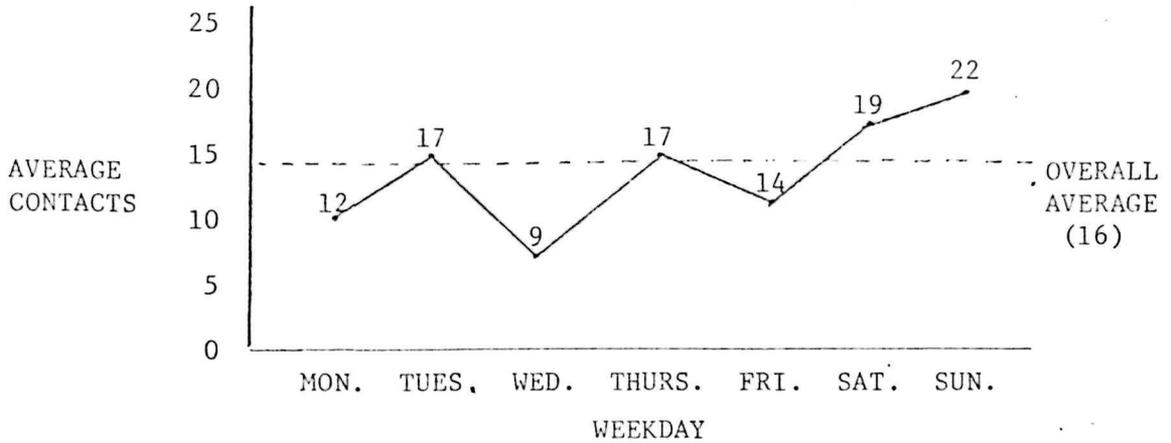
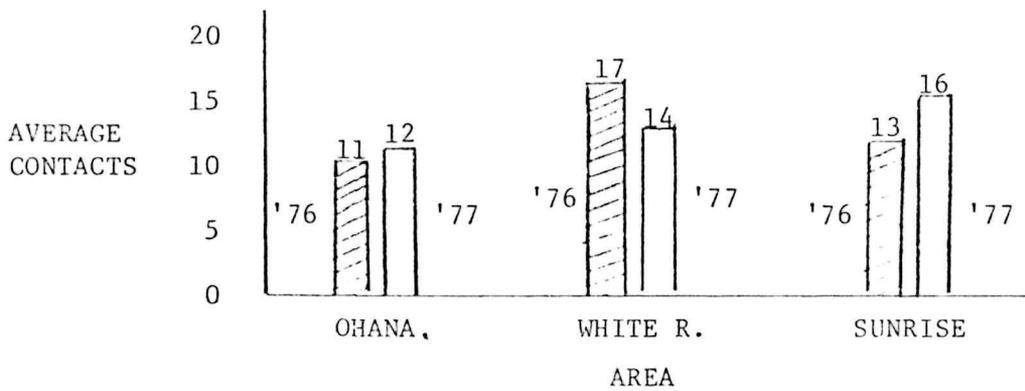


FIGURE 4. SUNRISE - Average Attendance at Guided Walks by Weekday.



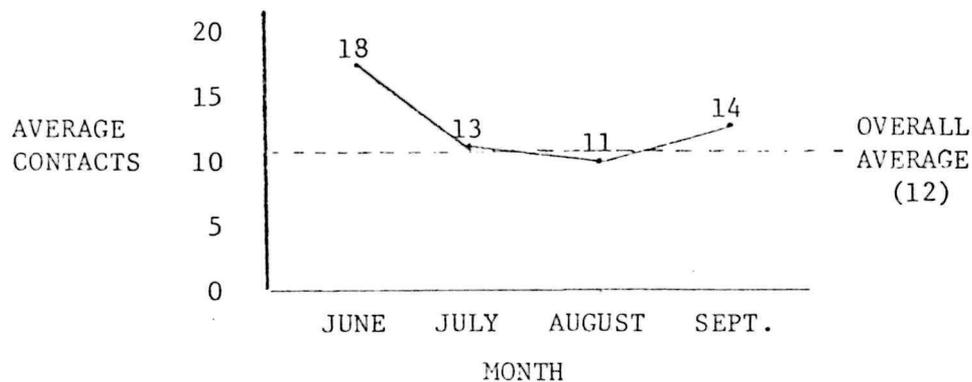
Because of a very mild winter, total visitation to Mount Rainier was much higher in 1977 than in 1976. To a certain extent, this visitation increase is reflected in the use of interpretive services in the East District. Figure 5 compares average attendance at guided walks in the East District. Figure 5 compares average attendance at guided walks in the Ohanapecosh, White River, and Sunrise areas between the two years. Ohanapecosh and Sunrise show slight increases, although a decrease in attendance is evident at White River.

FIGURE 5. EAST DISTRICT - Average Attendance at Guided Walks in 1976 and 1977.



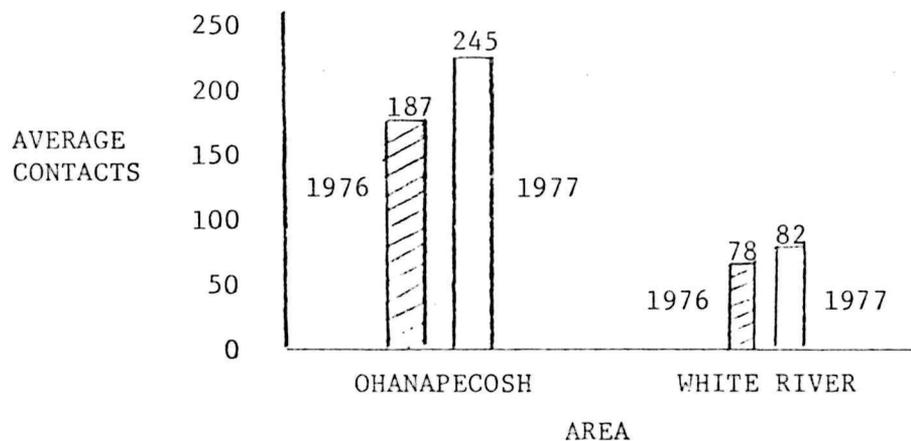
The real effect of the mild winter is seen not so much in the seasonal averages, however, in the monthly averages. Ohanapecosh, the only area in the East District open in June, had its highest average attendance on guided walks during that month, at a time when many park roads are normally closed by snow (Figure 6). This may be the result increased visitation early in the summer season due to the light snowfall the previous winter, although the fact that substantially fewer walks were offered in June than in July and August also contributed somewhat to the high average attendance in that month.

FIGURE 6. OHANAPECOSH - Average Attendance at Guided Walks by Month - 1977.



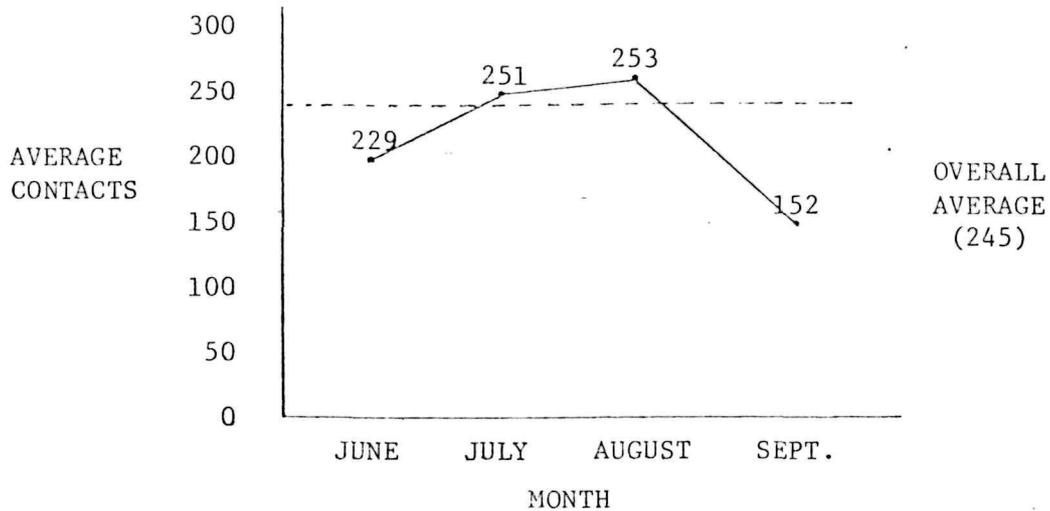
Increased visitation during 1977 also coincided with higher attendance levels at evening programs in both the Ohanapecosh and White River campgrounds (FIGURE 7). Average attendance rose from 187 to 245 at Ohanapecosh, and from 78 to 82 at White River, representing respective increases of 31 and 5 percent.

FIGURE 7. EAST DISTRICT - Average Attendance at Evening Programs in 1976 and 1977.



At Ohanapecosh, where evening programs were presented from June through September, average attendance was especially high during the first three of these months (Figure 8). The attendance during June may again be the result of increased early visitation resulting from a mild winter.

FIGURE 8. OHANAPECOSH - Average Attendance at Evening Programs by Month - 1977.



In both the Ohanapecosh and White River areas, attendance at evening programs peaked on Friday and Saturday nights, followed by a sharp drop-off on Sunday evenings (Figures 9 and 10). The high average for Wednesdays at Ohanapecash may be due to the personal popularity of the interpreter offering the program on that particular night.

FIGURE 9. OHANAPECOSH - Average Attendance at Evening Programs by Weekday - 1977.

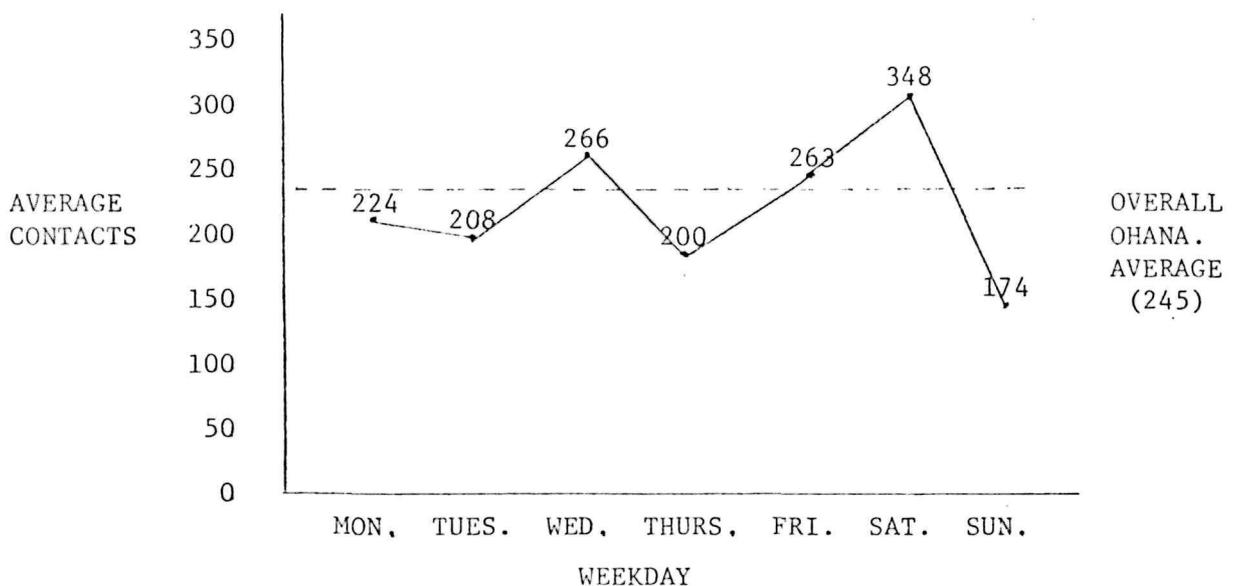
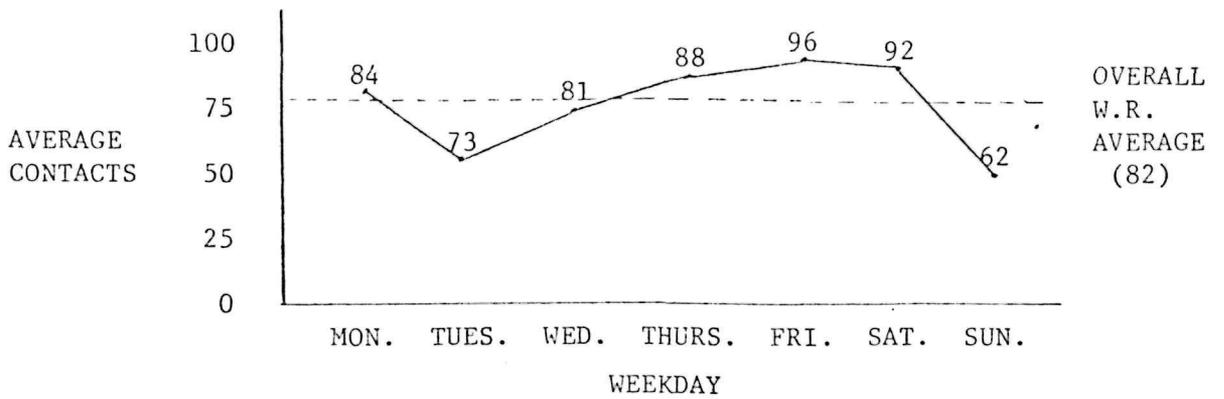
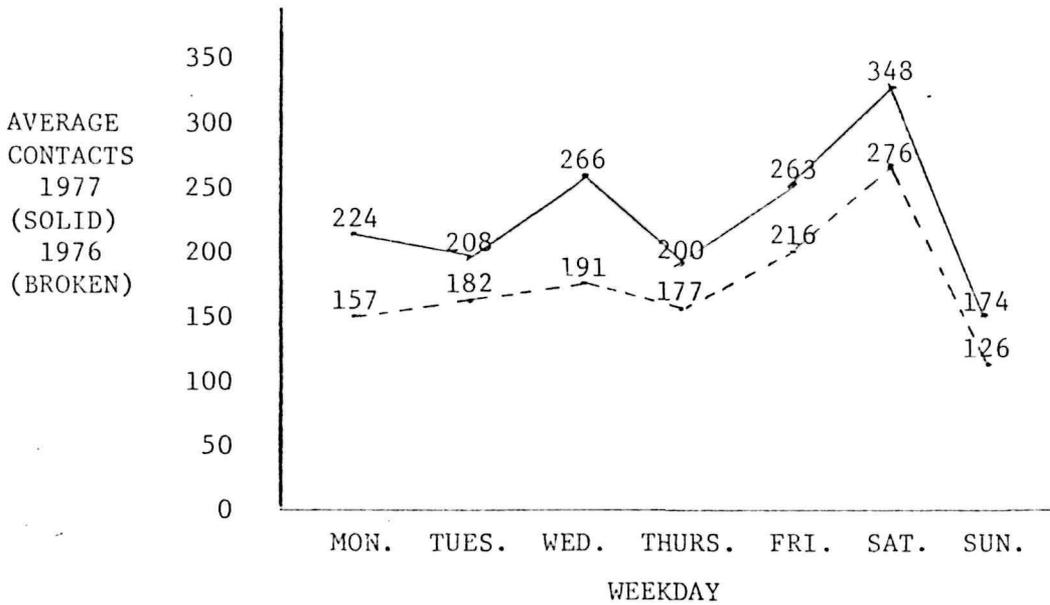


FIGURE 10. WHITE RIVER - Average Attendance at Evening Programs by Weekday - 1977.



