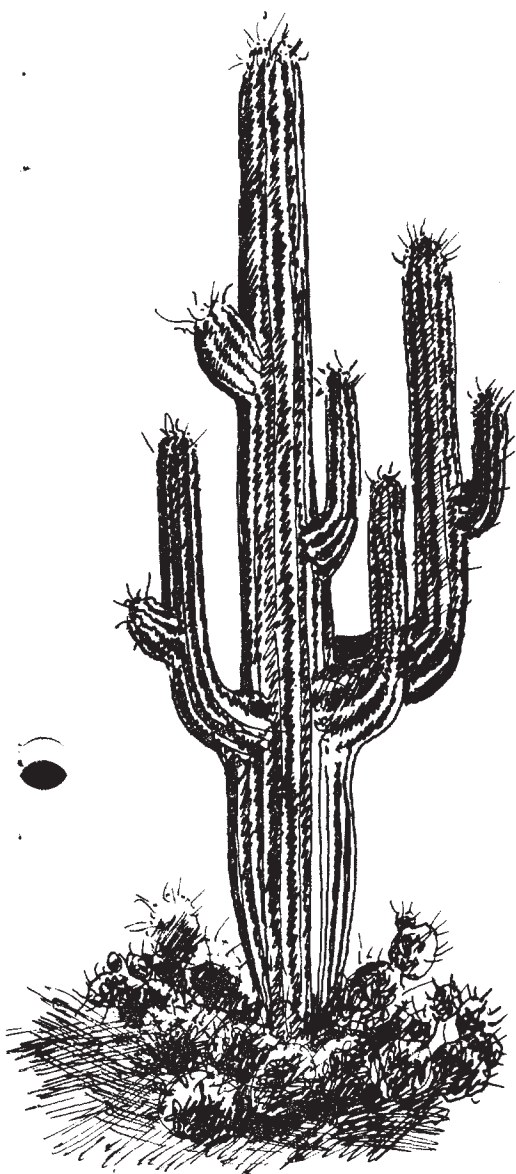


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Cooperative National Park Resources Studies Unit

ARIZONA

TECHNICAL REPORT No. 15

SAGUARO NATIONAL MONUMENT:

Recreational Use by Visitors, Neighbors, and
Organized Groups

Terry D. Shand and A. Heaton Underhill

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May 1985

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ABSTRACT

The results of the social science portions of a study on human impacts on Saguaro National Monument are reported. Visitors, neighboring landowners, and organized user groups were surveyed between 1 September 1983 and 31 August 1984. What visitors do, where they do it, how satisfied they are, and their views on management questions are analyzed. Where they come from and who they are demographically are correlated with activities and seasons of the year. Neighbors living within two miles of the monument responded to questions similar to those asked visitors. In addition, their use of the monument and the monument's impact on their properties are analyzed. Neighbors' activities and opinions are compared to those of monument visitors. The views and activities of ten groups that use the monument are included in this report. Conflicting uses are noted and a number of recommendations designed to lessen impacts and increase visitor satisfactions are made. While the impact of past visitor use and other human activities was not measured due to lack of adequate records of past conditions, this study provides baseline data on the situation at this time. This information, combined with the data currently being collected for the biological portion of the human impact study, makes it possible to measure the impact of future use and to record any changes that occur.

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INTRODUCTION

Saguaro National Monument was established March 1, 1933 by President Herbert Hoover's proclamation. At that time, the total population of Tucson, Arizona was about 35,000. The west boundary of the monument was some 15 miles east of the city, and could be reached only over narrow, winding, dirt roads. As originally established, the monument comprised 63,360 acres; these were all in what is now the Rincon Mountain Unit (RMU) of the monument. Subsequent legislation has reduced the size of this unit to its present 61,280 acres (24,810 ha). Elevations and vegetative types rise from Desert Scrub in the Lower Sonoran Life Zone at 2654 ft (809 m) through the Upper Sonoran Grassland Life Zone, containing Desert Grassland, Oak Woodland, and Oak/Pine Woodland, through a Transition Life Zone of Pine Forest to a Canadian Life Zone of Montane Fir Forest at 8664 ft (2641 m). On the north, east, and south sides of RMU, the Coronado National Forest bounds the monument, covering about three-fifths of the total monument boundary.

On November 17, 1961, President John F. Kennedy signed a Presidential Proclamation creating the Tucson Mountain Unit (TMU) of the monument. In October 1976, major portions of both units were placed in the National Wilderness System by act of Congress. At the same time, the boundaries of both units were established as they are today. TMU comprises 20,800 acres (8421 ha) and ranges in elevation from 2165 ft (660 m) to 4688 ft (1429 m). All of TMU is within the Lower Sonoran Desert Scrub and the Upper Sonoran Desert Grassland. TMU is located about 10 miles west of Tucson. About half of its southern boundary is made up of Pima County's Tucson Mountain Park. Since its creation, TMU has had better road access from Tucson than did RMU in its early years.

By 1982, the population of Tucson and the immediate surrounding areas of Pima County had grown to over 500,000; it has continued to increase at some 2500 per month. Housing had pushed east right up to RMU's boundaries and west almost to TMU. In fact it is creeping westward along TMU's southern boundary west of Tucson Mountain Park. In addition, Avra Valley, to the west and north of Tucson, and adjacent to TMU is changing from farms and ranches to residential development.

This rapid urban development led the Superintendent of Saguaro National Monument to place the measurement of human impacts on the monument high on the priority list of its Resource Management Plan. In 1983, funds became available to commence this study, titled "Human Impact, Saguaro National Monument." The study consists of two parts, sociological and biological. This report covers the sociological aspects, but is closely tied to the biological study since many, perhaps most, measurements of human impacts are biological populations and associations.

We make no attempt here to measure early human impacts; archaeological studies have documented Indian occupants of this area for over one thousand years. Undoubtedly, their activities had some impact on the ecology of the monument today, but this is almost impossible to measure. Impacts of Spanish and Anglo settlers are a bit more obvious, but still poorly recorded. Limestone quarrying, mesquite and paloverde harvesting for kiln and other fuels, and grazing of cattle left impacts that are still visible today. However, nature is erasing these signs, and, again, there are few records that can measure their impacts. Since the monument was established in 1933 and enlarged in 1961 for

TMU, Superintendents and others have reported cactus stealing, vandalism, and other human activities. Unfortunately, these early Park Service custodians and reporters were equally unscientific in documenting their observations. With the exception of records for a few plots for the study of saguaro mortality, and others to measure changes after abolition of cattle grazing, there are almost none that can be used to evaluate human impacts.

This technical report covers three studies of monument users: a survey of park visitors from September 1, 1983 through August 31, 1984, a survey of homeowners living within 2 miles of the monument boundaries, and a survey of 13 organizations that use the monument for group activities. These surveys give information on where visitor impacts are occurring today, but they do not measure past impacts or how the monument may or may not have changed as a result of visitor activities. They do provide a baseline for future comparisons. They document who today's visitor is demographically: by season, by where he comes from, by what he does at the monument, by how satisfied he is, by how often he visits, and by what he thinks regarding certain management options. The neighbor survey explores some of the same factors and measures nearby residents' relationship with the monument. Organized groups' impacts are small, but again, their positions at this time are recorded. We have attempted to analyze results in a manner that makes them useful to monument planners and managers.

STUDY METHODS

Development of viable management plans to minimize visitor impacts while accommodating visitor demands requires accurate information beyond monthly and seasonal visitation figures. The visitor-use surveys conducted as part of this study had the following objectives:

1. to identify the types of recreational activities most frequently participated in by monument visitors;
2. to determine the areas of the monument where these activities occur and the level of use;
3. to estimate the level of visitor satisfaction;
4. to determine how uses by local residents differ from those of non-local Arizona residents, out-of-state visitors, and visitors from foreign countries;
5. to identify changes, if any, that visitors would like to see in Park Service management and in its interpretive programs, and
6. to assess any significant differences in visitor uses for the various seasons and between the monument's East and West units.

Visitor Use, Neighborhood and Organizational Surveys

Beginning in September 1983, an "exit/mailback" survey was distributed to visitors by the monument staff and Park Service volunteers. This survey was

conducted through August 1984. A one-year sampling period was chosen to determine seasonal variations of recreational use and to obtain a representative sample of the monument's users. A total of 4371 questionnaires was distributed at the two units (2518 at RMU and 1853 at TMU). This represents one percent of the estimated total visitation for 1981, the most recent figures available when the study commenced. The number of questionnaires distributed at each unit during a given season was based upon 1981 monthly visitation figures provided by the monument staff. The survey instrument was designed in cooperation with the monument staff, and patterned after the Master Park Service Visitor Survey Form approved by the Office of Management and Budget (No. 10-24-0036). Copies of these instruments appear in Appendix A.

The questionnaire was distributed to visitors as they were leaving the monument. They were asked to complete the questionnaire upon returning home and to mail it back using an enclosed, self-addressed, stamped envelope. The Privacy Act of 1974 (PL 93-579) prevented the taking of names and addresses for follow-up on non-respondents. To enhance expected participation rates, visitors were offered a free packet of saguaro seeds if they supplied a name and address with the completed questionnaire. One thousand, nine hundred and eighty-seven (1987), or 43 percent of the forms distributed, were returned (1175 for RMU and 812 for TMU). Nine hundred and fifteen (915), or 46% of respondents, requested saguaro seeds. While this may initially appear to be a low rate of return, research on similar surveys nationwide indicates that it is actually 10 percent above what can be expected for this type of survey (Dillman 1978).

To determine the possible existence of non-response bias, 159 questionnaires were filled out on site during the spring quarter. A statistical comparison between mailback questionnaires and those filled out on-site indicates some significant differences in responses. However, this appears to be more a function of different survey styles than any real difference between sample populations. For instance, fewer respondents to the on-site survey took the time to read instructions thoroughly or to answer open-ended questions. Bicyclists were more heavily sampled at RMU for the on-site survey, and at TMU more on-site questionnaires were distributed at Picture Rocks Road than elsewhere. Questions concerning visitor attitudes showed no significant respondent differences. It is therefore felt that no non-response bias exists.

During May and early June 1984 a second survey was conducted among Tucson residents living within 2 miles of the monument's boundaries. In addition to meeting the objectives outlined above, this neighborhood survey was designed to:

1. gain better information on equestrian use of monument lands by its neighbors;
2. determine the number of households owning pets--important because of the potential impact stray dogs and cats may have on wildlife in the monument;
3. determine if public access and use has had any adverse effects on the privacy or property of monument neighbors;
4. seek opinions on how the Park Service should approach local issues such as commuter traffic along Picture Rocks Road at the Tucson Mountain Unit, and public access to Madrona Ranger Station at the Rincon Mountain Unit.

The survey instrument was patterned after the general visitor-use survey and contained many of the same questions. This was done so that comparisons could be made between visitors and neighbors. The survey was conducted using the procedures prescribed by Don Dillman (1978) in his book, "Mail and Telephone Survey--The Total Design Method for Surveys." The Pima County Assessor's Office supplied computer printouts of all owner-occupied residences within 2 miles of each unit (1910 households). A 10 percent random sample was drawn from each printout. This produced a list of 184 households--115 adjacent to the East unit (RMU), and 69 adjacent to the West unit (TMU). Seven of the 191 mailed were returned as undeliverable. The overall response rate for this survey was 81 percent. The much higher response rate is undoubtedly due to our being able to follow up on those who initially failed to respond by mailing out reminder cards and additional questionnaires. Copies of these questionnaires are presented in Appendix B.

A third visitor survey was mailed to local organized groups identified by the Park Service as being regular users of the monument. A list of these groups along with the two-page questionnaire appears in Appendix C. Again, this survey was designed to meet most of the same objectives as the first two. Of the 13 groups sent the questionnaire, 10 responded.

Limitations of Surveys

General limitations of mail questionnaires which affected all three surveys are well-documented elsewhere (Fishbein 1967, Dillman 1978) and will not be discussed here. Limiting factors unique to this study centered around the general visitor-use survey conducted between August 1983 and September 1984.

As mentioned earlier, the Privacy Act prevented the taking of names and addresses of monument visitors for follow-up of non-respondents. This meant the acceptance of a low response rate (43%) and the possibility of a non-response bias.

Another limiting factor concerning the year-long general visitor survey dealt with the logistics of distributing the questionnaire. The need to rely on the monument staff and volunteer workers for this task meant that it had to fit in with their other duties and responsibilities. When law enforcement, visitor safety, or resource protection problems arose, the survey was given lower priority. This resulted in upsetting the preplanned distribution schedule and necessitated the distribution of some questionnaires to visitors while they were still in the park.

Over 25 percent of the questionnaires scheduled to be distributed during the summer quarter at the Tucson Mountain Unit were misplaced by the staff. Although they replaced them with an equal number of xerox copies, the staff was unable to distribute them according to the planned distribution schedule. None of these xeroxed questionnaires were filled out and returned. Thus, only 46 questionnaires were received for the entire summer quarter for the Tucson Mountain Unit. This means that conclusions drawn for this period for TMU may be suspect.

The neighborhood survey with over 80 percent response rate had few problems other than the general weaknesses of mail surveys. Renters were not included in

the sample; this could have caused some bias, but we do not believe they differ much from owners in this case.

The questionnaire sent to organized groups was answered by one person (the organization president, secretary, etc.). This could have resulted in some deviations from the thinking or position of the whole organization or its individual members.

Method of Analysis

All statistical analyses were performed utilizing the SYSTAT program for micro-computers (Wilkinson 1984). Descriptive statistics--absolute frequencies, relative frequency percentages, means, and standard deviations were used to summarize the data and aid comparisons. Open ended questions eliciting more than one response were analyzed manually to obtain response frequencies. Additionally, Chi-square tests were run to determine if any significant differences existed between respondents based on season of the year and area of residence (local vs. non-local visitors).

THE VISITOR USE SURVEY

The following discussion covers a question by question breakdown of the information supplied by an analysis of the replies to the year-long Visitor Use Survey. When the information is presented in tabular form, only highlights will be mentioned in the discussion.

Question 1. Activities participated in, level of satisfaction, reason not satisfied.

Table 1 provides a breakdown of activities participated in by season of the year for RMU and TMU. The six activities most frequently participated in at both units were: Enjoy the desert, Take scenic drive, Visitor Information Center, Hike/walk, Study plants, and Observe animals. A relatively low percentage of respondents participated in Ranger-guided walks which, though regularly scheduled, are infrequent and thus not available to the majority of monument visitors. Figures representing participation in Bicycling and Jogging/Running do not accurately represent actual participation in these two activities because the survey was not able to obtain a statistically valid sample of bicyclists or joggers.