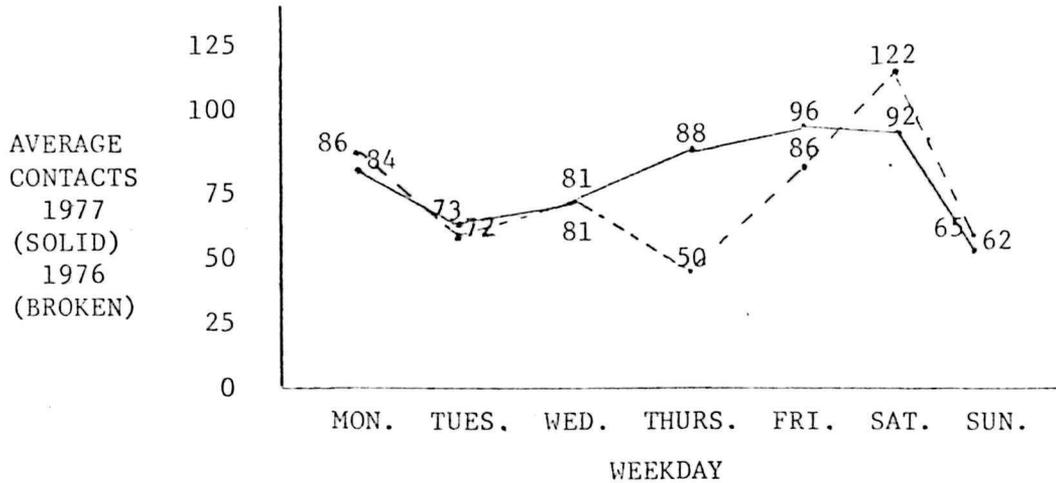
The evening program attendance patterns illustrated in Figures 9 and 10 are almost identical to the 1976 patterns for the Ohanapecosh and White River areas. A comparison between patterns for both areas is presented in Figures 11 and 12.

FIGURE 11. OHANAPECOSH - Comparison Between Average Attendance at Evening Programs by Weekday during 1976 and 1977.



Overall White River shows less difference in weekday averages than is evident at Ohanapecosh, although Thursdays and Saturdays did show a marked deviation from the previous year.

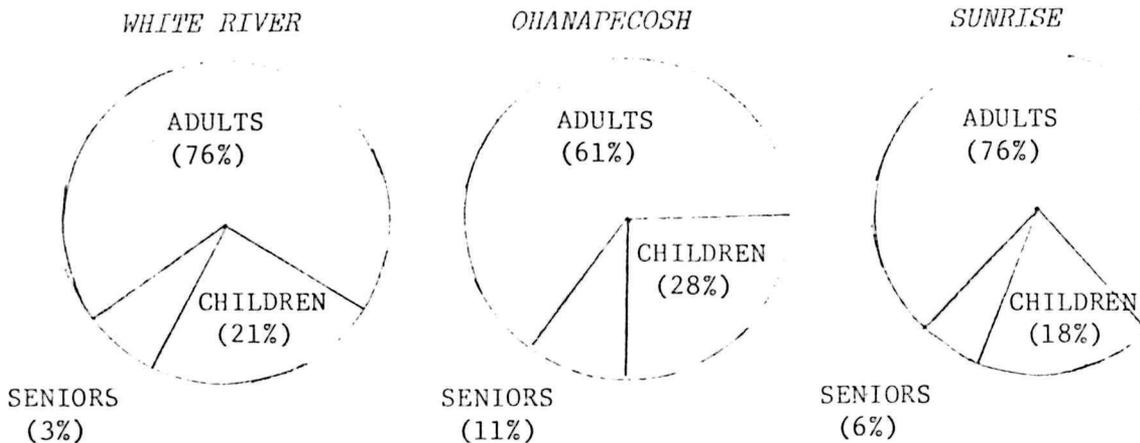
FIGURE 12. WHITE RIVER - Comparison Between Average Attendance at Evening Programs by Weekday during 1976 and 1977.



Age of Participants in Guided Walks

Most information on audience composition in the East District was obtained during conducted walks, since these activities provided the best conditions for collecting such data. Therefore, the following descriptions of interpretive audiences will be confined to those taking part in these walks. The "seniors" category refers to those over 60 years of age. Children were those under 12, and adults those between 12 and 60. Figure 13 presents the age breakdowns for all three areas within the East District.

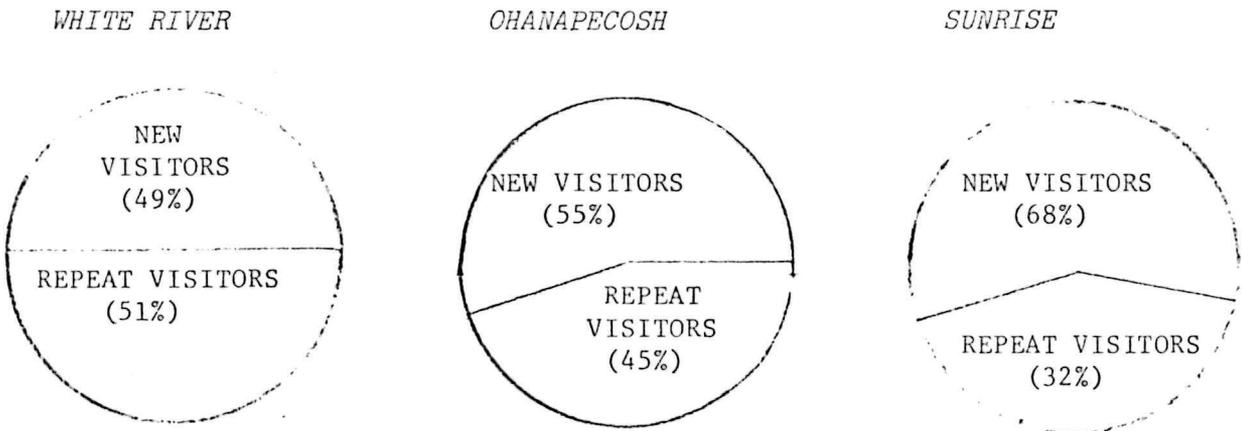
FIGURE 13. EAST DISTRICT - Age Breakdown of Those Attending Guided Walks - Summer, 1977.



New and Repeat Visitors Participation in Interpretive Walks

At Mount Rainier, those attending guided walks were asked whether or not they had been to the park previously. In Figure 14, the percentage of new and repeat visitors attending guided walks is presented for the Ohanapecosh, White River, and Sunrise areas. At White River, there was nearly an equal split between new and repeat visitors. However, at Ohanapecosh, and particularly at Sunrise, new visitors predominated, with 68 percent of those attending guided walks in the latter area making their first visit to Mount Rainier.

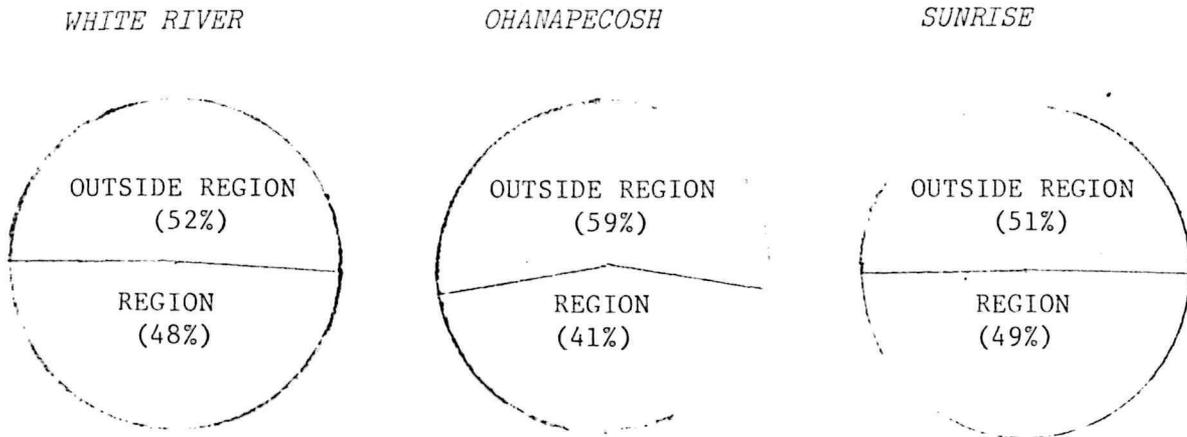
FIGURE 14. EAST DISTRICT - New and Repeat Visitors Attending Guided Walks - Summer, 1977.



Residence of Visitors Participating in Interpretive Walks

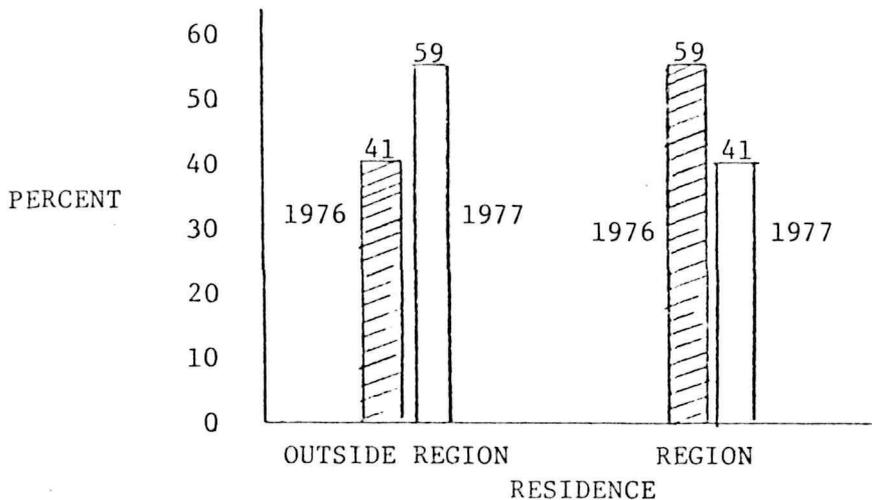
The Interpretive Activity Inventory was also used to measure the residence of persons contacted during conducted walks in the East District. Residence was divided into two categories: "region" (Washington State) and "outside region" (everywhere else). At Sunrise and White River, those contacted were almost evenly divided on this variable. However, at Ohanapecosh, visitors from outside Washington made up 59 percent of all those attending interpretive walks (Figure 15).

FIGURE 15. EAST DISTRICT - Residence of Visitors Attending Guided Walks - Summer, 1977.



What is interesting about the residence breakdown is the dramatic shift in the pattern at Ohanapecosh between 1976 and 1977. In 1976, fully 59 percent of all those contacted on guided walks resided in Washington State. This dropped eighteen points to 41 percent in 1977 (Figure 16). Possibly, the rise in the percentage of out-of-state residents noted in the latter year may be linked in some way to the overall increase in visitation to the park in 1977. It is difficult to verify this by examining patterns at other areas because 1976 residence data from Sunrise and White River is incomplete. However, there is some indication that at Sunrise the number of out-of-state residents participating in guided walks declined in 1977, in contrast to what occurred at Ohanapecosh.

FIGURE 16, OHANAPECOSH - Comparison of Residence of Visitors Attending Guided Walks in 1976 and 1977.

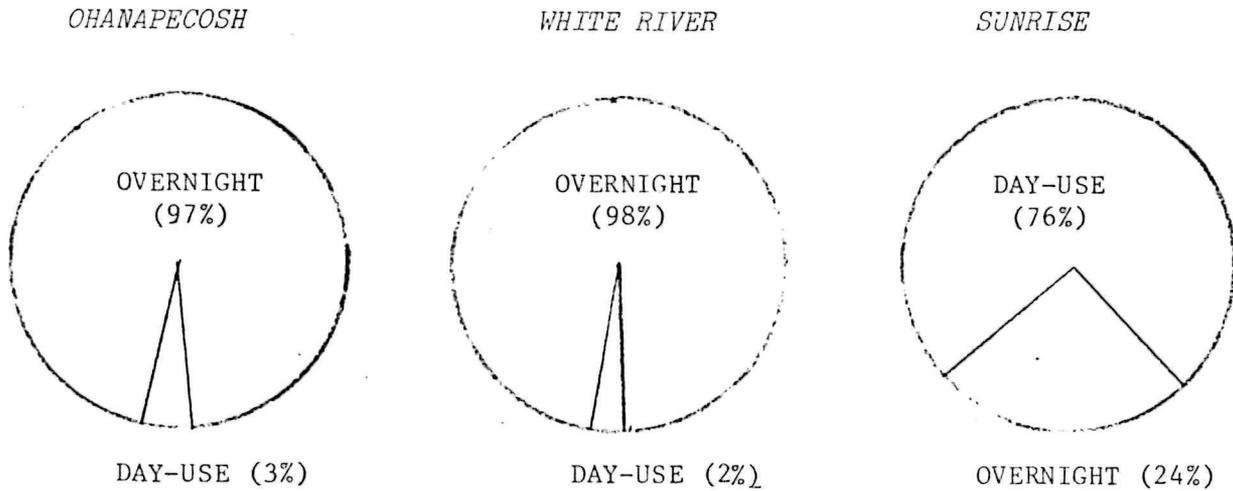


Length of Stay of Visitors Participating in Guided Walks

A final variable measured by the Interpretive Activity at Mount Rainier was the visitor's length of stay in the park. As with residence, visitors were divided into two categories: those staying overnight in the park, and those visiting just for the day. On this variable there was a sharp difference between Sunrise, which is principally a day-use area, and both of the campgrounds.

At Sunrise, three-fourths of those attending interpretive walks were day-users, while almost all of those participating in walks at Ohanapecosh and White River were staying in the park overnight (Figure 17).

FIGURE 17. EAST DISTRICT - Length of Stay of Visitors Participating in Guided Walks - Summer, 1977.

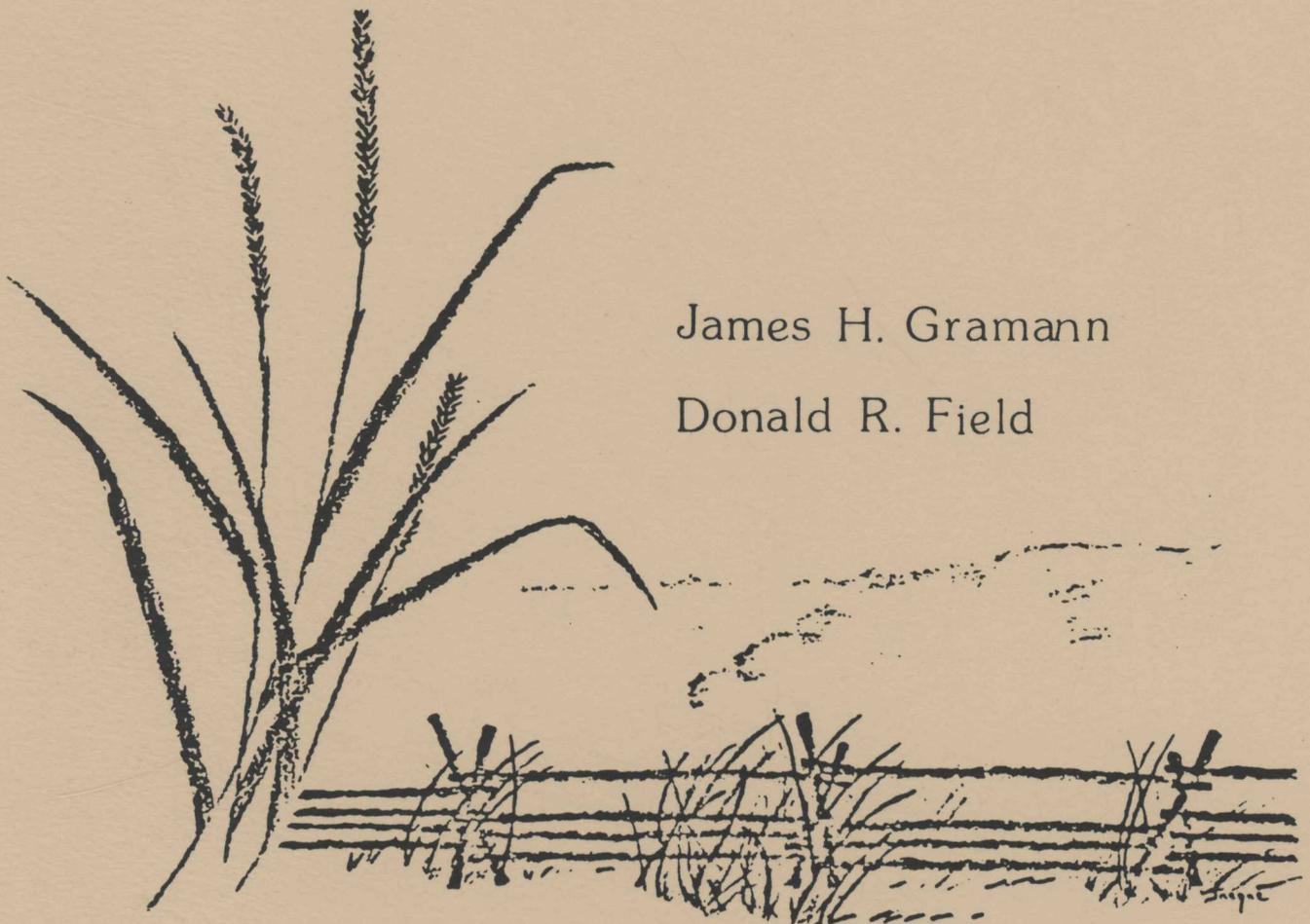


Interpretive Activity Inventory

The Whitman Mission Data

James H. Gramann

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January 1978

INTERPRETIVE ACTIVITY INVENTORY: THE WHITMAN MISSION DATA

A Report of the National Park Service, Cooperative Park Studies Unit (Sociology Studies Program) located in the College of Forest Resources, University of Washington, Seattle.

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December, 1977

Cover design by Jacqueline Gramann

PREFACE

Interpretive Activity Inventory: The Whitman Mission Data is one of a series of reports dealing with the testing of the Interpretive Activity Inventory System during 1976 and 1977. Other reports in this series are available upon request from the Cooperative Park Studies Unit, College of Forest Resources AR-10, University of Washington, Seattle, 98195. These reports include:

Interpretive Activity Inventory System: Interim Report (1976)

Interpretive Activity Inventory: Analysis of the 1976 Data from Mount Rainier National Park and Perry's Victory and International Peace Memorial

Interpretive Activity Inventory: The Mount Rainier Data, 1977

Interpretive Activity Inventory: The Perry's Victory Data, 1977

History and Evaluation of the Interpretive Activity Inventory, An Observational System for Use in Parks (J.H. Gramann, Unpublished M.S. thesis, 1978)

In addition, a final report describing the system and evaluating its various uses is planned for completion by the spring of 1978.

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INTRODUCTION

The Interpretive Activity Inventory System is an observational tool designed as a management aid to those concerned with the administration of interpretive programming in parks and other recreational areas. Its purpose is to provide a systematic method for collecting, storing, and analyzing information on the users of interpretive services. As a research instrument, it is distinguished from many other information gathering tools by being under the complete control of the park interpretive staff. All aspects of the observational work are carried out entirely in-house by park interpreters, and the instrument itself is adaptable for use in a wide variety of situations.

From April 1 through September 1, 1977 the Interpretive Activity Inventory was utilized by the staff at Whitman Mission National Historic Site as part of a general test of its workability in park settings. The purpose of this report is to present the information on visitors that was collected during this test period. The report is divided into three sections:

The *first section* consists of a narrative description of the visitors to Whitman Mission. It is based on observational data collected in the visitor's center by interpreters using the Inventory System. This section also includes a discussion of specific multiplication factors which can be combined with the use of automatic counting devices to furnish estimates of total summer visitation to the park, as well as total visitor use of the self-guiding trail located on the Mission grounds.

Section two expands upon the information presented in the first section, using graphic techniques to furnish a more detailed breakdown of how different types of visitors used the park during the summer of 1977.

The *third section* is an "odds and ends" collection of impressions on interpretation at Whitman Mission formed by the investigator during the course of several hours spent observing visitor participation in interpretive services. It is intended as outside input of an informal nature, and no claim is made for the statistical reliability of the observations. This section also includes specific suggestions for the use of Whitman Mission Inventory data.

THE WHITMAN MISSION VISITORS

There is no such thing as an "average" visitor to a park. At Whitman Mission visitors formed a diverse group and their make-up changed, not only as the season progressed from spring to summer during 1977, but also as the week, and even the day, progressed. In the months of April and May school field trips and church groups formed a large part of the park's visitation. In the latter month, in fact, well over half of all people viewing the Whitman Mission film shown in the visitor's center auditorium were members of such organized tours. May was the only month from April through August when these people formed the majority of film viewers.

From April 1 through September 1 the Whitman film was shown seven times daily (on the average) to a total of 18,616 visitors. The busiest hours were Saturday afternoons. The film was designed to appeal especially to children, and during the summer months fully one quarter of all people sampled in the visitor's center were children under twelve years of age. The percentage of children remained relatively constant throughout the summer, as did the percentage of those twelve to sixty years old and those over sixty. What was interesting about the age breakdown of the visitors was that senior citizens were less likely to be found in the park in the afternoon as in the morning. And after 6:00 P.M. they made up only seven percent of those people in the visitor's center, being outnumbered by children four to one and by adults nine to one. The large percentage of children in the sampled population indicates that these visitors form a numerically important segment of users not only during the spring, but during the summer season as well. Therefore, interpretive efforts directed specifically towards children should not be entirely abandoned at the conclusion of the school year.

A somewhat surprising statistic is that 77 percent of the 342 people in the Inventory sample had never been to Whitman Mission previously. During mid-week, from Monday through Friday, this percentage was even higher, at 81 percent. Special events held over the weekends appeared to attract more repeat visitors, however, since the percentage of first-time visitors dropped to 73 percent on those days and repeat visitation rose from 19 to 27 percent.

An intriguing discovery is that the park continues to attract a number of local residents who have never visited it before. Again, this is especially true on weekends. Although overall, the summer visitors to Whitman Mission are overwhelmingly "non-local" (living more than 100 miles from the park), local residents did make up 40 percent of those in the visitor's center on weekends. This is a dramatic increase over the mid-week period when they comprised only 19 percent of the visitors. And since the percentage of local residents in the visitor's center on weekends far exceeded the percentage of repeat visitors, a significant number of local *first-timers* had to have been visiting the park on those days.

Another interesting fact about local residents is that they actually formed a majority of the people in the visitor's center after 6:00 P.M., even though they represented a minority of the visitation in the morning and afternoon hours.

Systematic random observation of the self-guided trail at the park was undertaken during the summer of 1977 by non-staff researchers. This revealed that for every punch recorded on the counter attached to the audio box at the First House ruin, 5.1 people used the trail. Multiplying the number of punches recorded on the counter by this figure will provide a reasonable estimate of visitor use of this facility for the purposes of the Annual Public Contact Report. Unfortunately, this figure can only be validly used for the summer months. It is quite possible that other seasons of the year would produce different multiplication factors. If the use of the counter is to be extended beyond the summer months, it is recommended that a certain amount of time be set aside on various days each week to keep track of the number of people on the trail, as well as the number of punches recorded on the counter for the same period of time.

Another product of the non-staff observation study was a multiplication factor to be used with an automatic vehicle counter in the parking lot to determine total visitation to the park. As with the trail factor, this is valid only for the summer months but it is interesting for the reason that it indicates that visitation to Whitman Mission may have been somewhat overestimated in past years, although it is not certain that this was the case.

An observer was stationed in the parking lot on twelve randomly chosen days during June, July, August, and September for the purpose of counting the number of vehicles and the number of passengers in them. A total of 245 vehicles carrying 745 "visitors" was sampled in this way. If people did not leave their car, they were not counted in the visitor total. However, the moment a person stepped from their automobile, even if it was only to stretch their legs or walk their dog, they were defined as a "visitor" and included in that count. The mail car, delivery trucks, staff cars, and other vehicles going to and from the superintendant's house were counted in the vehicle total, but their occupants were not considered to be visitors. The presence of such vehicles reduced the visitor to click ratio on the counter considerably, as did the fact that about five percent of the observed vehicles were motorhomes or trailer combinations with three or four axles. A four axle rig, of course, creates twice as many clicks on the counter as would an automobile, even though it may not carry any more visitors. A surprising number of cars were "on/off-ers". They entered the parking lot, circled the island, and left without stopping. They were registered on the counter, but their passengers were not visitors. Some vehicles stopped, but their occupants spent their whole stay inside resting, eating, etc. This was especially true of older people in large motorhomes. They, too, were not counted as visitors.

All told, the 245 vehicles generated 1,096 clicks entering and exiting the parking lot and carried 745 visitors. The ratio obtained this past summer of 745 visitors to 1,096 clicks is equivalent to 2.72 visitors for

GRAPHIC ANALYSIS OF THE INVENTORY DATA

Use of the Whitman Mission Film

From April 1 through September 1, 1977 the film, *The Whitmans of Waiilatpu* was shown 1,079 times to 18,616 visitors. This is an average of 7 showings per day and over 17 people per showing. The monthly breakdown of film use is depicted in Figure 1, below.