Tables 2 and 3 provide a complete analysis of the level of visitor satisfaction and reasons for lack of satisfaction by activity and season of the year. Eighty-seven percent of respondents from RMU and 88 percent of respondents from TMU indicated that they were satisfied or highly satisfied with their visit. The only activity showing a substantial degree of respondent dissatisfaction was Observing animals. Four percent of RMU respondents and 3 percent of TMU respondents indicated dissatisfaction with this activity. This is probably due to the fact that the majority of monument visitors arrive after midmorning. By this time of day most wildlife except for birds have become inactive.

Table 1. ACTIVITIES PARTICIPATED IN BY SEASON - RMU/TMU. Appendix D provides a complete listing of those activities mentioned by respondents as "Other". Seasons: Fall (Sept.-Nov.); Winter (Dec.-Feb.); Spring (Mar.-May); Summer (June-Aug.).

Activity	Rincon Mountain Unit					Tucson Mountain Unit				
	Fall N=186 %	Winter N=374 %	Spring N=447 %	Summer N=168 %	Total N=1175 %	Fall N=172 %	Winter N=277 %	Spring N=317 %	Summer N=46 %	Total N=812 %
Photograph/Sketch	46	43	49	55	47	50	53	56	63	54
Hike/Walk	55	59	54	55	56	60	73	66	61	67
Study Plants	51	54	54	58	54	64	64	67	72	66
Observe Animals	52	47	57	64	54	45	47	52	43	48
Ranger-Guided Walk	2	2	4	2	3	3	3	2	0	2
Take Scenic Drive	53	71	76	81	71	70	73	79	78	75
Bicycle	10	6	3	8	6	1	1	0	0	1
Jog/Run	4	3	2	4	3	0	1	1	0	1
Picnic	15	18	21	13	18	20	27	26	9	24
Backpack/Camp	10	4	5	5	6	3	2	2	2	2
Visit Info. Center	55	66	69	71	66	67	72	65	96	70
Enjoy the Desert	81	84	82	88	83	89	87	90	93	89
Other	6	5	7	8	6	8	4	4	4	5

Table 2. Activities participated in/level of satisfaction by season for Rincon Mountain Unit. Season: Fall (Sept.-Nov.), Winter (Dec.-Feb.), Spring (Mar.-May), Summer (June-Aug.). Level of Satisfaction: Highly Satisfied (H.S.), Satisfied (S.), Neutral (NEU.), Dissatisfied (D.S.), Highly Dissatisfied (H.D.), No Response (N.R.). Figures may total more or less than 100% because of rounding. (*)-Survey did not obtain a representative sample of this activity.

Activity	N	H.S. %	S. %	NEU. %	D.S. %	H.D. %	N.R. %	Reason Not Sat. ¹
Photograph/Sketch								
Fall	85	56	33	1	0	0	9	2,13
Winter	159	64	26	2	1	0	6	1,2,3,13
Spring	221	60	33	1	0	0	5	2,3,9,12,13
Summer	92	53	39	1	0	0	7	3
Hike/Walk								
Fall	103	59	25	2	0	0	14	2,3,8,11,13
Winter	220	60	32	0	0	0	8	1,8,11,13
Spring	243	58	30	6	1	1	5	1,2,3,4,8,9,11,
Summer	92	42	50	1	0	0	7	2,8,13
Study Plants								
Fall	95	54	28	5	0	0	13	1,2
Winter	203	55	32	2	0	0	10	1
Spring	241	64	27	4	1	0	4	1,3,6,8,13
Summer	98	51	33	3	2	0	11	1,2,13
Observe Animals								
Fall	97	40	27	15	4	0	13	2,3,8,13
Winter	175	38	28	15	3	0	15	1,3,13
Spring	257	51	28	8	4	0	9	1,2,3,4,6,9,10,
Summer	107	40	40	9	4	0	7	1,3
Ranger-Guided Walk								
Fall	4	50	0	0	0	0	50	13
Winter	8	88	0	0	0	0	12	
Spring	18	72	28	0	0	0	0	
Summer	3	33	33	33	0	0	0	
Take Scenic Drive								
Fall	98	66	21	2	0	0	10	1,3,13
Winter	267	63	27	1	1	0	7	2,3,9,10,13
Spring	338	67	20	3	1	0	10	1,2,3,4,8,9,10,
Summer	136	66	28	0	0	0	6	1,3,9,10

Table 2. Continued.

Activity	N	H.S. %	S. %	NEU. %	D.S. %	H.D. %	N.R. %	Reason Not Sat.
Bicycle (*)								
Fall	18	78	11	6	0	0	6	9,13
Winter	23	57	26	4	4	0	9	4,8,9,10,13
Spring	14	64	14	0	7	0	14	1,4,9,10
Summer	14	57	36	0	0	0	0	3,9,13
Jog/Run (*)								
Fall	8	100	0	0	0	0	0	
Winter	11	82	9	0	9	0	0	13
Spring	10	90	10	0	0	0	0	8,9,10
Summer	7	43	43	14	0	0	0	2,8
Picnic								
Fall	28	50	36	11	0	0	4	13
Winter	68	59	29	3	0	0	9	1,13
Spring	92	66	22	3	2	0	13	1,4,13
Summer	21	52	33	5	0	0	10	2,4,13
Backpack/Camp								
Fall	18	61	33	6	0	0	0	4,13
Winter	15	73	13	0	0	0	13	13
Spring	24	67	25	0	4	0	4	4
Summer	8	75	25	0	0	0	0	
Visit Info. Center								
Fall	102	58	29	4	0	0	9	13
Winter	246	57	27	6	1	0	9	1,13
Spring	309	63	27	2	1	0	7	1,13
Summer	119	63	27	3	1	0	6	3,13
Enjoy the Desert								
Fall	150	70	16	1	0	0	13	3,11,13
Winter	314	70	18	1	1	0	11	1,2,3,4,13
Spring	366	74	17	1	0	0	8	1,3,4,8,9,10,
Summer	147	75	16	1	0	0	8	2
Other								
Fall	11	64	18	0	9	0	9	1
Winter	17	65	12	6	6	6	6	12

Table 2. Continued.

Activity	N	H.S. %	S. %	NEU. %	D.S. %	H.D. %	N.R. %	Reason Not Sat.
Other								
Spring	30	60	20	7	7	0	7	3,13
Summer	13	54	46	0	0	0	0	1
Total	5568	61	26	3	1	.1	8	

Other Activities Participated In

Bird Watching	Relax
Exercise	Lay in Sun
Saw Movie	Saw Slide Show
View Wildflowers	Rock Climbing
Map Project for NPS	Show Monument to Friends
Backpack with kids	Geology
Walk Dog	Car Camping
Marriage	View Sunset
Party	Take Nature Walk
Environmental Education Class	Meditate
Enjoy Wilderness	Ride Mountain Bicycle
Paint	Obtain Teacher Information
Heritage Expedition	Visit Desert Museum
Obtain Post Cards/Materials	Swim
Breakfast/Lunch	

¹Reasons not satisfied with activities participated in:

- | | |
|--------------------------------|---|
| 1. Features not well explained | 8. Not enough trails |
| 2. Bad weather | 9. Road too narrow |
| 3. Didn't see animals | 10. Conflicts between bicyclists/
joggers/cars |
| 4. Park too crowded | 11. Conflicts between horses and
hikers |
| 5. Park too noisy | 12. Low visibility/air pollution |
| 6. Park too dirty | |
| 7. Discourteous staff | |
| 13. Other - by activity | |
| Photograph/Sketch | Loop road closed |
| Hike/Walk | Loop road closed |
| | Trails not well marked |
| | Bothered by insects |
| | No information available |

Study Plants	Mark plants better No information available Bothered by insects
Observe Animals	Loop road closed Monument opens too late
Ranger-Guided Walk	Arrived too late
Take Scenic Drive	Not enough side roads Road closed More pullouts needed No information available
Bicycle	Loop road closed No bicycle paths Road maintenance needed
Jog/Run	Restrooms not maintained
Picnic	No benches available Drinking water needed No parking for motorhomes
Backpack/Camp	Trail markers needed
VisitorInfo. Center	Slide show not synchronized Ranger offered no assistance
Enjoy the Desert	Dog present Bothered by insects

Table 3. Activities participated in/level of satisfaction by season for Tucson Mountain Unit. Season: Fall (Sept.-Nov.), Winter (Dec.-Feb.), Spring (Mar.-May), Summer (June-Aug.). Level of Satisfaction: Highly Satisfied (H.S.), Satisfied (S.); Neutral (NEU.); Dissatisfied (D.S.), Highly Dissatisfied (H.D.); No Response (N.R.). Figures may total more or less than 100% because of rounding. (*)-Survey did not obtain a representative sample of this activity.

Activity	N	H.S. %	S. %	NEU. %	D.S. %	H.D. %	N.R. %	Reason Not Sat. ¹
Photograph/Sketch								
Fall	86	69	23	1	0	0	7	12
Winter	148	60	32	3	0	1	4	1,2,3,4,9,12,13
Spring	179	64	30	2	0	0	5	2,3,8,12,13
Summer	29	72	24	3	0	0	0	
Hike/Walk								
Fall	104	68	25	0	0	0	7	2,8,13
Winter	201	62	31	1	0	0	5	1,2,3,4,8,9,12
Spring	210	59	31	2	1	0	5	1,3,8,12,13
Summer	28	68	29	0	4	0	5	13
Study Plants								
Fall	110	64	26	1	0	0	9	1,2
Winter	176	59	34	2	1	0	6	1,10,13
Spring	213	57	32	2	1	0	8	1,2,3,13
Summer	33	67	30	3	0	0	0	
Observe Animals								
Fall	78	41	29	8	6	0	15	1,3
Winter	130	39	35	12	5	0	9	2,3,4
Spring	165	47	29	10	1	0	13	2,3,5,13
Summer	20	45	40	10	0	0	5	3
Ranger-Guided Walk								
Fall	5	80	0	0	20	0	0	13
Winter	7	86	14	0	0	0	0	
Spring	5	80	20	0	0	0	0	
Summer	0	0	0	0	0	0	0	

Table 3. Continued.

Activity	N	H.S. %	S. %	NEU. %	D.S. %	H.D. %	N.R. %	Reason Not Sat.
Take Scenic Drive								
Fall	121	53	31	2	3	0	11	1,3,9,12,13
Winter	203	63	31	1	1	0	4	9,10,13
Spring	249	63	25	4	1	0	6	1,2,3,9,12,13
Summer	36	58	28	3	8	0	3	1,13
Bicycle (*)								
Fall	1	0	100	0	0	0	0	
Winter	3	67	33	0	0	0	0	
Spring	1	0	0	100	0	0	0	1
Summer	0	0	0	0	0	0	0	
Jog/Run (*)								
Fall	0	0	0	0	0	0	0	
Winter	3	100	0	0	0	0	0	
Spring	2	50	50	0	0	0	0	
Summer	0	0	0	0	0	0	0	
Picnic								
Fall	34	59	24	0	0	0	18	12
Winter	75	69	21	1	1	1	5	2,5,13
Spring	83	64	20	5	2	1	7	2,4,6,13
Summer	4	75	25	0	0	0	0	
Backpack/Camp								
Fall	5	40	20	0	40	0	0	3,5
Winter	6	17	17	0	0	0	67	
Spring	7	43	43	14	0	0	0	
Summer	1	100	0	0	0	0	0	
Visit Info. Center								
Fall	115	50	33	8	1	0	9	1,6,13
Winter	200	52	34	6	3	0	6	1,5,13
Spring	207	52	31	8	0	0	8	1,13
Summer	44	66	30	5	0	0	0	
Enjoy the Desert								
Fall	153	75	13	0	1	0	12	1,3,12
Winter	241	80	15	0	0	0	5	1,13
Spring	284	75	17	1	0	0	7	2,3,8,12
Summer	43	79	12	2	2	0	5	13

Table 3. Continued.

Activity	N	H.S. %	S. %	NEU. %	D.S. %	H.D. %	N.R. %	Reason Not Sat.
Other								
Fall	14	57	0	7	7	0	29	3,10
Winter	10	10	60	0	10	10	10	1,13
Spring	13	62	15	0	0	0	23	
Summer	2	100	0	0	0	0	0	
Total	4089	61	27	3	1	.2	7	

Other Activities Participated In

Visit Old Tucson	Bird Watching
View Wildflowers	Show Monument to Friends
Geology	Marriage
Take Nature Walk	Obtain Teacher Information
Heritage Expedition	Visit Desert Museum
Obtain Post Cards/Materials	Breakfast/Lunch
Obtain Information	Commuter

¹Reasons not satisfied with activities participated in:

- | | |
|--------------------------------|---|
| 1. Features not well explained | 8. Not enough trails |
| 2. Bad weather | 9. Road too narrow |
| 3. Didn't see animals | 10. Conflicts between bicyclists/
joggers/cars |
| 4. Park too crowded | 11. Conflicts between horses and
hikers |
| 5. Park too noisy | 12. Low visibility/air pollution |
| 6. Park too dirty | |
| 7. Discourteous staff | |
| 13. Other - by activity | |
| Photograph/Sketch | Loop road closed |
| Hike/Walk | Loop road closed |
| | Trails not well marked |
| | Bothered by insects |
| | No information available |
| Study Plants | Mark plants better |
| | No information available |
| | Bothered by insects |

Observe Animals	Loop road closed Monument opens too late
Ranger-Guided Walk	Arrived too late
Take Scenic Drive	Not enough side roads Road closed More pullouts needed No information available
Bicycle	Loop road closed No bicycle paths Road maintenance needed
Jog/Run	Restrooms not maintained
Picnic	No benches available Drinking water needed No parking for motorhomes
Backpack/Camp	Trail markers needed
VisitorInfo. Center	Slide show not synchronized Ranger offered no assistance
Enjoy the Desert	Dog present Bothered by insects

Question 2. Activities planned but not done--reasons.

Tables 4 and 5 list activities respondents planned to engage in before arriving but did not. Hiking was most frequently mentioned by respondents from RMU (53%) and TMU (54%). The primary reasons given for not participating were bad weather (heat, rain) and lack of time. The second activity most frequently mentioned by RMU respondents was seeing wildlife, usually because the respondents felt that they had arrived at the wrong time of day. Seventeen percent of TMU respondents indicated that they had planned to drive the Bajada Loop Drive but didn't because it was closed. The majority of these respondents visited TMU shortly after the October 1983 floods which washed out several sections of the road. Photography was mentioned by 12 percent of RMU respondents and 6 percent of TMU respondents as an activity they planned to do but didn't. The chief reason for not participating was that respondent forgot his/her camera. Eight percent (8%) of TMU respondents indicated that they had planned to participate in Ranger-guided walks but didn't because none were available. Picnicking was mentioned by 4 percent of the TMU respondents as an activity they planned to do but didn't because of bad weather. The remaining activities listed in tables 4 and 5 were mentioned by only one respondent.

Table 4. Activities planned before arrival, but not done: reason not done - Rincon Mountain Unit. The number of respondents answering this question equaled 102, or 9% of all questionnaires returned.