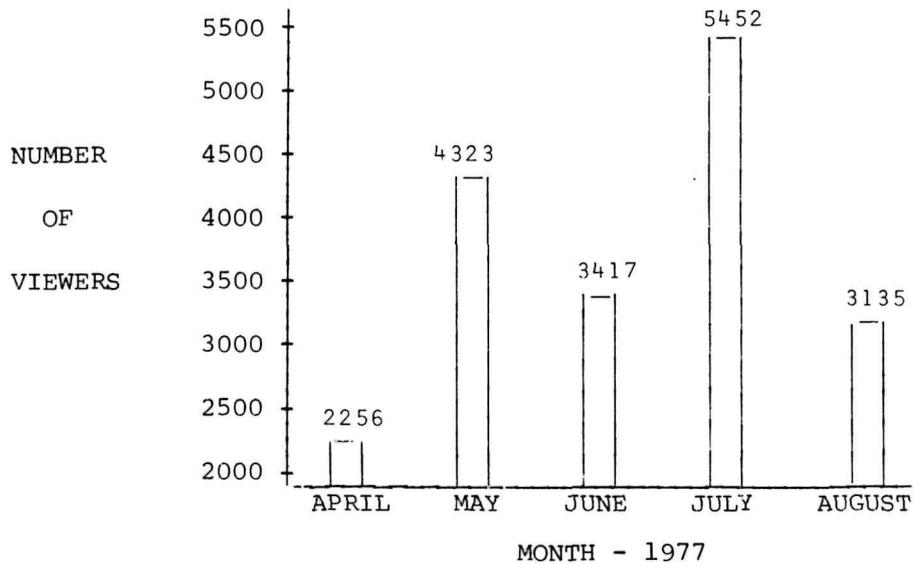
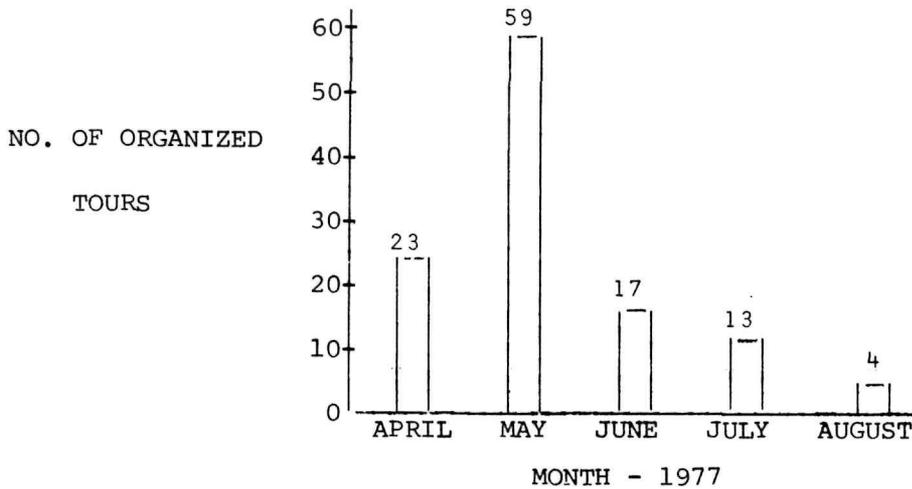


FIGURE 1. MONTHLY BREAKDOWN OF FILM VIEWERS

The reason that so many people viewed the film during May is because this was the month that saw the greatest number of organized tours to Whitman Mission. These were mainly school field trips, but also included church groups and, later on during the year, day care center tours, senior citizen tours, and special interest groups, such as historical societies. Figure 2 on the next page shows the use of the film by organized groups during different months of the year.

FIGURE 2. MONTHLY BREAKDOWN OF NUMBER OF ORGANIZED TOURS VIEWING THE WHITMAN FILM.



During May, when 59 organized groups viewed the film, the average size of a tour was 42 people, accounting for the large number of viewers during that month. The film was actually shown to twice as many unorganized groups (123) during May than to organized tours, but the average attendance at these showings was only 15. May was the only month of the five analyzed that saw more people in organized tours view the film than people in unorganized groups.

We also analyzed use of the film by the day of the week and by time of the day. As might be expected, the film was shown more times to more people on weekends than during the period from Monday to Friday. Figure 3 illustrates the average attendance at the film and the average number of showings per day of the week. Figure 4 on the following page shows that the busiest times of the day were afternoons, from 12:00 to 6:00 P.M.

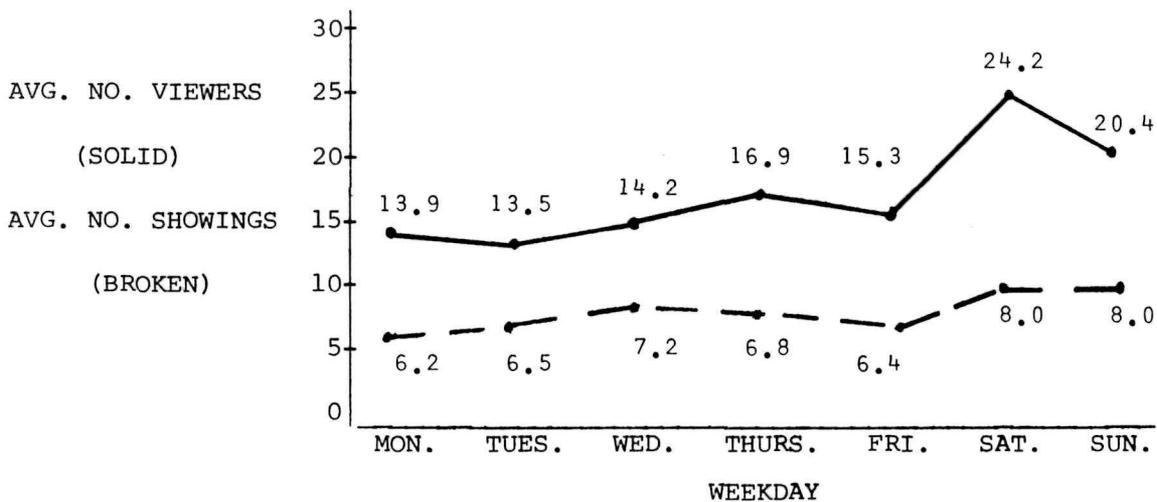


FIGURE 3. AVERAGE NUMBER OF FILM VIEWERS AND SHOWINGS PER WEEKDAY.

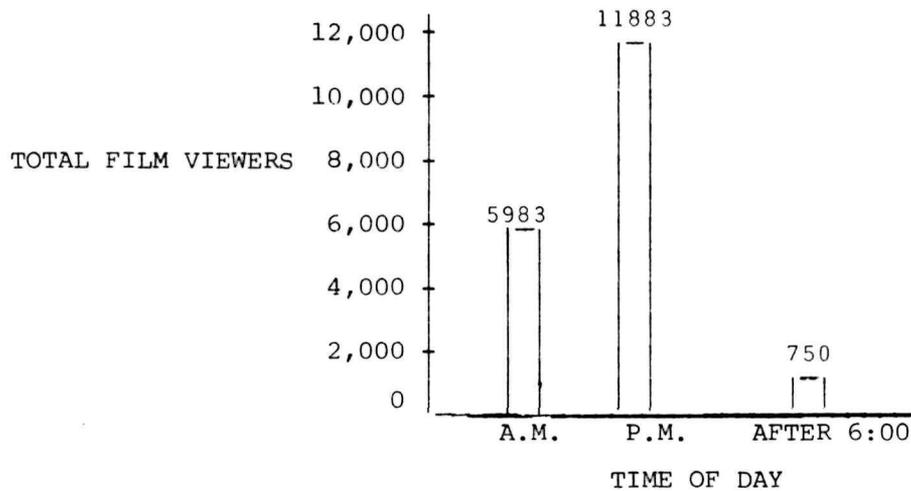


FIGURE 4. BREAKDOWN OF TOTAL NUMBER OF FILM VIEWERS BY TIME OF DAY.

Age Breakdown of Whitman Mission Visitors

The Interpretive Activity Inventory was used to sample the age of persons in the visitor's center from June 16 through August 24. Visitors were grouped into three broad age categories: seniors (over 60), adults (12 to 60), and children (under 12). The figures obtained were checked against an independent random sample of visitor age taken during the observational study and were found to match very closely. However, these figures are representative of summer use only and should not be used to describe visitation during other seasons of the year. The overall age breakdown is presented in Figure 5.

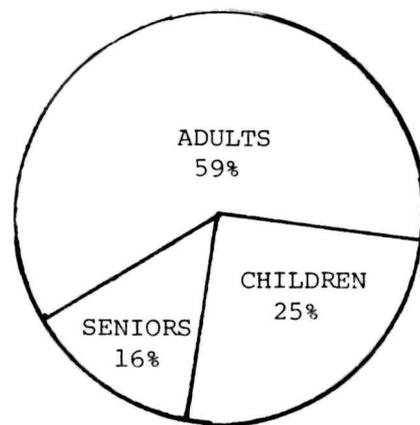


FIGURE 5. AGE BREAKDOWN OF WHITMAN MISSION VISITORS - SUMMER, 1977.

The single largest group of visitors were those in the 12 to 60 years old age bracket (59%). Surprisingly, though, fully one-fourth of the visitors were children under 12. Those over 60 formed the smallest percentage of visitors (15%). There was very little variation in this percentage between June, July, or August, nor was there much change between days of the week. A comparison of the age breakdowns at different times of the day, however, reveals a very marked trend for senior citizens to decline in total percentage as the day wears on. A possible explanation for this phenomenon is that the increased heat in the afternoon results in fewer senior citizens visiting the park (see Figure 6.)

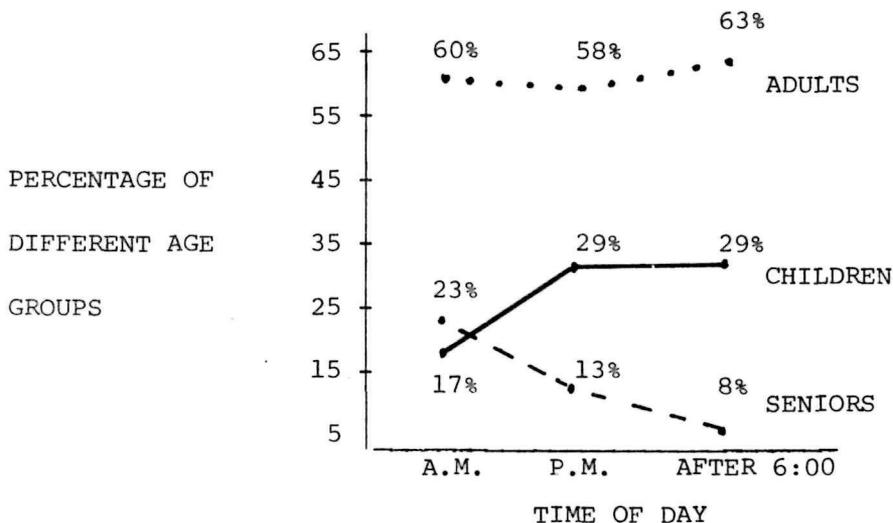


FIGURE 6. COMPARISON OF AGE BREAKDOWNS AT DIFFERENT TIMES OF THE DAY.

New and Repeat Visitors at Whitman Mission

New visitors in the Inventory sample outnumbered repeat visitors by a margin of more than three to one and represented over three-fourths of all people found in the visitor's center. Figure 7 shows that 77 percent of all visitors sampled indicated that they were making their first trip to Whitman Mission.

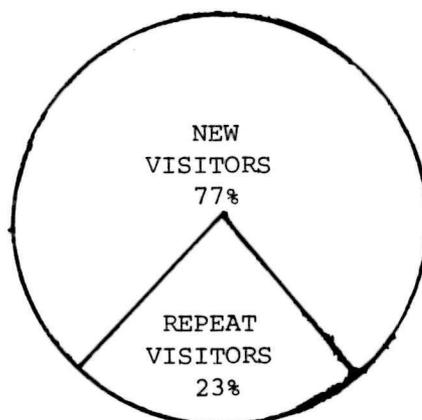


FIGURE 7. BREAKDOWN OF NEW AND REPEAT VISITORS TO WHITMAN MISSION - SUMMER, 1977.

Generally speaking, the relationship depicted in Figure 7 was stable through time, although special programs staged on the weekends and advertised locally apparently did have the effect of increasing the percentage of repeat visitors on these days by a slight amount. Figure 8 shows the change in the balance of new and repeat visitors at different times of the week. There was an eight percent increase in repeat visitation on the weekends.

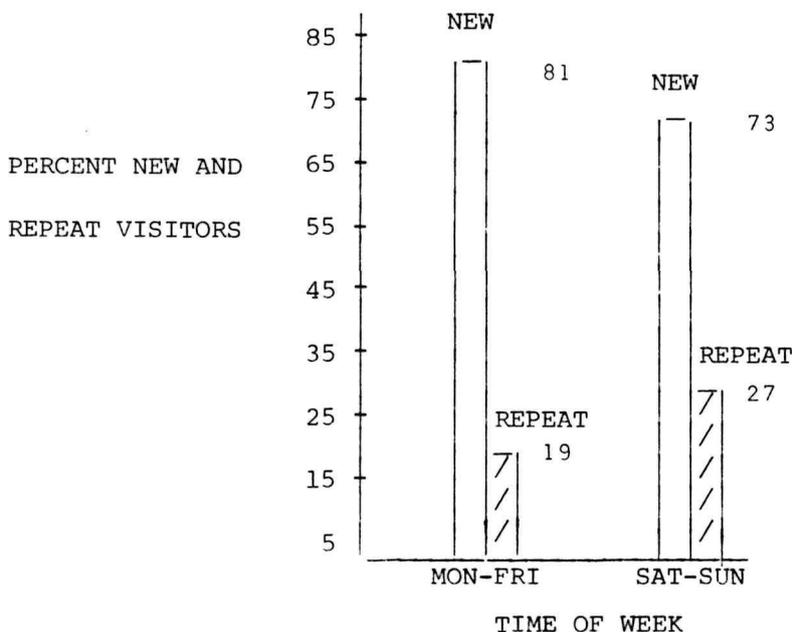


FIGURE 8. BREAKDOWN OF NEW AND REPEAT VISITATION BY THE TIME OF THE WEEK.

Repeat visitors are more likely to be local residents than new visitors are so this may explain why the percentage of repeat visitors also goes up after 6:00 P.M. New visitors are more likely to be looking for a campground or motel in the late afternoon, but local repeat visitors have their own home to return to after completing a late visit (see Figure 9, next page). Nevertheless, new visitors are still in the majority, even in the late afternoon and evening hours.

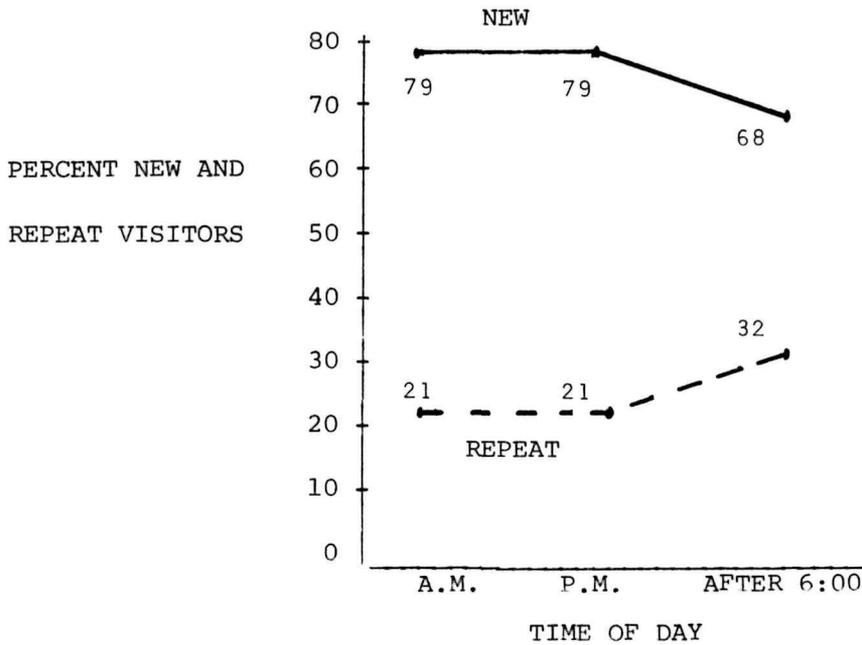


FIGURE 9. BREAKDOWN OF NEW AND REPEAT VISITATION BY TIME OF THE DAY.

Local and Non-local Visitors to Whitman Mission

The same trends evident with new and repeat visitors are seen with local and non-local residents. For the purposes of the Inventory, a "local resident" was defined as one living within a 100 mile radius of Whitman Mission. Thus, people from Tri-Cities, Walla Walla, Milton-Freewater, and Pendleton were local residents. Those from Seattle or Portland were non-local. Overall, almost three-fourths of the visitors in the sample were non-local residents (see Figure 10).



FIGURE 10. BREAKDOWN OF RESIDENCE OF VISITORS TO WHITMAN MISSION-SUMMER - 1977.

As might be expected, the percentage of local residents rose on weekends just as the percentage of repeat visitors increased. But in this case the increase was even more pronounced, suggesting that many local, first-time visitors were coming to the park. Figure 11 reveals that the percentage of local residents rose 21 points, from 19 percent during the week to 40 percent on the weekend.

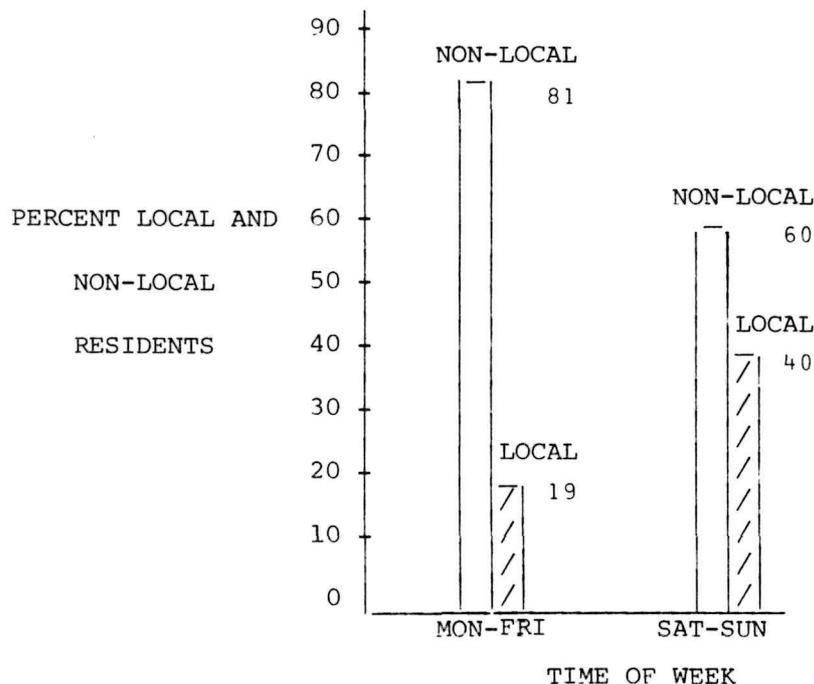


FIGURE 11. BREAKDOWN OF LOCAL AND NON-LOCAL VISITATION BY TIME OF THE WEEK.

After 6:00 P.M. local visitors actually formed a slim majority of those sampled in the visitor's center, another dramatic change from earlier in the day when 75 percent of the visitors were non-local residents (see Figure 12, next page).

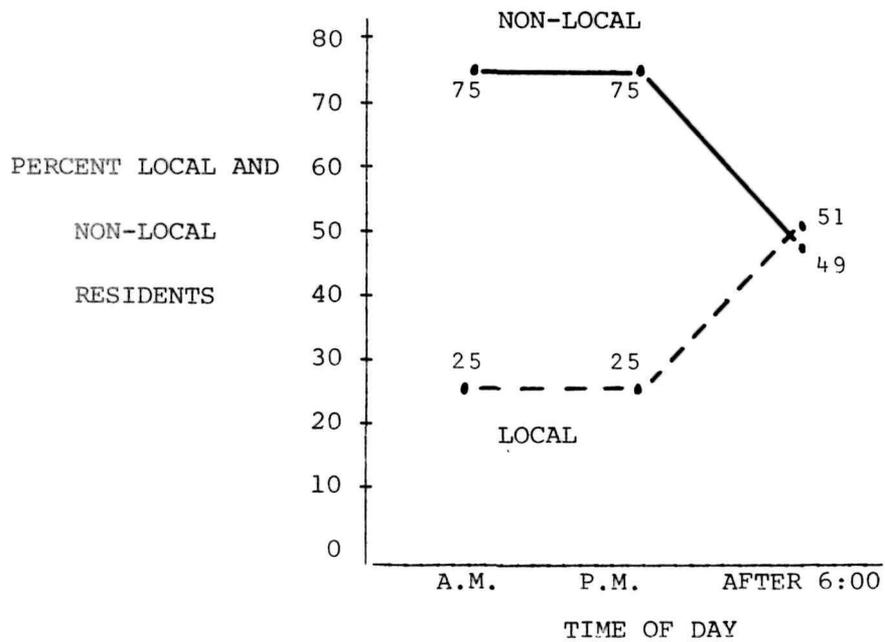


FIGURE 12. BREAKDOWN OF LOCAL AND NON-LOCAL VISITATION BY TIME OF THE DAY.

ODDS AND ENDS

During the course of the work at Whitman Mission, there was ample time to observe the use of different interpretive services available at the park. One of the most surprising observations concerned the length of time visitors spent in the exhibit room at the visitor's center. Several studies done in various parts of the country have found that people usually do not look at exhibits long enough to read their entire label. This did not appear to be the case at Whitman Mission; visitors spent a great deal of time in the exhibit room and in front of individual exhibits. Of all the exhibits, the diorama with audio box seemed to be the most popular, especially with children. Care should be taken, however, that announcements about film showings made over the public address system do not coincide with the playing of the tape as sometimes occurred last summer, since this tends to garble both messages. A contributing factor to the relatively long stays by visitors in the museum may have been that many people were "killing time" while waiting for the hourly showing of the film in the adjacent auditorium. Whenever the film was announced, the museum room would empty almost completely as most people filed into the auditorium.

One aspect of interpretation at Whitman Mission that might be modified is the audio message at the memorial shaft. This message states in part:

For it was the Whitman Party that brought the first white women overland, across the continent, and established the first white American families in all the vast lands of the Pacific Northwest. (Emphasis on tape.)

Since blacks, chicanos, and Indians, as well as whites were all observed to use this audio station it would perhaps be appropriate to drop the first "white" and replace the second with "pioneer" or some similar word. Such changes would not seriously alter the meaning of the message. At the very least, consideration should be given to re-recording the message without the marked emphasis on those two words. Even white visitors were occasionally heard to chuckle when this portion of the tape was played.

Although Whitman Mission itself is exclusively a day-use area, an interesting facet of the visitation is that a number of people coming to the park spend their nights camping at nearby Fort Walla Walla City Park. Visitation from this source could no doubt be increased if a supply of the Whitman Mission folders were kept in the registration office at Fort Walla Walla. Last summer Washington State Parks had an information booklet which was distributed to campers as they registered in the office. It seems that the National Park Service could certainly follow suit.

Another idea worth exploring, should the *Trails West* outdoor drama be cancelled for the 1978 season, would be to use the amphitheater at Fort Walla Walla for evening interpretive programs on weekends. The campground is usually full, or nearly so, on these days and a large crowd would be virtually assured if the program were well advertised among campers.

One complaint voiced by interpreters this past summer was that there was an insufficient supply of coloring books to distribute to younger visitors, as they had to be reserved for use with school tours in the spring. Since fully one quarter of the visitors to Whitman Mission last summer were children under twelve, and because the National Park Service has recently made a strong commitment to children's interpretation, this seems to be an odd situation. Here is a case where the use of the Inventory statistics on children's visitation might prove to be an effective tool in arguing for increased funding to print additional coloring books.

A final thought concerns the character of the overall programming mix at Whitman Mission. Especially during the summer months, a tremendous reliance is placed on various non-personal and automated devices to carry the burden of communicating the interpretive story. The only visitor-interpreter interaction observed to occur last summer was during short spinning demonstrations, at living history programs scheduled on weekends, and at the information desk in the visitor center lobby. Interpreters were almost never to be found on the Mission grounds outside the visitor's center. One interpreter admitted to not having been on the self-guided trail the entire summer, even though it is located just a few yards beyond the visitor's center. The lack of visitor-interpreter interaction may have been due in part to a staff shortage last summer, but there were many times when two people were manning the information desk. This didn't seem to be necessary. Our experience with the Inventory at other historical parks has demonstrated that a great deal can be learned about visitors and the ways in which they use an area by simply strolling around the grounds and chatting with them on an informal basis. At Whitman Mission, for example, it was observed that audio stations on the trail that had a bench or shady spot nearby were more apt to have their entire messages listened to. At the memorial shaft, not a few people climbed over the barrier and picked wildflowers and other plants growing on the hillside below. There was also confusion among some visitors as to what the Canada geese and the ducks at the millpond had to do with the Whitmans. Other animal life such as frogs, snakes, and birds would also attract attention, but there was little interpretation available concerning them.

Sometimes points in the taped messages or in the signs weren't clear to visitors. Why did the main house have two kitchens, for instance? What kinds of apples grew in the orchard? Was it all right to eat them? It must be remembered that most visitors to Whitman Mission in the summer have never been to the park before. Also, the large majority of them are from over 100 miles away, and are not as likely to be as familiar with the park or with the Whitman's story as local visitors would be. Face-to-face two-way communication is the most responsive form of interpretation available. By making "grounds duty", or even "museum duty", a routine part of an interpreter's schedule the interpretive effort at Whitman Mission would be enhanced. In addition, valuable information on visitor's knowledge and behavior patterns would also be collected which could be "fed back" into the interpretive programming.

INTERPRETIVE ACTIVITY INVENTORY:

THE PERRY'S VICTORY DATA, 1977

A Report of the National Park Service, Cooperative Park Studies Unit (Sociology Studies Program) located in the College of Forest Resources, University of Washington, Seattle.

by

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February, 1978

PREFACE

Interpretive Activity Inventory: The Perry's Victory Data, 1977 is one in a series of reports dealing with the testing of the Interpretive Activity Inventory System during 1976 and 1977. Other reports in this series are available upon request from the Cooperative Park Studies Unit, College of Forest Resources, AR-10, University of Washington, Seattle, 98195. These reports include:

Interpretive Activity Inventory System: Interim Report (1976)

Interpretive Activity Inventory: Analysis of the 1976 Data from Mount Rainier National Park and Perry's Victory and International Peace Memorial

Interpretive Activity Inventory: The Mount Rainier Data, 1977

Interpretive Activity Inventory: The Whitman Mission Data, 1977

History and Evaluation of the Interpretive Activity Inventory, An Observational System for Use in Parks (J. H. Gramann, Unpublished M.S. Thesis, 1978)

In addition, a final report describing the system and evaluating its various uses is planned for completion by the spring of 1978.

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INTRODUCTION

The Interpretive Activity Inventory System is an observational tool designed as a management aid to those concerned with the administration of interpretive programming in parks and other recreational areas. Its purpose is to provide a systematic method for collecting, storing, and analyzing information on the users of interpretive services. As a research instrument, it is distinguished from many other information gathering tools by being under the complete control of the park interpretive staff. All aspects of the observational work are carried out entirely in-house by park interpreters, and the instrument itself is adaptable for use in a variety of situations.