<u>Planned Activity</u>	<u>Reason Not Done</u>
Hike	Weather Lack of time Too crowded No trail information
Bicycle	Loop Road closed
Drive Loop Road	Closed Lack of time Out of pamphlets
Photograph	Lack of time Weather Forgot Camera
Ranger-guided walk	None available
Picnic	Weather Did not bring food
Camping	Weather Physical injury Had dog along No vehicle facilities
See wildlife	Wrong time of day
Look at ruins	Could not find any
See slide show	Missed it

Table 5. Activities planned before arrival, but not done/reason not done - Tucson Mountain Unit. The number of respondents answering this question equaled 83, or 10% of all questionnaires returned.

<u>Planned Activity</u>	<u>Reason Not Done</u>
Hike	Weather Lack of time Arrived too late No trail information
Drive Loop Road	Closed Road maintenance needed
Ranger-Guided Walk	None available
Run	Not enough trails
Photograph	Weather Forgot camera
Camp	No facilities Physical injury
Picnic	Weather
Purchase Information	Not available

Questions 3 and 18. In order to gain more insight into the level of visitor satisfaction with their visit experience (including monument facilities), the visitor-use survey asked two open-ended questions. Question 3 asked respondents to indicate "How monument facilities could be improved to increase access to and enjoyment of the monument." Question 18 asked respondents for "...additional opinions you would like to bring to the attention of the park management. Were there aspects of your trip that were especially satisfying or disappointing which managers should be aware of?" The majority of respondents to the survey appear to have made no distinction between these two questions. Most offered the same comment or suggestion when answering both questions. Therefore, the answers to both questions have been combined, with duplicate answers from any single respondent eliminated. Appendix D lists desired improvements and additional comments provided by respondents. A total of 2188 comments were tallied (1381 from RMU and 807 from TMU). One thousand, two hundred and thirteen (54%) of these were general comments favorable to the monument, its facilities, or the National Park Service (755, or 54%, of comments from RMU and 458, or 56%, of comments from TMU). Fifty-seven, or 3%, of the comments were generally critical (34, or 3%, of those received from RMU and 23, or 2%, of those received from TMU). Nine hundred and seventy-five, or 24%, of the comments offered specific suggestions on how the monument or its facilities could be improved (626, or 43%, of those received from RMU and 348, or 42%, of those received from TMU).

The most frequent suggestions concerning improvements to facilities or interpretive programs at RMU and TMU were:

1. More information on plants and animals;
2. Better signing to and from the monument (this was the most frequent specific comment from TMU respondents);
3. More pull-offs along monument roads;
4. Better marking of trails;
5. Trail maintenance needed;
6. More water facilities;
7. More hiking trails;
8. Road maintenance needed.

Question 4. Respondents were asked to provide their opinions on specific management issues concerning the monument. Six current issues were covered in the two surveys. These questions and answers are shown in Appendix A. Only one of these questions was asked at both units.

Respondents at both the RMU and TMU were asked whether horses and hikers should be allowed to use the same trails, or whether some trails should be designated for hikers only. One thousand seventy-six RMU respondents and 779 TMU respondents answered this question. Of 813 respondents from RMU with an opinion, 644, or 79%, favored designating some trails for hikers only and 169, or 21%, favored allowing horses and hikers to use the same trails. Two hundred and sixty-three, or 24%, of RMU respondents had no opinion. Of the 546 TMU respondents with an opinion, 441, or 81%, favored the designation of some trails for hikers only and 105, or 19%, favored allowing horses and hikers to use the same trails. Two hundred and thirty-three, or 30%, of TMU respondents offered no opinion. The replies to the other five management questions are shown in Appendix A.

Question 5. Provides information on which entrance to the monument respondents used. Because of road locations, there was greater diversity at TMU, but it can be seen that access to headquarters was the major approach to both units.

Question 6 (RMU). Did you pay entry fee or use Golden Eagle/Golden Age Passport? The fee is currently discontinued. This information may be valuable if the government starts reemphasizing entrance fees.

Question 6 (TMU). Respondents were asked if they visited the Arizona-Sonora Desert Museum on the same day they visited the monument. If yes, was the visit to the museum before or after the visit to the monument? Eight hundred and five respondents answered the first part of this question. Four hundred and fifty, or 56%, indicated that they had not visited the Desert Museum and 355, or 44%, indicated that they had. Of the 355 respondents who indicated that they had visited the museum, 353 answered the second part of the question. Two hundred and five, or 58%, visited the museum before visiting the monument and 148, or, 42% visited the monument first.

Question 7 indicates that only about one third of the respondents at both units hiked the trails. At RMU only about 16 % of those who hiked reported taking an overnight trip.

Question 8. How many times have you visited the monument in the last 30 days, in the last year, and in the last 5 years? As can be seen, the great majority are first-time visitors.

Question 9. Recent visit to other unit. The idea in asking the question was to determine the percentage of monument visitors who take the opportunity to visit both units. A greater percentage of RMU visitors had visited or planned to visit TMU than the reverse. Approximately half of all respondents visited both units.

Question 10. How many times have you visited the other unit within the last 30 days, the last year, and the last 5 years? This is a companion question to No. 9. The numbers visiting both units over the years pretty well parallel the answers to question 8 and 9.

Tables 6 and 7 summarize demographic type characteristics of visitors by season for each unit. These cover questions 11, 12, 13, 15, and 16. Party size and composition are similar to results of most park or recreation surveys. Any interpretations of age composition should recognize that we did not adequately sample visitors under 18. Mode of arrival certainly points up America's love of the automobile.

The most important fact revealed by the area of origin question is the large percentage of visitors who come from the Tucson area: 45% of the RMU respondents and 32% of those at TMU. This is a larger percentage of locals than is found at most Park Service areas. However, even here, approximately 60% of the visitors surveyed are from out of state.

Table 7. Socio-demographic characteristics of visitors to Rincon Mountain Unit. Area of Origin: Northwest (Ore., Wash., Wyo., Id., Mont.), Southwest (Colo., Utah, N.Mex., Nev.), North Central (Io., Wis., Minn., N.Dak., S.Dak., Ill., , Mo., Neb.), Central (Kan., Okla., Ark., Tex., La.). Seasons: Fall (Sept.-Nov.), Winter (Dec.-Feb.), Spring (Mar.-May), Summer (June-Aug.). Percentages may not total 100 because of rounding. (*)-Chi Square Test indicates a significant difference between seasons at a 0.95 level of confidence.

	Fall %	Winter %	Spring %	Summer %	Total %
* Area of Origin (N=1170)					
Local	55	43	41	49	45
Rest of Arizona	4	2	4	4	3
California	3	7	7	7	6
Northwest	5	5	4	1	4
Southwest	5	7	5	2	5
North Central	5	13	11	7	10
Central	2	3	5	5	4
East of Mississippi	15	19	23	22	20
Foreign Country	6	2	1	4	3
* Age in Years (N=1158)					
1-18	3	3	0	5	2
19-35	42	24	23	42	29
36-50	18	18	21	33	21
Over 50	37	54	56	21	48
How Arrived (N=1173)					
Walk	0	1	1	0	1
Bicycle	7	5	2	6	4
Car/Pickup/Van	88	91	94	90	91
Motorhome	2	3	2	1	2
Other	3	1	2	3	2
Group Affiliation (N=1174)					
Came Alone	20	12	11	14	13
Family	45	59	52	55	54
Friends	24	20	22	21	21
Fellow Workers (FW)	1	0	2	1	1
Family/FW	0	0	0	0	0
Friends/FW	1	0	0	2	1
Family/Friends	6	8	10	7	8
Organized Group	4	1	3	1	2

Table 7. Continued.

	Fall %	Winter %	Spring %	Summer %	Total %
Number in Party (N=1145)					
1	17	10	11	13	12
2	43	50	46	41	46
3	11	14	14	14	14
4	15	14	18	18	16
5	5	6	5	7	6
6 or more	7	7	5	8	7

Table 8. Socio-demographic characteristics of visitors to Tucson Mountain Unit. Area of Origin: Northwest (Ore., Wash., Wyo., Id., Mont.), Southwest (Colo., Utah, N.Mex., Nev.), North Central (Io., Wis., Minn., N.Dak., S.Dak., Ill., Mo., Neb.), Central (Kan., Okla., Ark., Tex., La.). Seasons: Fall (Sept.-Nov.), Winter (Dec.-Feb.), Spring (Mar.-May), Summer (June-Aug.). Percentages may not total 100 because of rounding. (*)-Chi Square Test indicates a significant difference between seasons at a .95 level of confidence.

	Fall %	Winter %	Spring %	Summer %	Total %
* Area of Origin (N=807)					
Local	37	31	30	26	32
Rest of Arizona	12	6	3	7	6
California	6	10	8	2	8
Northwest	2	4	7	4	5
Southwest	5	9	6	4	7
North Central	8	12	13	20	12
Central	3	1	3	13	3
East of Mississippi	22	22	22	20	22
Foreign Country	5	3	8	4	5
* Age in Years (N=799)					
1-18	1	0	1	2	1
19-35	39	22	27	30	28
36-50	22	23	19	37	22
Over 50	39	55	53	30	49
How Arrived (N=808)					
Walk	0	0	0	0	0
Bicycle	0	1	0	0	0
Car/Pickup/Van	97	95	95	95	96
Motorhome	3	3	3	4	3
Other	1	0	1	0	1
Group Affiliation (N=810)					
Came Alone	16	9	10	0	10
Family	19	23	23	11	22
Friends	52	54	57	80	56
Fellow Workers (FW)	3	1	0	0	1
Family/FW	1	0	1	0	1
Friends/FW	0	0	1	2	0
Family/Friends	9	9	7	7	8
Organized Group	1	4	1	0	2

Table 8. Continued.

	Fall %	Winter %	Spring %	Summer %	Total %
Number in Party (N=809)					
1	16	9	7	0	9
2	54	49	49	59	51
3	11	9	13	9	11
4	12	20	18	22	18
5	4	5	4	4	5
6 or more	3	8	8	6	7

Question 14. Are any members of your group physically handicapped? If yes, were facilities adequate? How can facilities be improved? Seven percent of respondents reported having physically handicapped individuals in their groups. Seventy-five, or 94%, of 80 RMU respondents and 44, or 94%, of 47 TMU respondents indicated that present facilities for the handicapped are adequate. Six RMU and five TMU respondents provided suggestions on how handicapped facilities could be improved; these included:

RMU	TMU
Interpretive programs for deaf, Benches along first part of Douglas Springs Trail, Toilet facilities on trails, More accessible pullouts, Backcountry access, Provide wheelchairs,	Interpretive displays for blind, Information on availability of benches along trails, Toilet facilities.

Question 17. If over 50 years of age, are you retired? Four hundred twenty-nine, or 73%, of the 586 RMU respondents and 290, or 70%, of the 417 TMU respondents answering this question indicated that they were retired.

Discussion

A comparison of responses from RMU and TMU visitors indicates that there are only a few significant differences between visitors to the two units of the monument.

TMU respondents were more dissatisfied with Ranger-guided walks than RMU respondents. This is mainly because staffing limitations and the infrequent scheduling made these interpretive programs unavailable to the majority of visitors.

While 57% of RMU respondents indicated they had visited or planned to visit TMU, only 42% of TMU respondents indicated that they had visited or planned to visit RMU. The most probable explanation for this difference is the fact that TMU is close to the Desert Museum, Old Tucson, and Tucson Mountain Park. These are popular visitor attractions and therefore one would expect RMU visitors to visit TMU in the process of visiting these sites. Colossal Cave is the only attraction site near RMU. This site is not as popular with tourists as those near TMU. It should be noted, however, that RMU attracts more visitors, approximately 58 percent of the monument's total. The most popular visitor activities at both RMU and TMU (i.e., enjoy the desert, take scenic drive, visit information center, study plants, observe animals, and hike/walk) would seem to indicate that visitors are interested in learning about the desert and experiencing it first-hand.

With few exceptions, comments and suggestions by respondents were constructive. These comments should help the National Park Service meet visitor needs while continuing to protect monument resources. A comparison of the most frequently mentioned suggestions with former visitor complaints mentioned in past superintendent and custodian monthly reports, indicates that these criticisms have been a source of visitor dissatisfaction since the monument's early days. See Appendix D for a complete listing of respondent comments and suggestions.

Cross Tabulations

A number of cross tabulations were run on the questionnaire data. Those that are felt to be of significance are summarized here.

The season of the year in which the respondent visited the monument had an effect on what he or she did. Photograph/Sketch and Study Plants were activities more frequently participated in during the summer. Hike/Walk was significantly more popular during the winter. Observing Animals and Take Scenic Drive were more popular during the spring and summer. As might be expected, significantly fewer respondents hike the monument's back trails during the summer or camp overnight in the winter. While Tucson is in the southwest desert with high summer temperatures, the Rincon Mountain Unit with its high elevation backcountry has heavy snow and cold temperatures in winter. RMU visitors are more likely to visit TMU during the winter. Local Tucson residents made up a significantly greater percentage of visitors during all seasons. This single fact indirectly affected responses to the following survey questions (refer to table 9):

1. Question #4 on increasing backcountry access, allowing horses and hikers to use the same trails, extending monument hours, access to the monument at night, regaining access to Madrona Ranger Station.
2. Question #5 on entrance used.
3. Question #6 of RMU survey on whether the \$1.00 entrance fee was paid or a Golden Age/Golden Eagle passport was used.
4. Question #12 on who accompanied respondent on monument visit.
5. Question #16 on age of respondent.

Although statistical analysis indicates that the significantly larger percentage of locals visiting the monument affects responses to the above questions, these effects are not considered important to management because the

ranked responses of locals were identical to those of the majority of other visitors.

Area of Origin also produced some significant differences in visitor activities and attitudes. As has been pointed out, local residents are the largest single user group. This holds true for both units throughout the entire year. At RMU, the proportion of local use ranges from a low of 41 percent of spring visitation to a high of 55 percent of fall visitation. At TMU, local use ranges from a low of 26 percent of summer visitation to a high of 37 percent of fall visitation.

Table 9. Response differences between local Tucson residents and all other monument visitors for selected questions from visitor use survey.

		RMU				TMU			
		N	%	%		N	%	%	
			Locals	All Others			Locals	All Others	
Question 4 - Management Issues									
A.	Increase backcountry access (RMU only)	938	31	18					
	Maintain current level of access		69	82					
B.	Allow horses & hikers to use same trails (RMU & TMU)	809	23	16	542	21		18	
	Designate some trails for hikers only		77	84		79		82	
C.	Extend monument hours (RMU only)	891	30	16					
	Maintain current hours		70	84					
D.	Close monument roads at night (TMU only)				548	58		62	
	Maintain night access					42		38	
E.	Regain access to Madrona R.S. (RMU only)	403	80	70					
	Keep Madrona R.S. closed to public		20	30					
Question 5 - Entrance Used		1132			786				
	Main (RMU)		80	90					
	End of Speedway		18	9					
	Happy Valley		2	1					
	Madrona R.S.		0	0					
	Reddington Pass		0	0					
	Kinney Rd. (TMU)					67		70	

Table 9. Continued.

	RMU				TMU			
	N	% Locals	% All	% Others	N	% Locals	% All	% Others
Picture Rocks/Golden Gate Rd.					22		19	
Sandario Rd.					10		10	
Kings Canyon					0		0	
Question 6 - Entrance Fee (RMU) 866								
Paid Fee		48		51				
Golden Age Passport		41		36				
Golden Eagle Passport		11		13				
Question 12 - With whom did you come?								
	1169				806			
Came alone		16		10		11		10
Family		41		65		43		62
Friends		27		16		28		19
Fellow Workers		1		1		0		2
Family/Fellow Workers		0		0		2		1
Friends/Fellow Workers		1		0		0		1
Family/ Friends		10		7		12		7
Organized Group		4		1		5		1

The Visitor Use Survey indicates some significant differences in activities by local residents compared to other monument visitors. In terms of activities participated in, the survey shows the following differences:

1. Only 29 percent of local residents photograph or sketch during their visits, whereas 55 to 94 percent of other monument visitors participate in this activity.
2. While only 43 percent of local residents study plants during their visits, 59 to 81 percent of remaining visitors enjoy this activity.
3. Visiting the monument for driving/sightseeing is a popular activity among 88 to 93 percent of out-of-state visitors, but only 54 percent of local visitors come to participate in this activity.
4. As would be expected, local residents are more likely to bicycle (12%) than other monument visitors (0 to 5%).
5. Although picnicking is participated in more frequently by locals (21%) than by out-of-state visitors (12 to 18%), Arizona residents (24%), and foreign visitors (42%) participate more frequently than locals.

6. Backpackers at RMU are more likely to be Arizona residents (13%) than either local residents (9%) or out-of-state visitors (0 to 5%).
7. Only 45 percent of local residents visit the monument's information centers while 62 to 94 percent of all other visitors use these facilities.
8. Day hiking on the monument's backcountry trails is more popular among locals (RMU - 43%, TMU -47%) than other visitors (13 to 40%).
9. Locals (28%) and Arizona residents (29%) are more in favor of increased backcountry access than out-of-state visitors (7-16%). Nine percent of locals had no opinion, while an average of 19% of remaining visitors had no opinion.
10. Locals (27%) are more in favor of extending monument hours than remaining visitors (8-16%).
11. Locals (41%) and Arizona residents (43%) are more in favor of regaining access to Madrona Ranger Station than remaining visitors (14-25%). Except for locals (48%), the majority of monument visitors (55-78%) had no opinion on this issue.

It is believed that the primary reason for the differences mentioned above is the fact that the majority of Tucson residents have visited the monument before. Survey results indicate that within the last year 69 percent of local residents answering the survey had visited RMU more than once and 65 percent have made more than one visit to TMU. It is logical, therefore, to expect bicyclists and day hikers using the monument's backcountry trails to be local residents. It is equally logical not to expect local residents to participate in the other activities mentioned above as frequently as other visitors.

One final note concerning the difference in use by local residents and other monument visitors. Although local residents make up the largest single group of users, over half of all respondents (51-58%) indicated that this was their first visit in the last 5 years. This is important for Park Service management to keep in mind when planning and advertising interpretive programs, and in providing adequate directions to and from both units of the monument.

A comparison between respondent age and other survey variables indicates the following differences:

1. Those respondents above the age of 50 years were more likely to favor maintaining present monument hours.
2. The majority of those over the age of 50 used their Golden Age Passport rather than pay the entry fee.
3. Organized groups were most likely to include visitors between the ages of 19 and 35 years, and above the age of 50 years.
4. The majority of respondents over 50 years of age were from out-of-state except during the summer.

5. The majority of foreign visitors who responded were between the ages of 19 and 35 except in the summer when the majority were between the ages of 36 and 50 years.

No strong correlation appears to exist between age and activities participated in, except that those within the 19-35 were more likely to participate in the more strenuous activities (i.e., hiking backcountry trails, backpacking, etc.), while those over 50 years were less likely to do so. Other differences in activities participated in are more likely attributed to climatic variations from season to season (i.e., summer heat restricts activities of those over 50 years).

SURVEY OF MONUMENT NEIGHBORS

The mail survey of households located within 2 miles of the boundaries of Saguaro National Monument was conducted during May 1984. The Pima County Assessor's Office furnished a list of all owner-occupied residences within 2 miles of the monument. While this excluded renters, it is felt that the list was representative of the monument's neighbors. The list contained 1190 households adjacent to the RMU and 720 adjacent to TMU, a total of 1910. A random sample, consisting of 10% of the householders listed for each unit, was selected for the survey; a questionnaire was mailed to each household chosen--119 for RMU and 72 for TMU (see Appendix B). Four for RMU and three for TMU were returned as undeliverable, so the total sample was 184, 115 RMU and 69 TMU. One hundred and forty-nine completed questionnaires were returned, 92, or 81%, for RMU and 57, or 83%, for TMU, 81% overall. One of these was received too late to be included.

As indicated, questionnaires were similar to those used for the Visitor Use Survey. However, there were additional questions that pertained only to people living next to the monument. Appendix B, besides showing the two questionnaires, summarizes the answers to each question. We, therefore, will only call attention to significant highlights in the text.

Question 1 asked those adjacent to both units: "Do you feel that the Monument should 1) increase access to the backcountry by constructing new trails, campsites, or entry points; 2) maintain current levels of back country access; 3) don't know, and 4) never thought about it. As can be seen, about two-thirds favored maintaining current access.

Both units were also asked, "Do you feel that the monument should 1) allow horses and hikers to use the same trails, or 2) designate some trails for hikers only, 3) don't know, 4) never thought." Neighbors showed a much higher percentage favoring combined use of the same trail than did those answering the other survey. The TMU neighbors actually were almost 2 to 1 in favor. The answers to the other multiple-choice questions on local issues are shown in Appendix B.

Apparently, monument neighbors did not feel that being adjacent to the monument adversely affected their privacy or property. Only 4 at RMU and 2 at TMU reported any problems. Ninety-six percent thought the situation was all right as is.

Our attempts to get a line on pets and strays resulted in about 45 percent of monument neighbors reporting seeing stray dogs and cats. About 85 percent reported owning dogs or cats of their own. When preparing the questionnaire, we

decided there was little point in asking whether or not their pets were allowed to run at large.

The next series of questions (6 through 10) sought to determine use of the monument by the families that live adjacent to it. These results are summarized in Appendix B. As might be expected, this group biked, jogged, hiked, and rode on the monument much more than the general public.

One hundred and forty households responded to the question as to whether or not they owned a horse or horses. Thirty-one, or 22%, reported that they did. One hundred and nine, or 78%, said they did not. Eight did not answer this question and probably are also non-owners. If they are included, 21 percent of the neighboring households owned horses. Fifty TMU respondents answered this question; 5, or 10%, said they owned horses; 45, or 90%, said they did not, but 12 TMU respondents reported that they rode on the monument. Of the 90 RMU respondents, 26, or 29%, said they owned horses, 64, or 70%, did not. There was 1 no-response. Twenty-seven families adjacent to RMU said they rode horses but only 13, or 14%, of those answering this question, reported that they rode on the monument.

Among the Rincon neighbors who rode, 4 reported they rode on the monument once a week, 4 reported 2 or 3 times a month, 2 once a month, and 3 less than 6 times a year. Eleven of the TMU neighbors reported how often they rode on the monument. Five said 2 or 3 times a week, 3 said 2 or 3 times a month, and 3 said less than 6 times a year. These figures would seem to indicate fairly high use of the monument by horseback riding neighbors, however, the sample is small and covers the pleasant spring season. The level of riding trips reported cannot really be applied on a year-long basis and should be used with caution. However, it represents a start for measuring this aspect of human impacts.

Questions 11 through 14 pertain to visits to the monument. The responses are given in Appendix B. It is obvious that neighbors use the monument quite frequently.

The last question on the neighborhood survey was the open-ended question: does your family have any additional opinions to bring to Park Service attention? Only 26, or less than one-third of the RMU respondents answered this question. At TMU 30, or 53%, expressed opinions. See Appendix B for a complete breakdown. Most appeared satisfied with the present situation, but at TMU improving road safety was the comment most often offered. RMU respondents did not appear to have a common theme.

SURVEY OF ORGANIZED GROUPS

The third survey of this study contacted 13 user organizations reported by monument staff as using the monument. The survey, shown in Appendix C, was designed to find out what they did and where, how often they used the monument, and how they felt the monument could better meet their needs. The information supplied by the 10 groups that answered, and a list of the organizations are included in this appendix which is self explanatory.

COMPARISON BETWEEN THE VISITOR USE SURVEY AND THE SURVEY OF MONUMENT NEIGHBORS

As mentioned above, many of the questions contained in the Visitor Use Survey also appeared in the Neighbor Survey. Because the Visitor Use Survey was run for a full year while the Neighbor Survey was conducted only during the Spring, the following comparison utilized only data from the Spring quarter of the Visitor Use Survey. The questions compared included: 1) Management issues contained in Question 4 of the Visitor Use Survey and Question 1 of the Residential Survey; 2) day hiking of backcountry trails; 3) number of visits in last 30 days, last year; 4) number of people in party; 5) with whom visitors came; and 6) how visitors arrived. The following questions showed significant differences in responses among neighbors, local residents, and all other monument visitors:

1. Although the majority of respondents to both surveys indicated that they favored maintaining the present level of backcountry access, monument neighbors were more in favor of increasing access. Of those respondents with an opinion, only 61 percent of monument neighbors favored maintaining the present level of access compared to 72 percent of Tucson residents in general, and 75 percent of all other monument visitors.
2. Only 55 percent of RMU neighbors favored designating some trails for hikers only while 74 percent of local respondents to the Visitor Use Survey and 80 percent of all other monument visitors favored separate trails for hikers. At TMU 62% of neighbors with an opinion favored allowing horses and hikers to use the same trails. This is in sharp contrast to the opinions of respondents of the Visitor Use Survey. Eighty percent of local residents and 88% of all other monument visitors with an opinion indicated that they would like separate trails for hikers.
3. At TMU, the majority of respondents to both surveys who indicated an opinion favored leaving Picture Rocks Road as is, thus preserving it as a scenic corridor. However, because TMU neighbors make heavy use of this road to commute to Tucson, neighbors were more in favor of widening Picture Rock Road to make it a safer commuter route. Only 61 percent of TMU neighbors favored leaving the road as is while 86 percent of local residents responding to the Visitor Use Survey and 90 percent of all other visitors held this opinion.
4. The opinions of TMU neighbors concerning access to the monument at night contrasted sharply with Tucson residents in general and all other monument visitors. Sixty-nine percent of TMU neighbors favored maintaining night access while only 31 percent of Tucson residents in general and 41 percent of other visitors held such an opinion.
5. At TMU neighbors were more likely to visit in groups larger than 3 people. Seventy percent of TMU neighbors indicated that their party size was greater than 3 people. Fifty percent of local residents responding to the Visitor Use Survey visited in groups larger than 3 people. Fifty-two percent of all other visitors to TMU come in groups larger than 3 people.

A comparison of the other questions mentioned at the beginning of this section showed no significant differences between monument neighbors, Tucson

residents in general, and all other monument visitors.

CONCLUSIONS AND RECOMMENDATIONS

Reported visitation at the monument has shown a steady increase since establishment in 1933. Projections for the future growth of incorporated Tucson indicate that its population may exceed 500,000 shortly after the turn of the century. Results of the Visitor Use Survey indicate that almost half of monument visitors are Tucson residents. As a result, visitation can be expected to increase well into the next century. Meeting future demands for recreational use while protecting monument resources against serious long-term impacts will require careful, comprehensive planning.

The Visitor Use Survey indicates that the great majority of monument visitors are satisfied with present facilities and with their recreational experience. However, as monument visitation increases, some facilities will become overtaxed. This will not only affect the level of visitor satisfaction, but will also produce unwanted impacts on nearby natural resources.

The amount of use monument roads and picnic areas receive on weekends and during periods of peak winter visitation has already begun to create problems. Joint use of interior roads by vehicles, bicycles, and joggers has produced safety hazards for all concerned. Serious accidents have been minimized by strictly enforced regulations governing the use of these roads, but the situation can only be expected to get worse as monument use increases. This is especially true along the Cactus Forest Drive at RMU and along Picture Rocks Road at TMU. Both are popular with bicyclists and joggers, and Picture Rocks Road also receives heavy use by commuter traffic between Avra Valley and Tucson.

Competition for picnic tables and parking space at monument picnic areas is intense on weekends throughout most of the year. Picnickers who do not arrive early enough to claim a parking space or picnic site are forced to park off the side of the road and find a shady spot in the desert nearby. Constant use of these undesignated areas will result in soil compaction and damage to vegetation, and will attract mice and other opportunistic feeders to the food or garbage left behind.

The Park Service can also expect use of monument backcountry facilities to increase. The Visitor Use Survey indicates that these facilities are mostly used by local residents who have come for short day hikes. Residential development adjacent to monument boundaries will also mean some increase in equestrian use of backcountry trails. Higher levels of use by both groups may lead to safety and aesthetic conflicts between them. It will certainly mean accelerated damage to trails and campsites due to loss of vegetation, soil compaction, and erosion damage.

As monument use increases so will the demand and need for more interpretive facilities and programs. Results of all three surveys discussed in this report show an interest in the monument's natural resources by most visitors. Most first-time visitors enjoy walking through the cactus gardens and using the self-guided nature trails. Respondents who offered suggestions on how monument facilities could be improved frequently mentioned interpretive programs. This included more film and slide shows, printed material, and signing of plants along roads and nature trails. Considering that over half of monument visitors

come from outside the Tucson area and are first-time visitors, interpretation is especially important to their enjoyment and understanding of the monument's natural resources. Local residents can also benefit from improved interpretive programs. Although familiar with monument facilities, these visitors may not be as familiar with ecological processes or the damage they can unknowingly cause to monument resources.

Driving-sightseeing/bicycling/jogging are currently the major, conflicting, recreational uses at the monument. Bringing these three activities together on any street or highway creates serious safety problems. These problems are magnified on narrow, winding, dipping roads such as the Cactus Forest Drive at RMU. This loop road receives almost 100 percent of the vehicular, bicycle, and jogging use at the unit.

During daylight hours all three activities occur. Serious accidents have been kept to a minimum because the road is one-way and has a low speed limit which the Park Service enforces. At night and during early morning hours, when the drive is closed to motor vehicles, it continues to be used by bicyclists and joggers. Currently the Park Service does not have regular night patrols. Bicyclists are free to travel as fast as their legs or gravity will propel them, and both bicyclists and joggers travel in either direction at night. Most users are safety conscious. They keep bicycle speeds low, and travel around the loop in the proper direction. However, many near-misses and some minor accidents have occurred. The conflicts between driving-sightseeing, bicycling, and jogging will increase at RMU and TMU as participation in these activities increases.