From July 8 through August 26, 1977 (and also during August of 1976) the Interpretive Activity Inventory was utilized by the staff at Perry's Victory and International Peace Memorial as part of a general test of its workability in park settings. The purpose of this report is to present the information on visitors that was collected during this test period. The report is divided into two sections:

The first section consists of a narrative description of the visitors included in the Inventory sample at Perry's Victory. It is based on data collected by interpreters at various activity centers within the park. This section also includes a comparison of data collected during 1977 with similar information gathered the previous year.

Section two expands upon the information presented in the first section, using graphic techniques to furnish a more detailed breakdown of how different types of visitors used the park during the Inventory test period.

THE PERRY'S VICTORY VISITORS

The Inventory sample taken at Perry's Victory describes those visitors participating in several different interpretive activities within the park. Both staff-conducted and self-conducted programs are represented in the sample. Characteristics were noted for visitors utilizing the following services: daily interpretive talks, evening programs, a visitor center, and elevator ride to the top of the memorial column, an automated audio device at the top of the column, and an observation gallery, also at the column's top. In some cases, these last three areas are combined into a single "memorial sample" for analysis purposes. We have no way of knowing for certain if the description of visitor use patterns presented here can be applied to those persons who did not make use of any of the above services during their visit to Perry's Victory.

There is no such thing as an "average" visitor to a park. In the case of Perry's Victory, interpretive audiences formed a diverse group. Often their composition and their levels of participation would change, not only from 1976 to 1977, but also as time progressed within a single season, within a single week, or even within a single day. In other cases, however, the balance in audience characteristics remained remarkably stable over all time periods measured.

One of the most significant changes to occur at Perry's Victory between 1976 and 1977 was a noticeable decline in the number of visitors taking part in staff-conducted interpretive activities. Plaza talks, which were offered several times daily, experienced a 41 percent decline in recorded attendance, while evening program attendance fell 20 percent. For the plaza talks, attendance losses occurred for all time periods, but were greatest for those talks scheduled Monday through Friday (45% decline) and for talks offered between the hours of 12 noon and 6:00 PM (47% decline).

An examination of the distribution of "poorly attended talks" (five or fewer visitors) and of "well attended talks" (thirty or more visitors) reveals that these activities made up 22 percent and 19 percent of all talks, respectively. There was a slight tendency for a greater percentage of talks scheduled in the mornings and on Mondays through Fridays to be poorly attended (by the above definition) than talks offered in the afternoons or on the weekends. Well attended talks were almost twice as likely to occur on the weekend as during the mid-week period.

One explanation for the decline in attendance at both plaza talks and evening programs may be that attendance levels the previous year were abnormally high due to the Bicentennial celebration. There is also a possibility that a considerable amount of noise from a major construction project located immediately adjacent to the park interfered with visitors' enjoyment of plaza talks, causing them to go elsewhere. However, this does not explain the decline in attendance at evening programs.

Two-thirds of all persons contacted at Perry's Victory were adults (defined as between twelve and sixty years of age). Those over sixty represented the smallest visitor age category (10%), while children under twelve accounted for approximately one-fourth of all those observed. This latter is a sizable proportion of the total interpretive audience and could be considered reason enough to implement a program of interpretation aimed especially at children.

During the first year of Inventory testing at Perry's Victory it was found that a majority of people sampled were making their first visit to the park. This pattern continued in 1977. In fact, the ratio of new visitors to repeat visitors was virtually identical for both years, indicating that a rather stable balance exists on this trait. In 1977, 59 percent of all people sampled were new visitors. The figures for 1976 (using the same activity samples) was 58 percent. As had been the case the previous summer, the highest proportion of new visitors was found at the audio station atop the Memorial. If all three sample sites within the Memorial are combined into a single sample, however, then the order of new visitor concentration (from highest to lowest) becomes: visitor center (64%), Memorial (60%), and plaza talks (54%). No information is available from evening programs. It was also found that over the two year period repeat visitors tended to be represented in their highest proportions on Sundays and Mondays. New visitors dominated the audience from Tuesday through Saturday, in each year peaking on Thursdays, when they made up almost three-fourths of all those sampled.

As with new and repeat visitors, a remarkable uniformity between years was found in the percentage of regional and nonregional residents visiting Perry's Victory. Regional residents (defined as those living in the states of Ohio and Michigan) constituted an overwhelming 85 percent of the interpretive audience in 1977. The year before the figure had been 86 percent. Over the two year period of Inventory use, residents of Ohio and Michigan outnumbered visitors from outside that region by a margin of six to one.

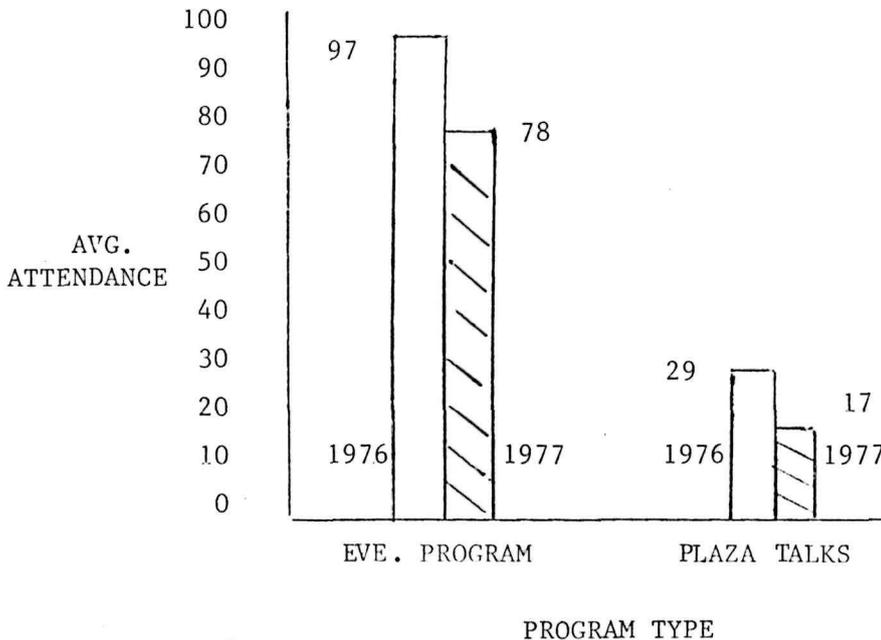
A final characteristic measured by the Inventory at Perry's Victory was the visitors' length of stay. This trait was divided into two categories: day-users and those staying overnight. Perry's Victory itself has no overnight facilities, however camping was available at a nearby state park. Visitors who stayed overnight at this park were classified as "overnighters" in the Inventory sample. All others were recorded as day-users. In total, overnighters comprised 24 percent of the visitors contacted. Even if evening programs figures are not used in computations, there is still a strong tendency for overnighters to make up a greater number of the visitors after 6:00 PM than before that hour. From noon to 6:00 day-users accounted for 80 percent of all people contacted. After this time that proportion dropped to 59 percent, while the proportion of overnighters doubled, rising from 20 percent to 41 percent. Whatever the hour, a fairly respectable number of people in the interpretive audience at Perry's Victory reported staying overnight at the state park campground.

GRAPHIC ANALYSIS OF THE INVENTORY DATA

Attendance at Perry's Victory Plaza Talks and Evening Programs

Plaza talks scheduled several times daily constituted the major form of staff-conducted interpretation offered at Perry's Victory during the summer of 1977. From July 8th through August 26th, 186 such interpretive talks were presented to a total of 3,185 visitors. This represents an average of 17 people per presentation. During the same period six evening programs were offered to 470 visitors. Average attendance at these programs was 78. Figure 1 shows that attendance at both types of interpretive programs decreased markedly from the previous summer. There are two possible explanations for this. One is that 1976, because it was the Bicentennial year, may have seen abnormally high levels of visitation to a historical park such as Perry's Victory. Decreased attendance during 1977 would then be expected, as visitation returned to normal levels. The other explanation is that noise from a major construction project occurring immediately adjacent to the park in 1977 made it much more difficult to hear what was being said during plaza talks (which were generally conducted out of doors), causing visitors to opt for other activities. This, however, does not explain the decrease in attendance at evening programs, when presumable construction was not taking place.

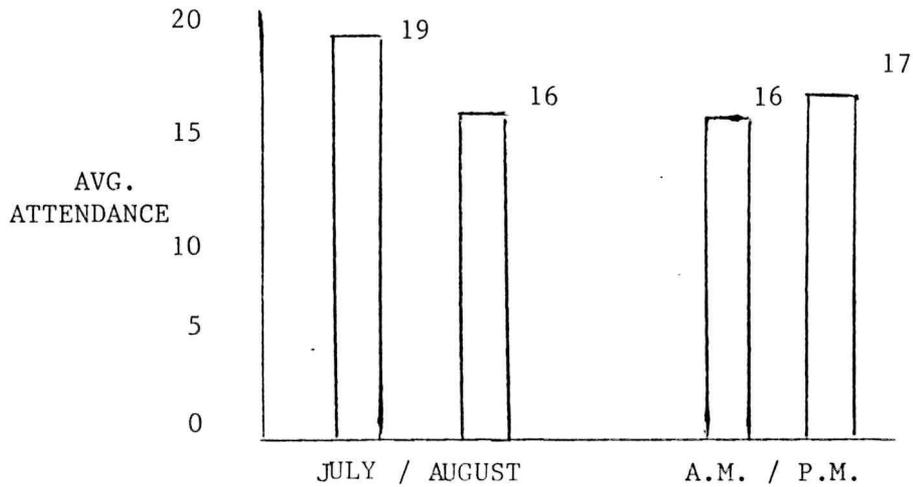
FIGURE 1. AVERAGE ATTENDANCE AT PERRY'S VICTORY PLAZA TALKS AND EVENING PROGRAMS - 1976 AND 1977



Evening programs experienced a 20 percent decline in average attendance from 97 to 78, while plaza talk attendance declined 41 percent, from an average of 29 to one of 17.

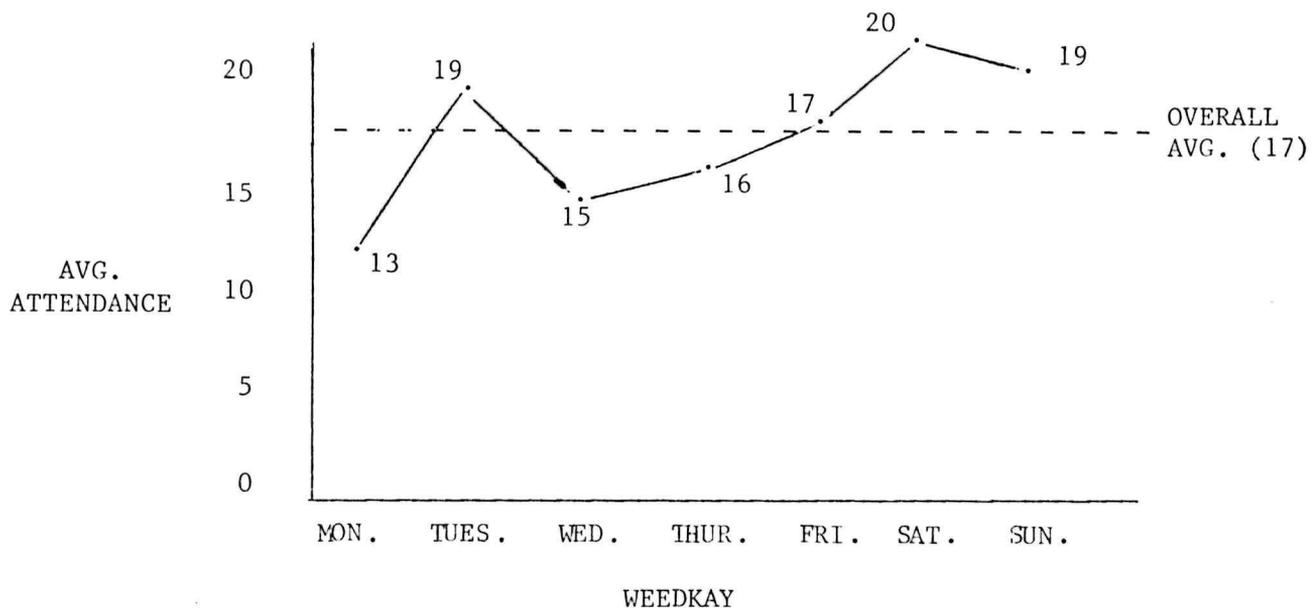
For plaza talks, average attendance levels did not change significantly from July to August, nor from morning to afternoon (see Figure 2). This is in partial contrast to the previous summer when attendance at afternoon talks was 52 percent higher on the average than attendance at morning talks. During 1977, the increase was a modest 6 percent.

FIGURE 2. AVERAGE ATTENDANCE AT PLAZA TALKS BY MONTH AND TIME OF DAY - 1977.



When attendance at plaza talks is examined on different days of the week, it can be seen that the daily averages do not vary much from the overall level of 17 visitors per program (Figure 3).

FIGURE 3. AVERAGE ATTENDANCE AT PLAZA TALKS BY WEEKDAY - 1977.



When combined, the weekend produced an average attendance figure of about 20 visitors per talk, while the average for the Monday through Friday period was 16.

Although the overall average attendance figure for plaza talks was 17, a wide variation in attendance for single talks occurred. Two-thirds of the programs measured reported between 3 and 30 visitor contacts, and the remaining one-third had either more or fewer people in attendance. The range of visitor contact figures for all individual programs ran from 0 to 70. Nineteen percent of all talks attracted 30 or more visitors, while 22 percent had 5 or fewer. Figure 4 shows that there was a slight tendency for more talks offered during the morning hours and on Mondays through Fridays to have five or fewer visitors in attendance than talks presented on weekends or in the afternoons. On the other hand, it was the afternoon hours and the weekends that saw the greatest proportion of talks with 30 or more participants (Figure 5).