Other conflicts between recreational uses at the monument which can be expected to develop and increase as visitor use and urban development adjacent to monument boundaries increase include:

1. Horse and hikers using the same trails (probably most important),
2. Unrestrained domestic dogs pursuing wildlife or confronting visitors on trails, in picnic areas, and along monument roads,
3. Mountain bicyclists and hikers using the same trails,
4. Parties at which alcohol and other drugs are consumed, interfering with the enjoyment of other visitors.

Impacts resulting from recreational use will continue to occur. The extent of these impacts will depend on how well the Park Service manages monument resources and the people who use them. The majority of these impacts will be restricted to areas immediately adjacent to monument roads, picnic areas, campsites, and trails. Current impacts include the destruction of vegetation by trampling, theft or vandalism; fuelwood cutting; soil compaction and erosion; harassment and killing of wildlife by domestic pets; and altering wildlife habits and populations by the presence of food or garbage. These impacts can be minimized by providing and maintaining well-located visitor facilities, and by enforcing regulations which govern visitor activities. However, the single management tool which can do the most to alleviate recreational impacts is resource interpretation. As is stated in the Park Service Administrative Manual: "Through interpretation, understanding, through understanding, appreciation, through appreciation, protection." When visitors become aware of the interrelationships which exist between themselves and the surrounding environment, they are less likely to damage that environment consciously. At present, many visitors do not take advantage of the information currently provided. Every effort must be made to improve communications.

Recommendations on how the problems discussed above can be avoided while accommodating increases in visitor use include:

1. Close the loop roads to motor vehicle traffic, and install a tram system. At present this could be restricted to the Cactus Forest Drive at RMU and limited to winter and early spring when visitation levels are highest.
2. Since no existing roads presently offer a viable alternative to Picture Rocks Road, the possibility of a new commuter route outside the monument should be investigated. A more likely alternative would be to make Picture Rocks Road a scenic parkway from Contzen Pass through the monument with a reduced speed limit.
3. Improve the design of Mica View picnic area at RMU and widen the road leading to it. Tables have been placed too close together; covered ramadas and a group area are needed; parking is not adequate for the amount of use it is likely to receive in the future, and the present entrance road is only one lane wide.
4. Establish an aggressive trail maintenance program including adequate signing at trailheads and major intersections. Current maintenance programs are woefully inadequate considering the amount of hiker and equestrian use trails receive. This problem is especially acute on all of the desert-to-mountain trails at RMU. Also, thought should be given to the re-alignment of some steep trail segments to reduce damage due to direct use and erosion.
5. Expand present interpretive facilities and programs. This should include more displays at both visitor centers, an audio-visual facility at TMU, presenting slide and film programs more frequently, and conducting regular interpretive walks throughout the year with increased frequency during periods of peak visitation (i.e., on weekends and during winter months). Also, more short self-guided nature trails should be constructed.
6. To alleviate competition between picnickers and hikers for parking space at Javalina Picnic Area, the trailhead for the Tanque Verde Trail should be moved. The trailhead can be relocated just off Old Spanish Trail in T.15S., R.16E., NE1/4 of Section 5. A portion of the old roadbed which was left following the realignment of Old Spanish Trail could be used as a parking lot for hikers and back-packers. A short segment of trail could be constructed to join the Tanque Verde Trail in T.15S., R.16E., NE1/4 of the NE1/4 of Section 5.
7. In addition to collecting figures on monthly visitation, periodic surveys of monument visitors (ie. every 2 or 3 years) should be conducted to obtain information on socio-demographic characteristics, activities participated in, monument facilities used, and level of visitor satisfaction. The visitor-use

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surveys conducted during this study provided such information; however, the data are good only as long as present visitor activities remain unchanged.

8. Increased public awareness is necessary if indirect impacts on monument resources are to be minimized. The National Park Service can help develop this awareness by becoming involved with local interest groups, by actively and aggressively participating in public hearings, and by promoting environmental education programs on and off the monument with Tucson area schools. Communications must be improved. If people don't participate or don't listen or read, the message won't be conveyed. It is also important to find out the kind of information visitors want.

Study Postscript

At the outset of this study, there were some who hoped that the information would indicate the consequences of changes in use configurations (i.e., type, intensity, seasonality, location) on ecological and physical resources. This information could then be used to adjust visitor numbers and activities so that resources could be protected.

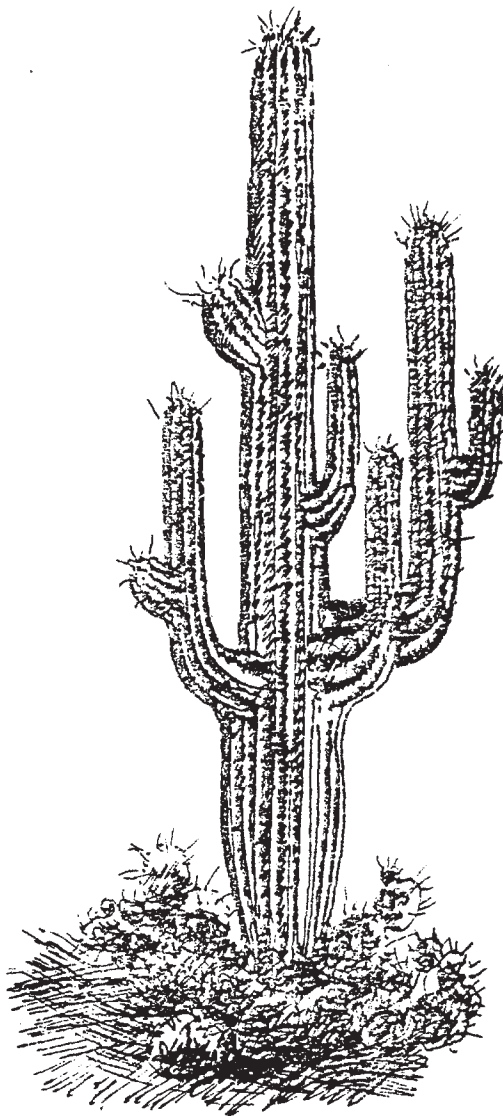
The study does provide information on current users and describes the current condition of monument resources. However, because similar historic data are lacking, no trends could be established which would tie changes in environmental conditions to changes in visitor use. Any logical and defensible decisions on use limitations can not be made at this time. The biological phase of this study, now underway, will provide some of the baseline data, currently lacking, against which future impacts can be measured. This study provides some parameters (visitor demography, activities, and satisfactions) that can be correlated with future visitor characteristics and related to biological changes, if any, that are found at that time.

The optimum level of use for this or any other unit of the National Park System must be determined from both resource impacts and user tolerances. Managers seek to provide resource preservation and high user satisfaction. This study does provide baseline data on visitor use and satisfaction. If future changes are documented, management must then decide how much man-caused change and what level of visitor satisfactions fit monument objectives. To be effective, any meaningful carrying capacity established at that time must be based on specific, measurable objectives which can be translated into on-the-ground actions.

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APPENDIX A
THE VISITOR USE SURVEY
RMU / TMU





SAGUARO NATIONAL MONUMENT

SURVEY OF VISITORS

RINCON MOUNTAIN UNIT

This survey is being conducted by the National Park Service - Cooperative Parks Study Unit at the University of Arizona, to determine how the monument can best accomplish its mission and serve the needs of you the visitor.

Your cooperation in filling out and returning this questionnaire is greatly appreciated. The survey is anonymous, but if you would like to receive recognition as a cooperator include your name and address on the attached prepaid envelope and we will send you a packet of saguaro seeds which you can plant and grow in your house or yard to produce a saguaro similar to the one pictured above.

OMB #10-24-0036

Date of Visit _____ Day of Week _____ Time of Visit: AM PM

1. Listed below are activities which you may have done on today's visit to the park. Please indicate which ones you participated in, your level of satisfaction, and if not satisfied, the reason why, listing by number from lists A and B below.

Activity	did while in park check as many as apply	level of satisfaction (from List A)	reason not satisfied (from List B)
A. Photograph/sketch			
B. Hike/walk			
C. Study plants			
D. Observe animals			
E. Ranger-guided walk			
F. Take scenic drive	Refer to Table 2 for List of Activities Participated In and Level of Satisfaction.		
G. Bicycle			
H. Jog/run			
I. Picnic			
J. Backpack/camp			
K. Visit info. center			
L. Ride horseback			
M. Enjoy the desert			
N. Other (specify)			

List A

1. Highly satisfied
2. Satisfied
3. Neither satisfied nor dissatisfied
4. Dissatisfied
5. Highly dissatisfied

List B

1. Park features not well explained
2. Bad weather
3. Didn't see animals
4. Park too crowded
5. Park too noisy

6. Park too dirty
7. Discourteous staff
8. Not enough trails
9. Road too narrow
10. Conflicts between bicyclists/
joggers/cars
11. Conflicts between horses
and hikers
12. Low visibility due to air
pollution
13. Other (specify) _____

(1)

2. Was there any single activity you had planned to do before arriving at the monument but didn't do? If so, please list below and give the reasons for not participating (refer to "Activity" list and "List B" from question #1 on the preceding page):

Refer to Table 5 for list of Planned Activities.

3. How can monument facilities be improved to increase access to and enjoyment of the park?

Refer to Appendix D for Suggested Improvements.

4. Do you feel that Saguaro National Monument should (please circle one answer from each set of answers)?

- N=1118 A. 1) increase public access to the backcountry by constructing new trails, campsites, and entry points; 20%
 or 2) maintain current level of access; 64%
 or 3) don't know; 10%
 or 4) never thought about it. 7%
- N=1076 B. 1) allow horses and hikers to use the same trails; 16%
 or 2) designate some trails for hikers only; 60%
 or 3) don't know; 12%
 or 4) never thought about it. 12%
- N=1096 C. 1) extend the hours when the monument is open; 19%
 or 2) maintain the current hours; 62%
 or 3) don't know; 12%
 or 4) never thought about it. 7%
- N=1045 D. 1) regain public access to Madrona Ranger Station (refer to the map on page 6); 29%
 or 2) keep Madrona Station closed to the public; 9%
 or 3) don't know; 42%
 or 4) never thought about it. 19%

5. Which entrance did you use to enter the monument on this visit? (refer to the map on page 6) N=1137.

Check one: Main 85% End of Speedway 13% Happy Valley 1%
 Madrona .1% Reddington Pass .3% Other (name)
0%

6. If you entered the monument at the main gate, did you pay the one dollar per vehicle entry fee, or did you use your Golden Age or Golden Eagle Passport? N=869.
Paid fee 50% Golden Age Passport 38% Golden Eagle Passport 12%
7. Did you hike on any of the trails in the monument (excluding self-guided nature trails)? N=1152.
Yes 32% No 68%
If yes, were they day hikes or an overnight backpacking trip? N=362.
Day hike 84% Overnight 16%
8. How many times have you visited Rincon Mountain Unit of Saguaro National Monument N=1175.
in the last 30 days: 79% First Time; 21% Repeat
in the last year: 62% First Time; 38% Repeat
in the last five years: 51% First Time; 49% Repeat
9. Have you recently visited the Tucson Mountain Unit of Saguaro National Monument, or do you plan on visiting the unit in the near future? N=1108.
Yes 57% No 43%
10. How many times have you visited the Tucson Mountain Unit
in the last 30 days (N=284): 78% First Time; 22% Repeat
in the last year (N=479): 55% First Time; 45% Repeat
in the last five years (N=628): 43% First Time; 57% Repeat
11. How many people in your party (including yourself)? Refer to Table 7.
12. With whom did you come on your trip today to Saguaro National Monument? (check one only) N=1174.
came alone 13% with family & fellow workers .2%
with family 54% with friends & fellow workers 1%
with friends 21% with family & friends 8%
with fellow workers 1% with organized group 2%

13. How did you arrive at the monument? (please check one) N=1173.

walk 1%; bicycle 4%; horseback .2%; car/pickup 86%;
van 5%; bus .4%; motorhome 2%; motorcycle 1%;
vehicle with horse trailer .1%.

14. Are you or any member(s) of your group physically handicapped? N=1168.

Yes 7% No 93%

If yes, did you find monument facilities adequate? N=80.

Yes 94% No 6%

If no, how could monument facilities be improved to increase access and enjoyment of the monument by physically handicapped individuals? N=6.

- Interpretive Program for deaf.
- Benches along first part of Douglas Springs Trail.
- Toilet facilities on trails.
- More accessible pullouts.
- Backcountry access.
- Provide wheelchairs.

15. What is your zip code? Refer to Table 7.

If you are from a country other than the United States, what is the name of your home country?

— Refer to Table 7.

16. How old are you? Refer to Table 7.

17. If over 50 years of age, are you retired? N=586

Yes 73% No 27%

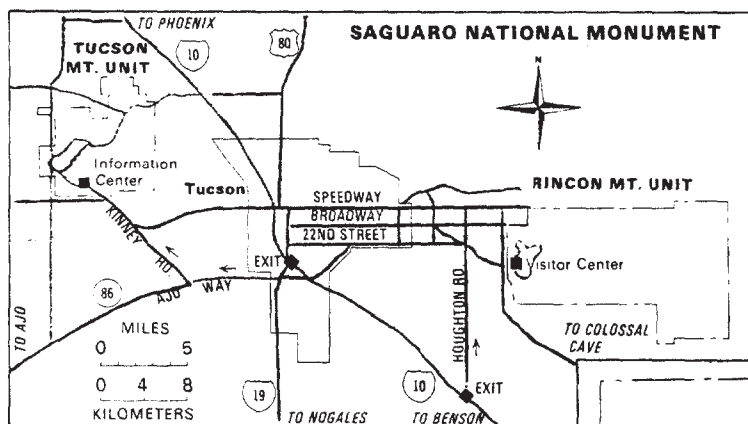
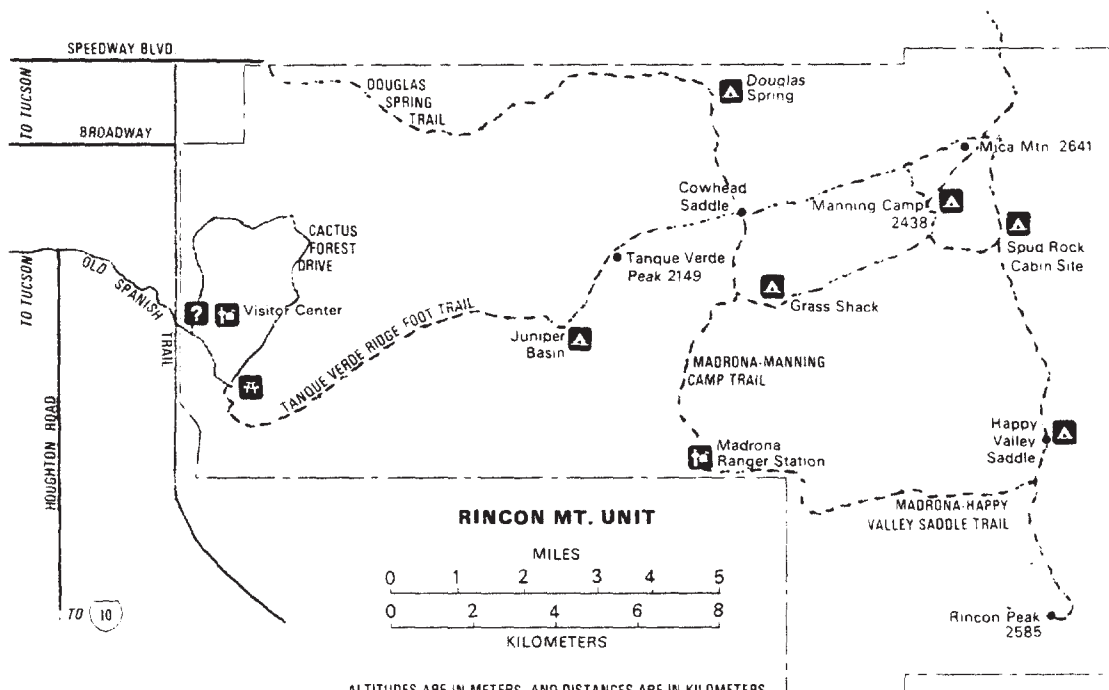
(4)

18. Do you have additional opinions you would like to bring to the attention of the park management? Were there aspects of your trip that were especially satisfying or disappointing which managers should be aware of?

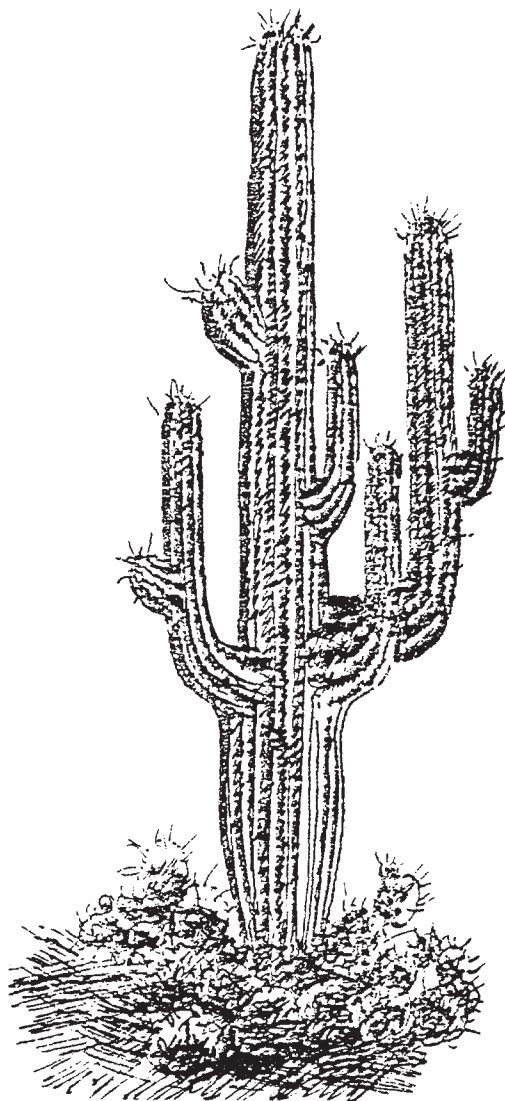
Refer to Appendix D for list of Additional Comments.

Again, thank you very much for your cooperation. Your contribution to this effort is greatly appreciated.

(5)



(6)



SAGUARO NATIONAL MONUMENT

SURVEY OF VISITORS

TUCSON MOUNTAIN UNIT

This survey is being conducted by the National Park Service - Cooperative Parks Study Unit at the University of Arizona, to determine how the monument can best accomplish its mission and serve the needs of you the visitor.

Your cooperation in filling out and returning this questionnaire is greatly appreciated. The survey is anonymous, but if you would like to receive recognition as a cooperator include your name and address on the attached prepaid envelope and we will send you a packet of saguaro seeds which you can plant and grow in your house or yard to produce a saguaro similar to the one pictured above.

OMB #10-24-0036

Date of Visit _____ Day of Week _____ Time of Visit: AM PM

1. Listed below are activities which you may have done on today's visit to the park. Please indicate which ones you participated in, your level of satisfaction, and if not satisfied, the reason why, listing by number from lists A and B below.

Activity	did while in park check as many as apply	level of satisfaction (from List A)	reason not satisfied (from List B)
A. Photograph/sketch			
B. Hike/walk			
C. Study plants			
D. Observe animals			
E. Ranger-guided walk			
F. Take scenic drive			
G. Bicycle	Refer to Table 3 for list of Activities Participated In and Level of Satisfaction.		
H. Jog/run			
I. Picnic			
J. Backpack/camp			
K. Visit info. center			
L. Ride horseback			
M. Enjoy the desert			
N. Other (specify)			

List A

1. Highly satisfied
2. Satisfied
3. Neither satisfied nor dissatisfied
4. Dissatisfied
5. Highly dissatisfied

List B

1. Park features not well explained
2. Bad weather
3. Didn't see animals
4. Park too crowded
5. Park too noisy

6. Park too dirty
7. Discourteous staff
8. Not enough trails
9. Road too narrow
10. Conflicts between bicyclists/
joggers/cars
11. Conflicts between horses
and hikers
12. Low visibility due to air
pollution
13. Other (specify) _____

(1)

2. Was there any single activity you had planned to do before arriving at the monument but didn't do? If so, please list below and give the reasons for not participating (refer to "Activity" list and "List B" from question #1 on the preceding page).

Refer to Table 6 for list of Planned Activities.

3. How can monument facilities be improved to increase access to and enjoyment of the park?

Refer to Appendix D for Suggested Improvements.

4. Do you feel that Saguaro National Monument should (please circle one answer from each set of answers)?

N=779 A. 1) allow horses and hikers to use the same trails; 13%
or 2) designate some trails for hikers only; 57%
or 3) don't know; 9%
or 4) never thought about it. 21%

N=771 B. 1) support the widening of Picture Rocks Road in order to make it a safer commuter route (refer to map on page 6); 8%
or 2) support leaving Picture Rocks Road as is, preserving it as a scenic corridor; 65%
or 3) don't know; 19%
or 4) never thought about it. 9%

N=772 C. 1) close all roads inside the park to prevent night use (parties etc.); 43%
or 2) maintain night access to the park; 28%
or 3) don't know 17%
or 4) never thought about it. 11%

(2)

5. Which entrance did you use to enter the monument on this visit?
(refer to map on page 6) N=791.
Check one: Kinney Rd. (Main) 69% Picture Rocks/Golden Gate Rd. 20%
Sandario Rd. 10% Other (name) .4%
6. Did you visit the Arizona Sonoran Desert Museum on the same day
you visited the monument? N=805.
Yes 44% No 56%
If yes, did you visit the museum before or after your visit to the
monument? N=353.
Before 58% After 42%
7. Did you hike on any of the trails in the monument (excluding self-
guided nature trails)? N=803.
Yes 34% No 66%
8. How many times have you visited Tucson Mountain Unit of Saguaro
National Monument N=812.
in the last 30 days: 85% First Time; 15% Repeat
in the last year: 70% First Time; 30% Repeat
in the last 5 years: 58% First Time; 42% Repeat
9. Have you recently visited the Rincon Mountain Unit of Saguaro
National Monument, or do you plan to visit the unit in the near
future? N=796.
Yes 42% No 58%
10. How many times have you visited the Rincon Mountain Unit
in the last 30 days (N=101): 81% First Time; 19% Repeat
in the last year (N=207): 51% First Time; 49% Repeat
in the last 5 years (N=308): 44% First Time; 56% Repeat
11. How many people in your party (including yourself)?_ Refer to Table 8.

(3)

12. With whom did you come on your trip today to Saguaro National Monument? (check one only) N=810.
- | | |
|-------------------------------|--|
| came alone <u>10%</u> | with family & fellow workers <u>1%</u> |
| with friends <u>22%</u> | with friends & fellow workers <u>.5%</u> |
| with family <u>56%</u> | with family & friends <u>8%</u> |
| with fellow workers <u>1%</u> | with organized group <u>2%</u> |
13. How did you arrive at the monument? (please check one) N=808.
- walk .1%; bicycle .3%; horseback 0%; car/pickup 92%;
 van 4%; bus .1%; motorhome 3%; motorcycle 1%;
 vehicle with horse trailer .1%.
14. Are you or any member(s) of your group physically handicapped? N=808.
- Yes 7% No 93%
- If yes, did you find monument facilities adequate? N=47.
- Yes 94% No 6%
- If no, how could monument facilities be improved to increase access and enjoyment of the monument by physically handicapped individuals? N=5.
- Interpretive displays for the blind.
 - Information on availability of benches along nature trails.
 - Restrooms for the handicapped.
15. What is your zip code? Refer to Table 8.
- If you are from a country other than the United States, what is the name of your home country?
- Refer to Table 8.
16. How old are you? Refer to Table 8.
17. If over 50 years of age, are you retired? Yes 70% No 30%
 N=417.

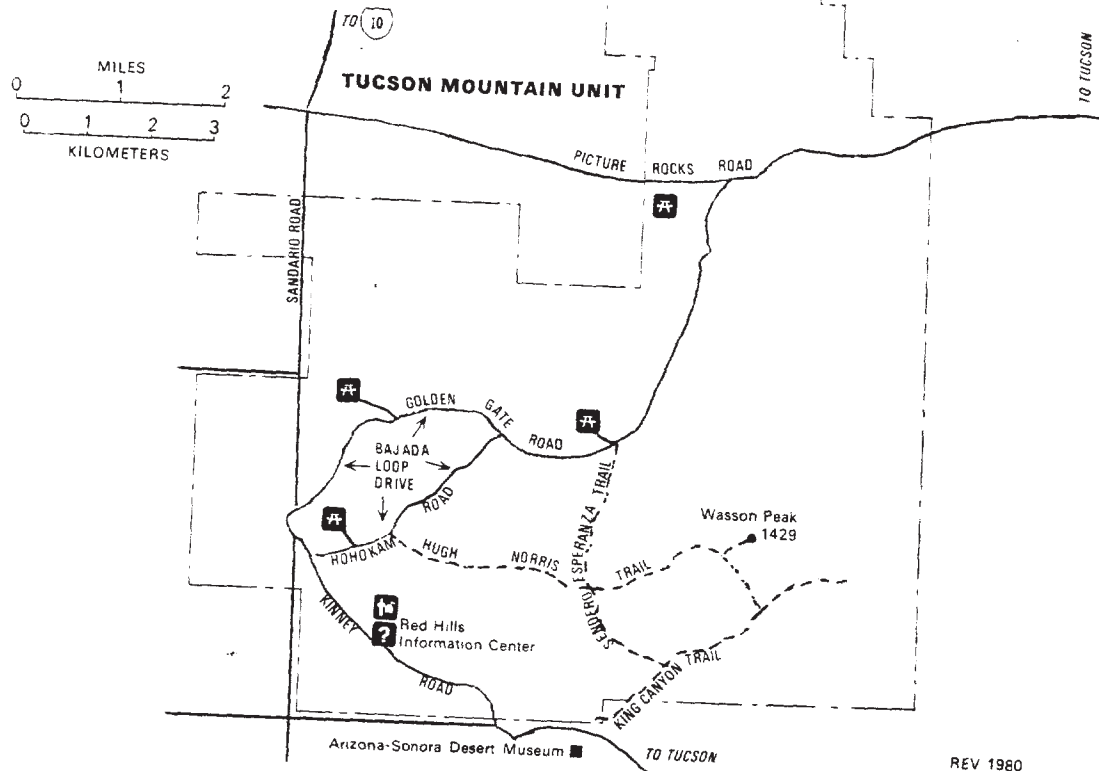
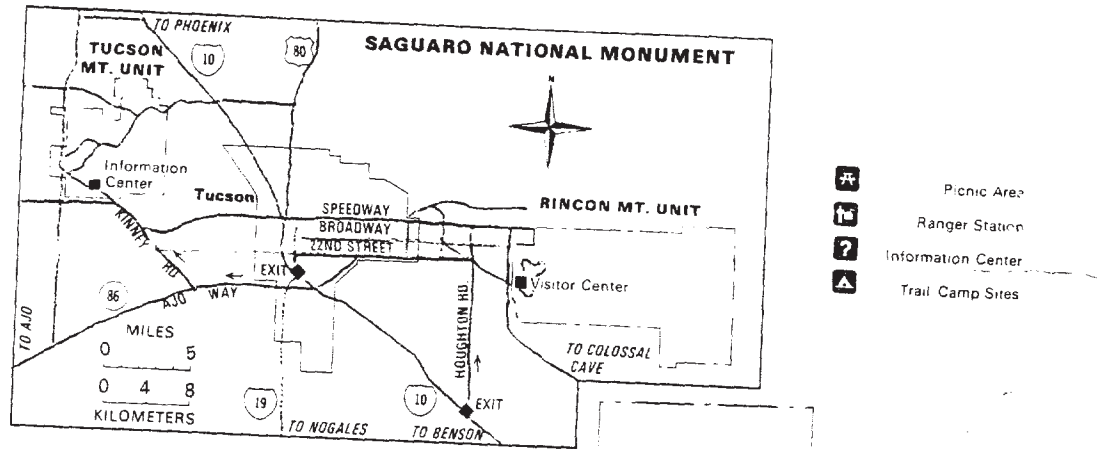
18. Do you have additional opinions you would like to bring to the attention of the park management? Were there aspects of your trip that were especially satisfying or disappointing which managers should be aware of?

Refer to Appendix D for list of Additional Comments.

Again, thank you very much for your cooperation. Your contribution to this effort is greatly appreciated.

(5)

ALTITUDES ARE IN METERS, AND DISTANCES ARE IN KILOMETERS.
ONE METER IS 3.3 FEET, 1 KILOMETER IS 0.62 MILES.



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(6)

APPENDIX B
SURVEY OF MONUMENT NEIGHBORS
RMU / TMU

SAGUARO

NATIONAL MONUMENT • ARIZONA

RINÇON MOUNTAIN UNIT

A SURVEY OF RESIDENTS

LIVING ADJACENT

TO THE

MONUMENT BOUNDARY



This survey is being conducted by the National Park Service - Cooperative Parks Study Unit at the University of Arizona to determine how the monument can best accomplish its mission and serve the needs of visitors.