FIGURE 4. PERCENTAGE OF ALL TALKS OFFERED WITH FIVE OR FEWER PERSONS IN ATTENDANCE, BY TIME OF DAY AND WEEKDAY - 1977.

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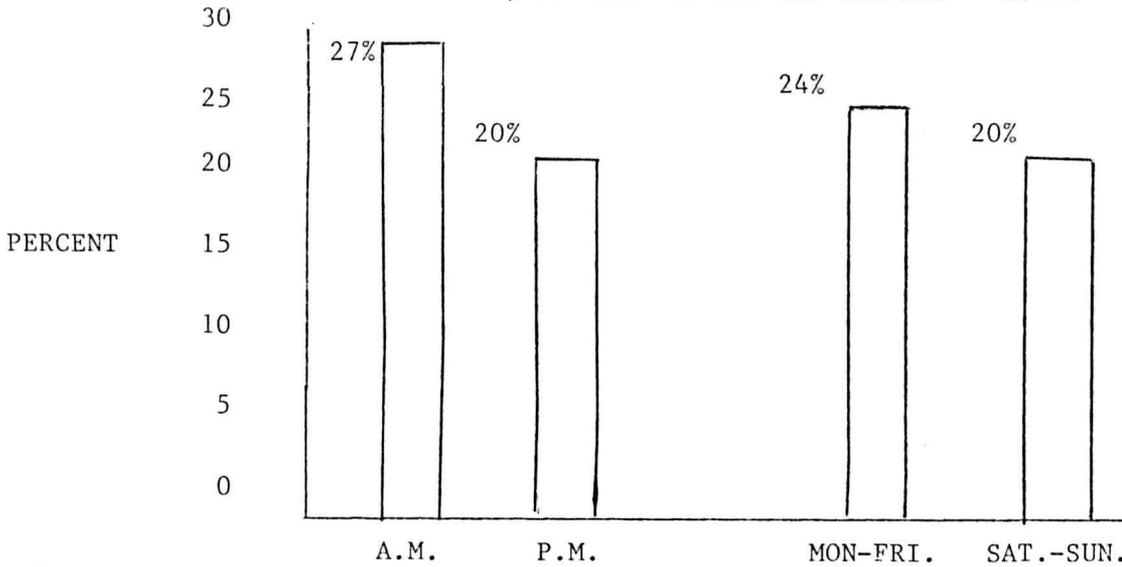
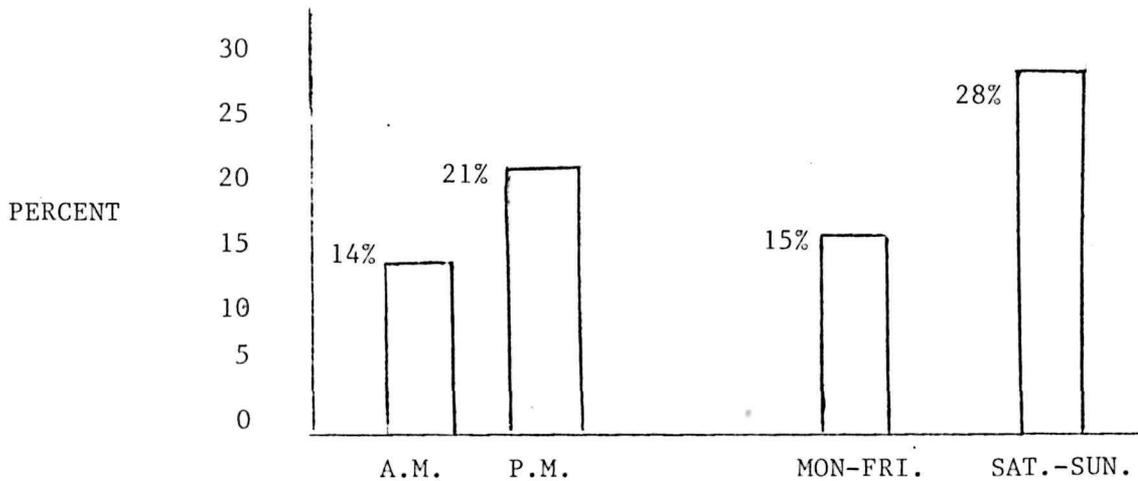


Figure 4 shows that 27 percent of all talks given in the morning had five or fewer persons in attendance. This compares with 20 percent for the afternoon. By weekday, the figures are 24 percent for the mid-week period and 20 percent for the weekend.

In Figure 5, it can be seen that of all talks given in the morning, only 14 percent attracted 30 or more visitors, while 21 percent of the afternoon talks had 30 or more in attendance. Put another way, afternoon talks were half again as likely to draw a large crowd as were talks presented in the morning.

FIGURE 5. PERCENTAGE OF ALL TALKS OFFERED WITH 30 OR MORE PERSONS IN ATTENDANCE, BY TIME OF DAY AND WEEKDAY - 1977.

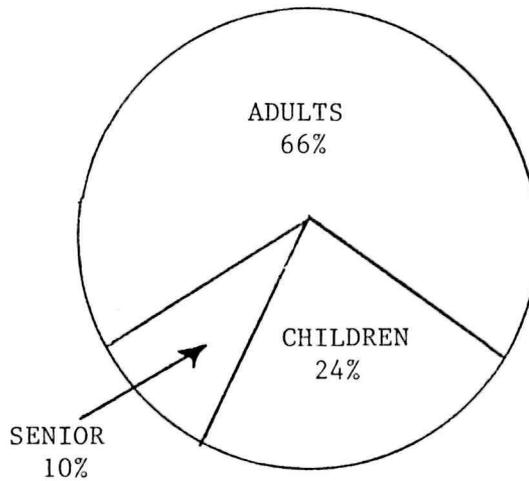


In the case of weekday periods, Figure 5 shows that 28 percent of those talks offered on Saturday and Sunday attracted 30 or more participants. This is almost twice the percentage for the mid-week period (15%).

Age Breakdown at Perry's Victory

The approximate age of 6,696 visitors to Perry's Victory was observed during the summer of 1977. These visitors were sampled at various interpretive activity centers within the park and assigned to one of three categories: seniors (over 60 years of age), adults (12 to 60), and children (under 12). The final age breakdown obtained is presented in Figure 6.

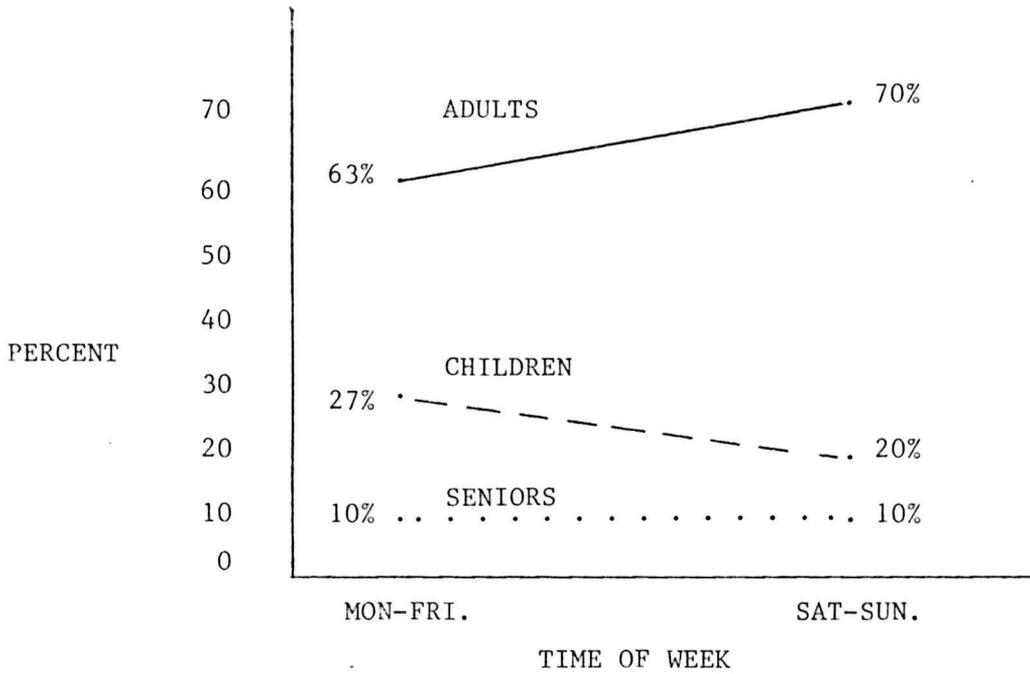
FIGURE 6. COMBINED AGE BREAKDOWN OF PARTICIPANTS IN VARIOUS INTERPRETIVE ACTIVITIES AT PERRY'S VICTORY - 1977



The percentage of adults was fairly constant for all activities surveyed, never falling below 64 percent or above 70 percent. The percentage of seniors was also fairly stable, as was that of children for all activity types.

Across different periods of time, such as months, weekdays, or hours of the day there was again very little variation during the summer of 1977 from the age breakdown presented in Figure 6. The greatest change observed to occur in the age make-up of visitors was for a comparison between the weekend and mid-week period, but even this was a minor variation, as can be seen in Figure 7. The proportion of seniors remained the same throughout the week at 10 percent of the total, however Saturday and Sunday saw an increase of seven points in the percentage of visitors 12 to 60 years of age, accompanied by a corresponding seven point decrease in the percentage of children under 12.

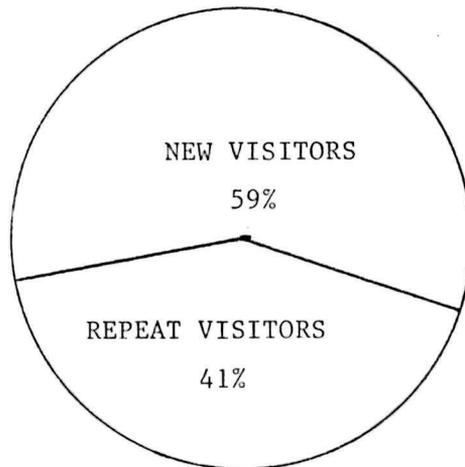
FIGURE 7. AGE BREAKDOWN OF PARTICIPANTS IN VARIOUS INTERPRETIVE ACTIVITIES BY TIME OF THE WEEK - 1977.



New and Repeat Visitors at Perry's Victory

Frequency of visits was asked of 4,638 visitors to Perry's Victory during the summer of 1977. The final percentage breakdown of new and repeat visitors obtained during this year (Figure 8) was virtually identical with the results from the previous season at Perry's Victory. During that year the breakdown for new and repeat visitors (for the same activities measured in 1977) was 58 percent new and 42 percent repeat.

FIGURE 8. COMBINED FREQUENCY OF VISITS FOR PARTICIPANTS IN VARIOUS INTERPRETIVE ACTIVITIES AT PERRY'S VICTORY - 1977



Unlike age, there was a distinct variation in the distribution of new and repeat visitors at different individual activity sites within the park (see Figure 9), however when frequency of visit figures for the observation gallery, elevator, and audio station are combined into a single "memorial activity," a remarkable similarity emerges in the proportion of new and repeat visitors found at the various activities during 1976 and 1977 (see Figure 10).

FIGURE 9. FREQUENCY OF VISITS BY ACTIVITY TYPE - 1977.

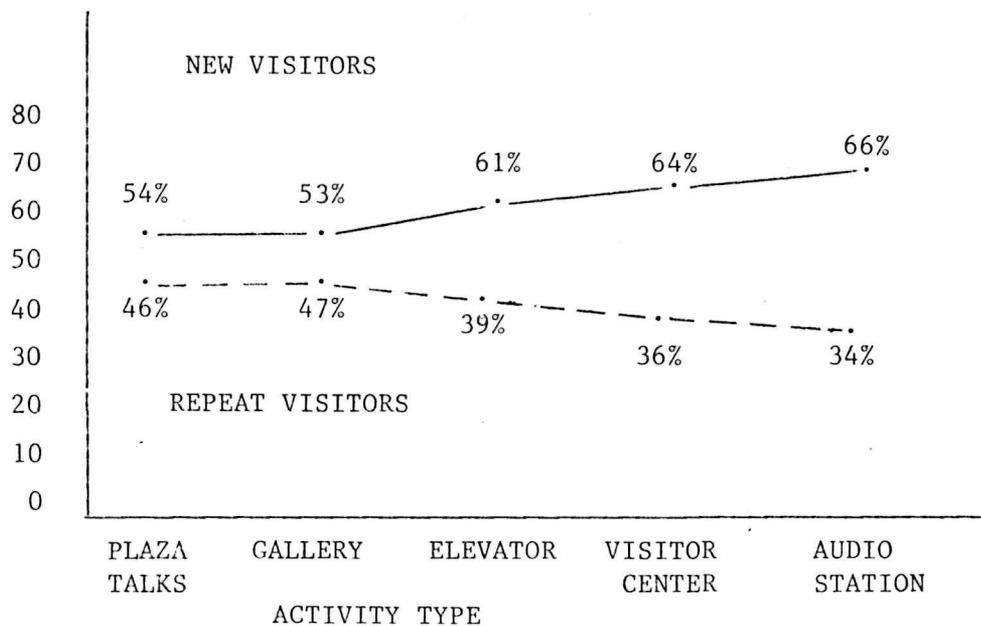
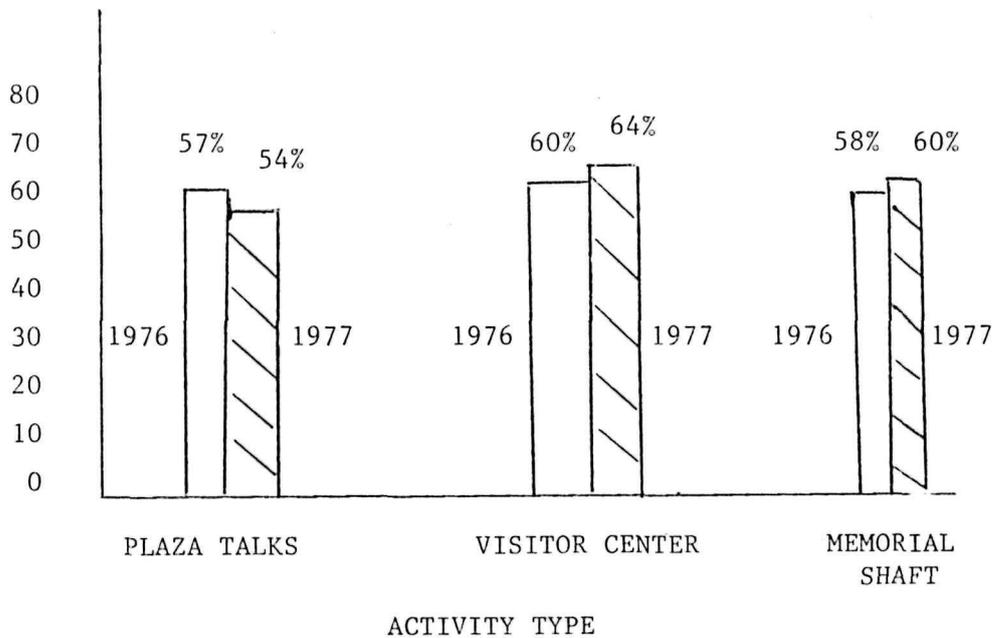


FIGURE 10. PERCENTAGE OF NEW VISITORS AT THREE ACTIVITY SITES DURING 1976 AND 1977.