Your cooperation in filling out and returning this questionnaire is greatly appreciated. The survey is anonymous, but if you would like to receive a summary of the results, write "copy of results requested" on the back of the attached prepaid envelope.

OMB #10-24-0036

1. Do you feel that Saguaro National Monument should (please check one answer from each set of answers). . . . ?

N=89 A. 32% Increase public access to the backcountry by constructing new trails, campsites or entry points;
51% Maintain current level of backcountry access;
6% Don't know;
11% Never thought about it.

N=89 B. 17% Extend the hours when the monument is open;
70% Maintain the current hours;
3% Don't know;
9% Never thought about it.

N=89 C. 38% Allow horses and hikers to use the same trails;
47% Designate some trails for hikers only;
4% Don't know;
10% Never thought about it.

N=85 D. 43% Regain public access to Madrona Ranger Station (refer to map on page 6);
16% Keep Madrona Station closed to the public;
22% Don't know;
17% Never thought about it.

2. How can monument facilities be improved to increase your family's enjoyment of the monument? N=51.

39% Fine as is	2% Increase ranger patrols
18% Increase access	2% Construct road into Rincon Mtns.
14% Don't know	2% Reduce fees
6% More information and Interpretive Programs	2% Better bicycle trails
4% More parking at trailheads	2% Extend hours
2% More drinking water facilities	2% More vista points
2% More restrooms	2% Stop bicycle races
	2% Enforce leash law

3. Has public access to and use of the monument adversely affected your family's privacy or property? N=89.

Yes 4% No 93%

If Yes, please explain. N=4.

-Tresspass/Litter	50%
-Bicycles hinder access	25%
-High traffic volumn	25%

4. The staff at Saguaro National Monument has indicated that they have sighted many stray dogs and cats running loose on the monument. Does your family regularly see stray dogs or cats on your own property? N=91.

Yes 45% No 55%

5. Does your family have any dogs or cats of your own? N=88.

Yes 86% No 14%

6. Do members of your family ride bicycles on the monument? N=90.

Yes 24% No 76%

If No, skip remainder of question 6 and go to question 7.

If Yes, answer the following questions (check one answer from each set): N=22.

A. How often does your family ride bicycles on the monument?

0% Daily	36% 2-3 times per month
5% 2-3 times per week	18% Once a month
18% Once a week	22% Other (specify): less than 6 times per year

B. During what part of the day do members of your family usually ride on the monument?

64% Mornings	4% Mornings/Evenings
4% Midday	4% Midday/Evenings
17% Evenings	4% All parts of day

C. Which season of the year does your family usually bicycle on the monument?

9% Spring	5% Spring/Fall
9% Summer	9% Fall/Winter
5% Fall	18% Fall/Winter/Spring
14% Winter	9% Spring/Summer/Fall
5% Spring/Summer	18% All Seasons

7. Do any members of your family run or jog on the monument? N=89.

Yes 7% No 93%

If No, skip remainder of question 7 and go to question 8.

If Yes, answer the following questions (check one answer from each set): N=6.

A. How often does your family run or jog on the monument?

0% Daily	17% 2-3 times per month
0% 2-3 times per week	33% Once a month
17% Once a week	33% Other (specify): less than 6 times per year

B. During what part of the day do members of your family usually run or jog on monument trails?

100% Mornings 0% Midday 0% Evenings

C. Where does your family usually run or jog?

0% Hiking trails 100% Paved or graveled
0% Crosscountry roads

D. Which season of the year does your family usually run or jog on the monument?

17% Summer/Winter 33% Spring/Fall/Winter
33% Fall/Winter 17% All Seasons

8. Do members of your family use any of the trails within the monument for day hiking/walking (do not include overnight camping trips or self-guided nature trails)? N=86.

Yes 47% No 53%

If No, skip remainder of question 8 and go to question 9.

If Yes, answer the following questions (check one answer from each set): N=40.

A. How often does your family hike on the monument?

0% Daily 20% 2-3 times per month
0% 2-3 times per week 23% Once a month
8% Once a week 50% Other (specify): less than
6 times per year

B. During what part of the day do members of your family usually hike monument trails?

68% Mornings 3% Mornings/Midday
8% Midday 15% Mornings/Evenings
5% Evenings 3% All parts of day

C. Which season of the year does your family usually hike/walk on the monument?

13% Spring 5% Spring/Winter
0% Summer 13% Fall/Winter
3% Fall 5% Spring/Summer/Fall
8% Winter 3% Spring/Summer/Winter
13% Spring/Summer 20% Fall/Winter/Spring
15% Spring/Fall 13% All Seasons

D. Which two(2) trails do your family most frequently use (refer to map on page 6)?

31% Douglas Springs	3% Miller Creek
28% Tanque Verde Ridge	0% Turkey Creek
8% Madrona/Manning Camp	0% Italian Ranch
3% Rincon Peak	25% Paved Loop Road
	2% Other

9. Do members of your family go camping overnight in the Rincon Mountains of Saguaro National Monument? N=89.

Yes 10% No 90%

If No, skip remainder of question 9 and go to question 10.

If Yes, answer the following questions (check one answer from each set): N=9.

A. How often does your family go backpacking on the monument?

0% 2-3 times per month	44% 2-3 times per year
0% Once a month	11% Once a year
22% Every 2-3 months	22% Other (specify): less than once every two years

B. Which two(2) camp sites do your family usually use (refer to the map on page 6)?

27% Douglas Springs	0% Happy Valley Saddle
0% Juniper Basin	13% Spud Rock Cabin Site
47% Manning Camp	13% Grass Shack

C. How many people go with you on these backpacking/camping trips?

11% One person	33% Four people
22% Two people	11% Twelve people
22% Three people	

D. How many nights are usually spent on these trips?

33% One night 44% Two nights 22% Three nights

E. Which season of the year does your family usually backpack/camp on the monument?

20% Spring	10% Spring/Fall
10% Fall	20% Spring/Winter
10% Winter	10% Fall/Winter
20% Spring/Summer	

10. Does your family own any horses? N=90.

Yes 29% No 71%

If No, skip remainder of question 10 and go to question 11.

If Yes, does your family ever ride these horses on the monument? N=27.

Yes 48% No 52%

If No, skip remainder of question 10 and go to question 11.

If Yes, answer the following questions (check one answer from each set): N=13.

A. How often does your family ride horses on the monument?

0% Daily	31% 2-3 times per month
0% 2-3 times per week	15% Once a month
31% Once a week	23% Other (specify): less than 6 times per year

B. During what part of the day do members of your family usually ride horses on the monument?

78% Mornings 8% Mornings/Midday 15% Mornings/Evenings

C. Using the map on page 6, place a check next to the two(2) trails or areas where your family rides most frequently.

43% Douglas Springs Trail
33% Northern Cactus Forest (map symbol )
10% Central & Southern of Cactus Forest (map symbol )
5% Madrona/Manning Camp Trail
5% Madrona/Happy Valley Trail
0% Rincon Mountains above 5000' (map symbol )
5% Rincon Valley inside monument boundary (map symbol )

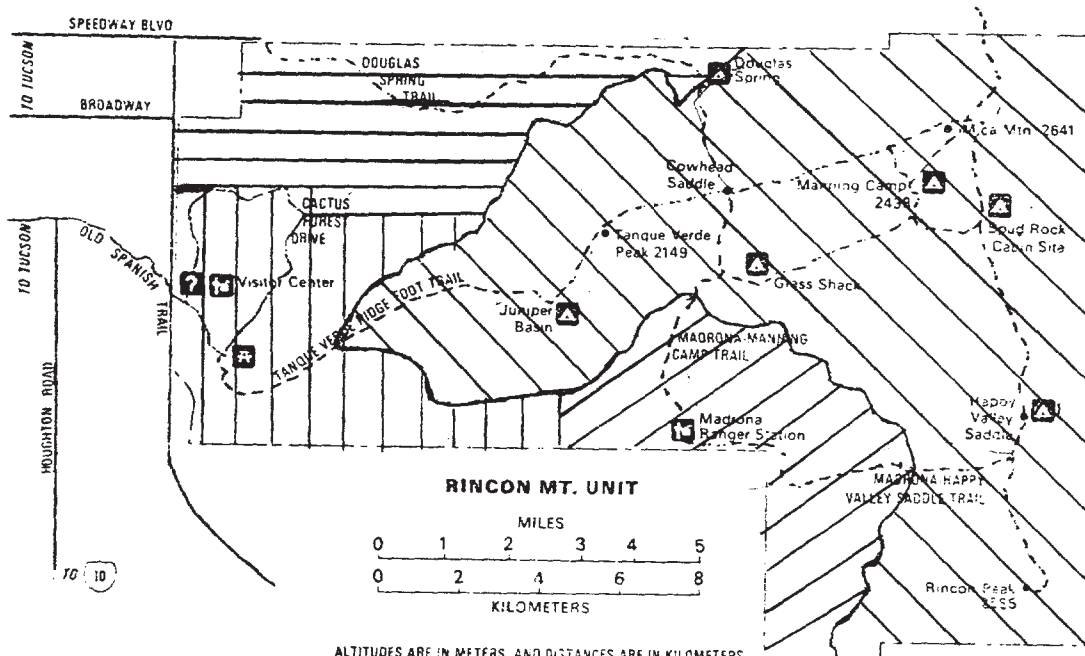
D. Which season of the year does your family usually ride horses on the monument?

8% Spring	8% Fall/Winter
8% Fall	46% Fall/Winter/Spring
15% Winter	15% All Seasons

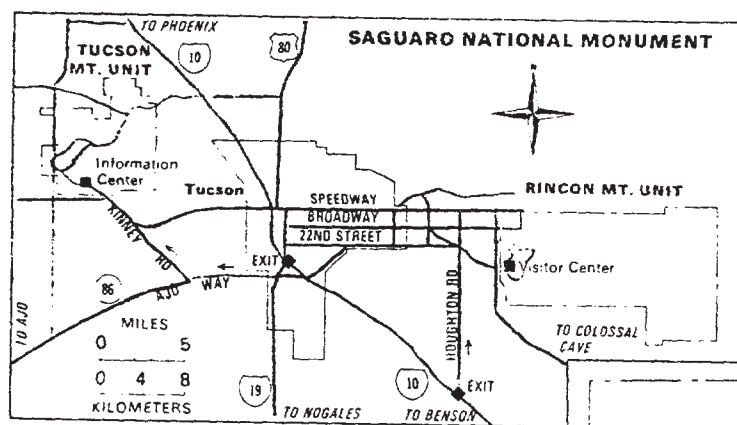
11. How many times has your family visited Saguaro National Monument?

In the last week (N=9): avg. 1.6
In the last month (N=31): avg. 1.8
In the last year (N=82): avg. 5.7

12. How many people were there on the last visit to the monument by a member of your family? (N=79): avg. 5
13. If you indicated that more than one person accompanied a member of your family on his or her last visit, who did he or she go with? N=78.
- | | |
|----------------------------|-----------------------------|
| 51% Family | 3% Friends & fellow workers |
| 17% Friends | 24% Family & friends |
| 0% Fellow workers | 5% Organized group |
| 0% Family & fellow workers | |
14. How did the member of your family arrive at the monument on his or her last visit (check one only)? N=86.
- | | |
|----------------|-------------------------------|
| 6% Walk | 2% Motorcycle |
| 0% Run/jog | 2% Vehicle with horse trailer |
| 6% Bicycle | 3% Other (specify): Bus |
| 7% Horseback | |
| 69% Car/pickup | |
| 5% Van | |
15. Does your family have any additional opinions they would like to bring to the attention of the park management? Were there aspects of their last visit that were especially satisfying or disappointing which managers should be aware of? N=26.
- | | |
|-----------------------------|--|
| 12% Favorable NPS | 12% Limit access to present level |
| 4% Critical NPS | 4% More Interpretive Programs |
| 23% Favorable Facilities | 8% Limit development adjacent to Monument |
| 8% Critical Facilities | 4% Control wildlife movement out of Monument |
| 4% More trail signs | 8% None |
| 4% Access to Madrona R.S. | |
| 4% Restrict dirt bikes | |
| 4% Have not used facilities | |



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ONE METER IS 3.3 FEET, 1 KILOMETER IS 0.62 MILES.



SAGUARO

NATIONAL MONUMENT • ARIZONA

TUCSON MOUNTAIN UNIT

A SURVEY OF RESIDENTS

LIVING ADJACENT

TO THE

MONUMENT BOUNDARY



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OMB #10-24-0036

1. Do you feel that Saguaro National Monument should (please check one answer from each set of answers). . . . ?

N=56 A. 20% Increase public access to the backcountry by constructing new trails, campsites or entry points;
70% Maintain current level of backcountry access;
2% Don't know;
9% Never thought about it.

N=56 B. 39% Support the widening of Picture Rocks Road in order to make it a safer commuter route (refer to the map on page 6);
61% Support leaving Picture Rocks Road as is, preserving it as a scenic corridor;
0% Don't know;
0% Never thought about it.

N=56 C. 55% Allow horses and hikers to use the same trails;
34% Designate some trails for hikers only;
4% Don't know;
7% Never thought about it.

N=54 D. 30% Close all roads in the monument to prevent night use;
65% Maintain night access
2% Don't know;
4% Never thought about it.

2. How can monument facilities be improved to increase your family's enjoyment of the monument? N=35.

34% Fine as is	3% More information and Interpretive Programs
11% Increase access	3% Enforce leash laws
9% More picnic areas	3% Better road maintenance
9% Don't know	3% Better bicycle trails
6% More trash recepticals	3% Horse rental facilities
3% More drinking water facilities	3% Restrict ORV use
3% More ramadas in picnic areas	3% Stop beer and marijuana parties
3% Better direction signs to Monument	3% Stop bicycle use of Picture Rocks Road

3. Has public access to and use of the monument adversely affected your family's privacy or property? N=56.

Yes 4% No 96%

If Yes, please explain. N=2.

-Tresspass/Litter
-Shot at

4. The staff at Saguaro National Monument has indicated that they have sighted many stray dogs and cats running loose on the monument. Does your family regularly see stray dogs or cats on your own property? N=55.

Yes 44% No 55%

5. Does your family have any dogs or cats of your own? N=56.

Yes 82% No 18%

6. Do members of your family ride bicycles on the monument? N=57.

Yes 16% No 84%

If No, skip remainder of question 6 and go to question 7.

If Yes, answer the following questions (check one answer from each set):

- A. How often does your family ride bicycles on the monument? N=9.

0% Daily	33% 2-3 times per month
11% 2-3 times per week	22% Once a month
11% Once a week	22% Other (specify): less than 6 times per year

- B. During what part of the day do members of your family usually ride bicycles on the monument? N=9.

33% Mornings	33% Evenings
22% Midday	11% Mornings/Evenings

- C. Which season of the year does your family usually ride bicycles in the monument? N=8.

13% Spring	13% Spring/Summer/Fall
13% Summer	25% Winter/Spring/Fall
13% Fall/Spring	25% All Seasons

7. Do any members of your family run or jog on the monument? N=55.

Yes 16% No 84%

If No, skip remainder of question 7 and go to question 8.

If Yes, answer the following questions (check one answer from each set):

- A. How often does your family run or jog on the monument? N=9.

11% Daily	22% 2-3 times per month
22% 2-3 times per week	33% Once a month
11% Once a week	0% Other (specify) _____

B. During what part of the day do members of your family usually run or jog on monument trails? N=9.

33% Mornings 22% Evenings 44% Mornings/Evenings

C. Where does your family usually run or jog? N=9.

33% Hiking trails 44% Paved or graveled roads
11% Crosscountry 11% All the above

D. Which season of the year does your family usually run or jog on the monument? N=9.

11% Winter 44% Fall/Winter/Spring
22% Fall/Winter 11% All Seasons
11% Spring/Summer/Fall

8. Do members or your family use any of the trails within the monument for day hiking/walking (excluding self-guiding nature trails)? N=56.

Yes 36% No 64%

If No, skip remainder of question 8 and go to question 9.

If Yes, answer the following questions (check one answer from each set):

A. How often does your family hike on the monument? N=20.

0% Daily 20% 2-3 times per month
5% 2-3 times per week 25% Once a month
10% Once a week 40% Other (specify): less than
6 times per year

B. During what part of the day do members of your family usually hike monument trails? N=19.

53% Mornings 5% Mornings/Midday
5% Midday 21% Mornings/Evenings
11% Evenings 5% All parts of day

C. Which two(2) trails do your family most frequently use (refer to map on page 6)? N=27.

22% King Canyon 37% Hugh Norris
4% Sweetwater 33% Sendero-Esperanza
4% Other

D. Which season of the year does your family usually hike/jog on the monument? N=18.

17% Spring 11% Fall/Spring
28% Winter 17% Fall/Winter/Spring
6% Spring/Winter 22% All Seasons

9. Does your family own any horses?

Yes 24% No 76%

If No, skip remainder of question 9 and go to question 10.

If Yes, does your family ever ride these horses on the monument? N=12.

Yes 100% No 0%

If No, skip remainder of question 9 and go to question 10.

If Yes, answer the following questions (check one answer from each set):

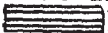
A. How often does your family ride horses on the monument? N=11.

0% Daily	27% 2-3 times per month
45% 2-3 times per week	0% Once a month
0% Once a week	27% Other (specify): less than 6 times per year

B. During what part of the day do members of your family usually ride on the monument? N=12.

25% Mornings	17% Mornings/Midday
17% Evenings	8% All parts of day
33% Mornings/Evenings	

C. Using the map on page 6, place a check next to the two(2) trails or areas where your family rides most frequently. N=22.

0% King Canyon Trail	
14% Hugh Norris Trail	
0% Sweetwater Trail	
5% Sendero-Esperanza Trail	
32% Area north and east of Golden Gate Road (map symbol )	
18% Area north of Picture Rocks Road (map symbol )	
27% Area east of Golden Gate Road/Sendero-Esperanza Trail (map symbol )	
0% Area south of Contzen Pass on east side of Tucson Mountains (map symbol )	
5% Southwestern portion of monument (map symbol )	

D. Which season of the year does your family usually ride horses on the monument? N=12.

8% Summer	8% Spring/Fall
17% Fall	17% Fall/Winter/Spring
8% Winter	42% All Seasons

10. How many times has your family visited Saguaro National Monument?

In the last week (N=12): avg. 1.6
 In the last month (N=20): avg. 2.6
 In the last year (N=48): avg. 5.6

11. How many people were there on the last visit to the monument by a member of your family? (N=46): avg. 3.8

12. If you indicated that more than one person accompanied a member of your family on his or her last visit, who did he or she go with? N=46.

57% Family	2% Friends & fellow workers
20% Friends	22% Family & friends
0% Fellow workers	0% Organized group
0% Family & fellow workers	

13. How did the member of your family arrive at the monument on his or her last visit (check one only)? N=49.

2% Walk	6% Motorcycle
0% Run/jog	0% Vehicle with horse trailer
2% Bicycle	0% Other (specify) _____
6% Horseback	
82% Car/pickup	
2% Van	

14. Does your family have any additional opinions they would like to bring to the attention of the park management? Were there aspects of their last visit that were especially satisfying or disappointing which managers should be aware of? N=30.

17% Improve road safety	7% Concern over effect of CAP route
13% Maintain present level of access	3% Enforce speed laws
10% Favorable to NPS	3% Drinking water in picnic areas
10% Favorable Facilities	3% More/Better signing to Monument
10% None	3% Bicycle and horse trails along Picture Rocks Road
7% Critical Facilities	
7% More trail signs	
7% Limit bicycle use	



APPENDIX C
SURVEY OF SELECTED ORGANIZED GROUPS

COMMENTS OF ORGANIZED GROUPS
REGULARLY VISITING
SAGUARO NATIONAL MONUMENT
(N=10)

1. List the type of recreational activities usually participated in by members of your organization during group sponsored visits to the monument (ie. running, bicycling or picnicing etc.). Also include the specific area(s) where these activities usually occur (i.e., the Signal Hill picnic area at the Tucson Mountain Unit or the Cactus Forest Drive at the Rincon Mountain Unit etc.).

<u>Recreational Activity</u>	<u>Area(s) Where Occur</u>
Horseback Riding (n=3)	Yuma Mine, Box Canyon (TMU), Rincon Mtns., Lower Cactus Forest (RMU).
Hiking (n=4)	Rincon Mtns., Douglas Springs Trail, King Canyon, Signal Hill.
Nature Study (n=2)	Rincon Mtns., Nature trails, Loop drives.
Picnic (n=3)	King Canyon, Signal Hill, Cambo.
Backpacking (n=2)	Throughout Rincon Mtns.
Bicycling (n=1)	Roads of both units.
Trail Running (n=2)	Douglas Springs Trail.

2. During the course of one year, how often does your organization use the area(s) listed in question #1 above? Does this use occur randomly throughout the year, or does it occur only during specific times of the year (ie. in the spring, on weekends, during the full moon each month etc.)?

Horseback Riding - Daily throughout the year (n=2); once a month September-May (n=1).

Hiking - Daily throughout the year (n=2); 3-4 times a year September-May (n=1); randomly throughout the year (n=1).

Nature Studies - Daily throughout the year (n=1); 3-4 times a year September-May (n=1).

Picnic - Weekly September-June (n=1); randomly throughout the year (n=2).

Backpacking - Randomly June-September (n=2).

Bicycling - Randomly 6-8 times a year (n=1).

Trail Running - 3-4 times a year February-April (n=2).

3. Can Monument facilities be changed or otherwise improved to increase visitor enjoyment and safety? If so how?

- Clean up trash in Box Canyon (TMU).
- Stop parties.
- Avoid use of heavily eroded equestrian trails.
- Trail maintenance (brush, erosion).
- More short hiking trails.
- Access to Madrona Ranger Station.
- Restrict large motorhomes and trailers.
- Facilities are fine as is.
- More restrooms (TMU).
- Restrict use of horses.
- Ban use of trail bicycles.
- Permit undesignated camping throughout backcountry of RMU.
- Construct trail from Javalina picnic area to Madrona Ranger Station.

Organized Group Contacted

Saguaro Horsemen's Association
Southern Arizona Hiking Club
Tanque Verde Guest Ranch
Greater Arizona Bicycling Assoc.
Sierra Club
Southern Arizona Roadrunners
Audubon Society

Arizona Mountain Runners
Saguaro Forest Associates
Tucson Mountain Stables
Lazy K Bar Ranch
Wild Horse Ranch
Sundancer Saddle & Surry Ranch

APPENDIX D
LIST OF ADDITIONAL COMMENTS AND SUGGESTIONS
ON HOW MONUMENT FACILITIES
CAN BE IMPROVED

COMMENTS AND SUGGESTIONS ON HOW
MONUMENT FACILITIES CAN BE IMPROVED

	RMU		TMU		TOTAL	
	N	%	N	%	N	%
General Comments						
Monument & Facilities fine as is	226	16	149	18	375	17
Favorable to National Park Service	171	12	90	11	261	12
Critical to National Park Service	10	1	4	0	14	1
Favorable of Facilities & Programs	150	11	68	8	218	10
Critical of Facilities & Programs	24	2	19	2	43	2
Enjoy Monument & Desert	208	15	151	19	359	16

Specific Comments

Better signing to and from the monument	32	2	51	6	83	4
More information on plants and animals	43	3	24	3	67	3
More pulloffs along monument roads	40	3	17	2	57	3
Better marking of trails	34	2	10	1	44	2
Road maintenance needed	14	1	21	3	35	2
Trail maintenance needed	29	2	5	1	34	2
More drinking water facilities	29	2	4	0	33	2
More hiking trails	10	1	23	3	33	2
More campgrounds front & backcountry	18	1	11	1	29	1
Expand interpretive programs	19	1	9	1	28	1
Advertise facilities & programs	17	1	11	1	28	1
Better signing of roads, trails, & pulloffs	9	1	18	2	27	1
More picnic areas/ramadas	16	1	10	1	26	1
Information & hiker warnings at trailheads	10	1	14	2	24	1
More bicycle paths along roads	12	1	6	1	18	1
Extend hours at RMU-open earlier	13	1	3	0	16	1
Pave loop road	1	0	12	1	13	1
More roads	9	1	3	0	12	1
Widen monument roads	7	1	5	1	12	1
More parking	5	0	6	1	11	1
More nature trails	9	1	2	0	11	1
Enforce speed laws	9	1	1	0	10	0
Allow pets on hiking trails	9	1	1	0	10	0
Sun shelters with benches on nature trails	4	0	6	1	10	0
Do not allow horses on trails	7	1	3	0	10	0
Refreshment stand needed	8	1	2	0	10	0
Supply map of monument	3	0	6	1	9	0
Increase enforcement against theft/vandalism	5	0	3	0	8	0
Remove speed bumps	7	1	0	0	7	0
No cars on loop road	6	0	1	0	7	0
Work to limit development next to monument	5	0	1	0	6	0
Do not allow dogs on monument	5	0	1	0	6	0
Provide horse rental facilities	4	0	2	0	6	0
Enforce leash law for dogs	4	0	1	0	5	0
Shorter loop road	4	0	1	0	5	0
Provide emergency telephones within monument	3	0	2	0	5	0
Elevated viewing areas along loop road	4	0	0	0	4	0
Allow dispersed camping	4	0	0	0	4	0

Specific Comments, Continued

	RMU		TMU		TOTAL	
	N	%	N	%	N	%
Enlarge monument	3	0	1	0	4	0
Keep bicycles off monument roads	1	0	3	0	4	0
More trails along loop roads	2	0	2	0	4	0
Pave nature trails	0	0	3	0	3	0
Tram system on loop roads	3	0	0	0	3	0
Eliminate mistletoe	3	0	0	0	3	0
Saguaro planting program to maintain stand	3	0	0	0	3	0
Remove tables and grills from backcountry	3	0	0	0	3	0
Provide seasonal entrance permits for locals	3	0	0	0	3	0
Reduce fees	3	0	0	0	3	0
Phone/Mail backcountry reservation system	3	0	0	0	3	0
More handicapped facilities	3	0	0	0	3	0
Overnight accommodations near entrance	3	0	0	0	3	0
More guided interpretive programs	2	0	0	0	2	0
Log for listing wildlife sighted	0	0	2	0	2	0
Water at end of Speedway	2	0	0	0	2	0
More use of volunteers	2	0	0	0	2	0
Conflict between cars and bicycles	2	0	0	0	2	0
Set up entrance station to collect fees	2	0	0	0	2	0
Audio programs for visually handicapped	2	0	0	0	2	0
Mark trails leading to kilns	2	0	0	0	2	0
Keep unpoliced/policing overzealous	0	0	2	0	2	0
Enforce one-way restrictions on loop road	1	0	1	0	2	0
Nature trail leaflets with map and pictures	2	0	0	0	2	0
Larger pull-offs along monument roads	2	0	0	0	2	0
Information on water quality & availability	2	0	0	0	2	0
Animal feeders to attract wildlife for viewing	2	0	0	0	2	0
Build bridges over washes	2	0	0	0	2	0
Morning interpretive programs for newcomers	1	0	0	0	1	0
Schedule film after guided tour	1	0	0	0	1	0
Keep loop road open	1	0	0	0	1	0
Ramada at Manning Camp	1	0	0	0	1	0
No off-road vehicle use	1	0	0	0	1	0
Allow bicycles on backcountry trails	1	0	0	0	1	0
Research health of ecosystem	1	0	0	0	1	0
Keep Hohokam/Golden Gate Road open	0	0	1	0	1	0
Let county/city prisoners maintain park	0	0	1	0	1	0
Provide interpreter at slide show	1	0	0	0	1	0
Periodically reverse one-way loop road at RMU	1	0	0	0	1	0
Advertise Golden Age/Golden Eagle Passports	1	0	0	0	1	0
Restrict aircraft overflights	1	0	0	0	1	0
Visitor Center at north entrance to TMU	0	0	1	0	1	0
Stock trout in Madrona/Chimineia Creeks	1	0	0	0	1	0
Provide parking at Sweetwater trailhead	0	0	1	0	1	0
Automatic lights in picnic areas	0	0	1	0	1	0
Distribute leaflets for nature trails at V.C.	0	0	1	0	1	0
More group camping areas	1	0	0	0	1	0
Telephone at end of Speedway	1	0	0	0	1	0
Make slide show a film	1	0	0	0	1	0
Don't I.D. same plants on both nature trails	1	0	0	0	1	0
Provide telescope to observe plants & animals	1	0	0	0	1	0

Specific Comments, Continued

	RMU		TMU		TOTAL	
	N	%	N	%	N	%
More interpretive stops along loop roads	0	0	1	0	1	0
Taped message & shelter at some pulloffs	1	0	0	0	1	0
Clean up Happy Valley campsite	1	0	0	0	1	0
Reduce speed limits	1	0	0	0	1	0
Move trailheads away from picnic areas	1	0	0	0	1	0
More horse trails	1	0	0	0	1	0
Pedestrian walkways along roads	1	0	0	0	1	0
No alcoholic beverages in monument	1	0	0	0	1	0
Night tram access	1	0	0	0	1	0
Provide bicycle lockers for campers	1	0	0	0	1	0
Allow cars on loop roads in Summer-midday only	1	0	0	0	1	0
Supply firewood	0	0	1	0	1	0
Provide bicycle rental facilities	1	0	0	0	1	0
Make animals more visible for children	1	0	0	0	1	0
Provide visitor impact education programs	1	0	0	0	1	0
Allow hunting on monument	0	0	1	0	1	0
Total	1381		807		2188	