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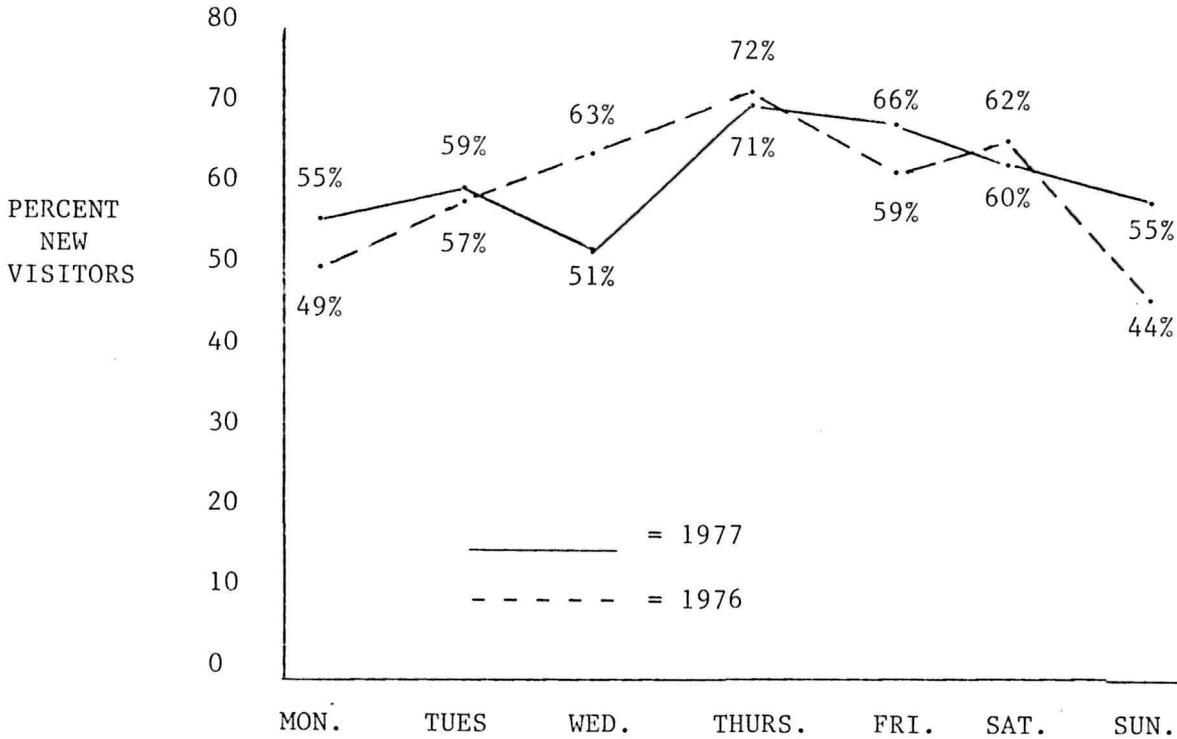
FIGURE 10. PERCENTAGE OF NEW VISITORS AT THREE ACTIVITY SITES DURING 1976 AND 1977.



It can be seen from the distribution in Figure 10 that for each of the three activity areas there was never a variance of greater than 4 percent between the concentration of new visitors in 1976 and that in 1977. The same holds true for repeat visitors of course, indicating that on this variable at least, the balance between new and repeat visitors was fairly stable over the two year period.

A striking characteristic of new visitors to Perry's Victory which was in evidence during both 1976 and 1977 was their tendency to dominate the samples from Tuesday through Saturday (in both years peaking on Thursday), while repeat visitors would reach their highest proportions on Sundays and Mondays when new visitor concentrations were at their lowest point. Figure 11 shows the percentage of new visitors at Perry's Victory for each day of the week during both years the Inventory was in use. Except for fluctuations on Wednesdays and Fridays, the pattern of new visitation is remarkably consistent over both years. (Of course, the pattern for repeat visitors would be a mirror image of the graph in Figure 11.)

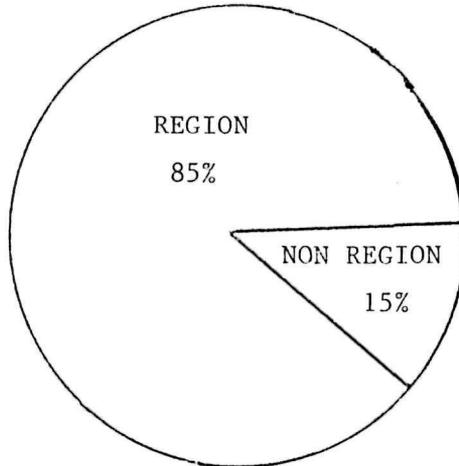
FIGURE 11. PERCENTAGE OF NEW VISITORS AT VARIOUS INTERPRETIVE ACTIVITIES BY WEEKDAY - 1976 AND 1977.



Regional and Nonregional Visitors to Perry's Victory

During the summer of 1977, 4,670 visitors to Perry's Victory were asked their place of residence. Those residing in the states of Ohio and Michigan were grouped together as "regional residents," while those living elsewhere were recorded as being from outside the region. Figure 12 shows that an overwhelming majority of 1977 visitors were regional residents. This is consistent with the finding from the previous year when 86 percent of all those in the Inventory sample reported living in either Ohio or Michigan.

FIGURE 12. COMBINED RESIDENCE BREAKDOWN FOR PARTICIPANTS IN VARIOUS INTERPRETIVE ACTIVITIES AT PERRY'S VICTORY - 1977 .



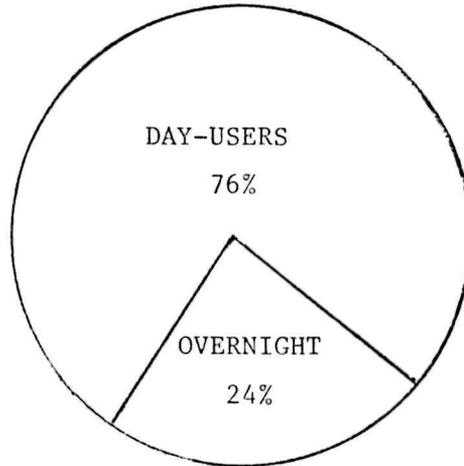
An intriguing finding, which also occurred the previous year, is that Perry's Victory continues to attract a number of Ohio and Michigan residents who have never visited the park before. Since the percentage of regional residents far exceeded the percentage of repeat visitors, a significant number of regional first-timers had to have been visiting the park.

There was no marked difference in the distribution of regional and nonregional visitors by either activity type, month, weekday, or time of day. For all interpretive activities and time periods, Ohio and Michigan residents formed between 82 percent and 92 percent of the interpretive audience. This is also similar to figures obtained in 1976. Visitation at Perry's Victory continues to be largely dominated by Ohio and Michigan residents.

Length of Stay of Visitors to Perry's Victory

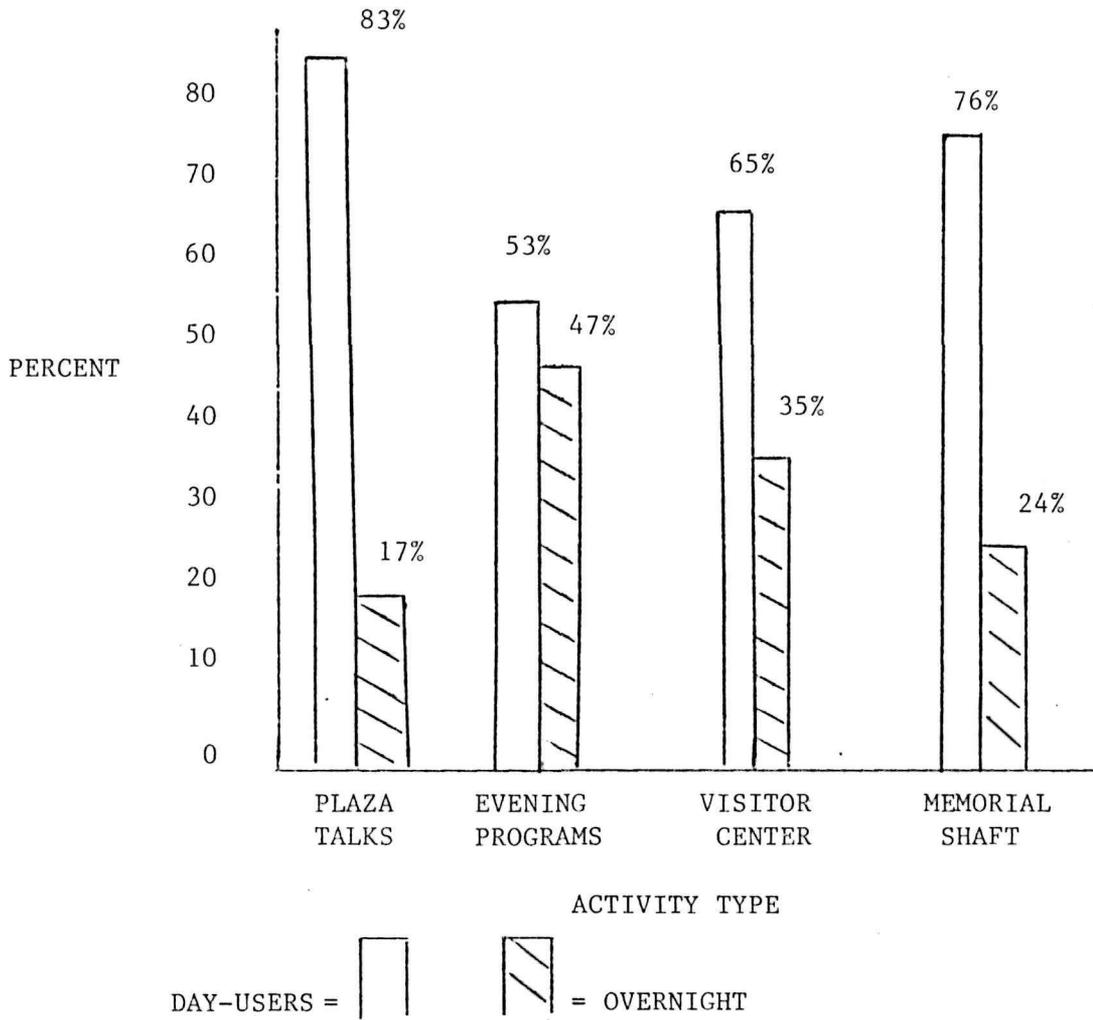
During 1977, the staff at Perry's Victory asked visitors if they were staying overnight at a state park located near the Memorial. This information had not been collected in 1976. Overall, 76 percent of 4,948 visitors replied in the negative and were classified as "day-users." About one quarter of the visitors were recorded as "overnighters" (Figure 13).

FIGURE 13. COMBINED LENGTH OF STAY FOR PARTICIPANTS IN VARIOUS INTERPRETIVE ACTIVITIES AT PERRY'S VICTORY - 1977



As one might expect, overnights were found in their greatest proportion at the evening programs where they made up almost half of the audience. However data from evening programs is somewhat sparse due to measurement difficulties and should therefore be regarded with caution. Those camping in the state park were least in evidence at the plaza talks, where they accounted for only about one-sixth of the audience (Figure 14).

FIGURE 14. VISITOR LENGTH OF STAY BY ACTIVITY TYPE - 1977.



There was little difference between July and August in the relative proportions of day and overnight visitors; the same held true for the days of the week. However, there was a strong tendency for those camping in the state park to be overrepresented among visitors contacted after 6:00 PM, even if those sampled at evening programs are not considered in the tabulations (see Figure 15). There was also a high percentage of overnight visitors in the morning hours when compared to the overall level of 24 percent for the entire sample. Even so, day-users made up the large majority of visitors during all hours of the day.

FIGURE 15. VISITOR LENGTH OF STAY BY TIME OF DAY (EVENING PROGRAMS EXCLUDED) - 1977.

