

VISITOR USE SURVEY

1976

BIG CREEK RANGER DISTRICT

PAYETTE NATIONAL FOREST



ABSTRACT

During 1976 the Big Creek District sampled recreational use on District roads, airstrips and trails. The following results highlight that effort:

Roads: The number of recreationists estimated to have entered the District by road increased by 89% over 1975 estimates. A large proportion of this increase was concentrated in the Stibnite area, where 127% more recreational visits were estimated to have occurred during 1976 than 1975.

Trails: Total registered trail use declined slightly by an estimated 8%. Traffic counters were used at four sites in conjunction with trail registration stations. An overall registration rate of 35% was calculated, based on traffic counts by beam counters and registration information.

Airstrips: Inadequate samples at Chamberlain and Big Creek strips made it impossible to provide reliable estimates of total use. Estimated total landings decreased slightly at Cold Meadows - summer landings were down and fall landings slightly up, at that station.

Major recommendations for the 1977 visitor use survey include:

Roads: Installation of traffic counters at sites used during 1976, and use of loop or pneumatic counters on the Stibnite, Profile and Elk Summit roads, if available, with possible District purchase if necessary.

Trails: Maintenance of existing registration stations and continued use of traffic counters at a minimum of four sites, with limited double sampling by observers to provide a base for making a reliable estimate of registration rates.

Airstrips: A 10 to 15 percent intensity sample at each of the three major Forest Service airstrips on the Big Creek Ranger District to provide a reliable base for making use estimates.

Consideration of the unusual weather conditions during 1976 may offer insights useful to an understanding of visitor use patterns discovered by this season's use survey. An unusually open spring allowed backcountry travel to begin at an earlier date than normal. However, a wet and stormy summer season exerted a somewhat restraining effect on trail travel, tended to inhibit air traffic, while road use continued at a high level. The fall season, in contrast, was relatively free of adverse weather conditions likely to discourage trail use, hinder air traffic or limit road access.

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RESULTS OF 1976 VISITOR USE SURVEY

In 1974 the Big Creek Ranger District of the Payette National Forest, initiated a long-term survey to determine recreational use. The District is essentially backcountry with most public use directed toward backcountry recreation.

Access to the Big Creek District is by road, airstrip and trail. Various techniques were employed in attempts to measure use connected with each of these modes of access. The purpose of this report is twofold: 1. To document the methods employed and data collected during the 1976 field season, and 2. To make recommendations designed to enhance the effectiveness of the visitor use survey and guide its implementation during 1977.

Road Traffic Survey - 1976

Traffic counters were placed on five of the District roads. Two counters - one loop, one pneumatic - were placed near the mouth of Profile, on the Stibnite and Profile roads respectively, by the Payette National Forest Engineering Division. District personnel located trail traffic beam counters at Monumental Summit, Smith Creek and on the Elk Summit road to count vehicles and other road traffic.

A summary of the data obtained by use of these counters is shown in Table 1. The schematic of Figure 1 provides comparison between estimated use during 1975 and 1976. The total number of recreationists estimated to have entered Big Creek by road increased by 89%, from 7650 visitors in 1975 to 14485 in 1976. This increase was most obvious in the Stibnite area, where estimated visitation was up 127% during 1976. Recreational visits into the Big Creek area, over the Profile or Elk Summit roads, increased by an estimated 57%. Road visits into the Idaho Primitive Area (IPA) via Monumental Summit and Smith Creek on the Thunder Mountain and Big Creek mining access roads decreased by about 29%, from 3978 estimated visits in 1975, to 2820 in 1976.

The Stibnite area drew over half (55%) of all road visits to the District. Only a small percentage (15%) of the visitors entering that area proceeded into the IPA over Monumental Summit on the mining access road. Similarly, about a quarter (26%) of the visitors entering the District via Profile or Elk Summit continued down the Big Creek road and entered the IPA. About 20% of the recreationists estimated to have entered the Big Creek District via road during 1976 used the existing mining access roads to enter the IPA, this compares to an estimated 52% in 1975.

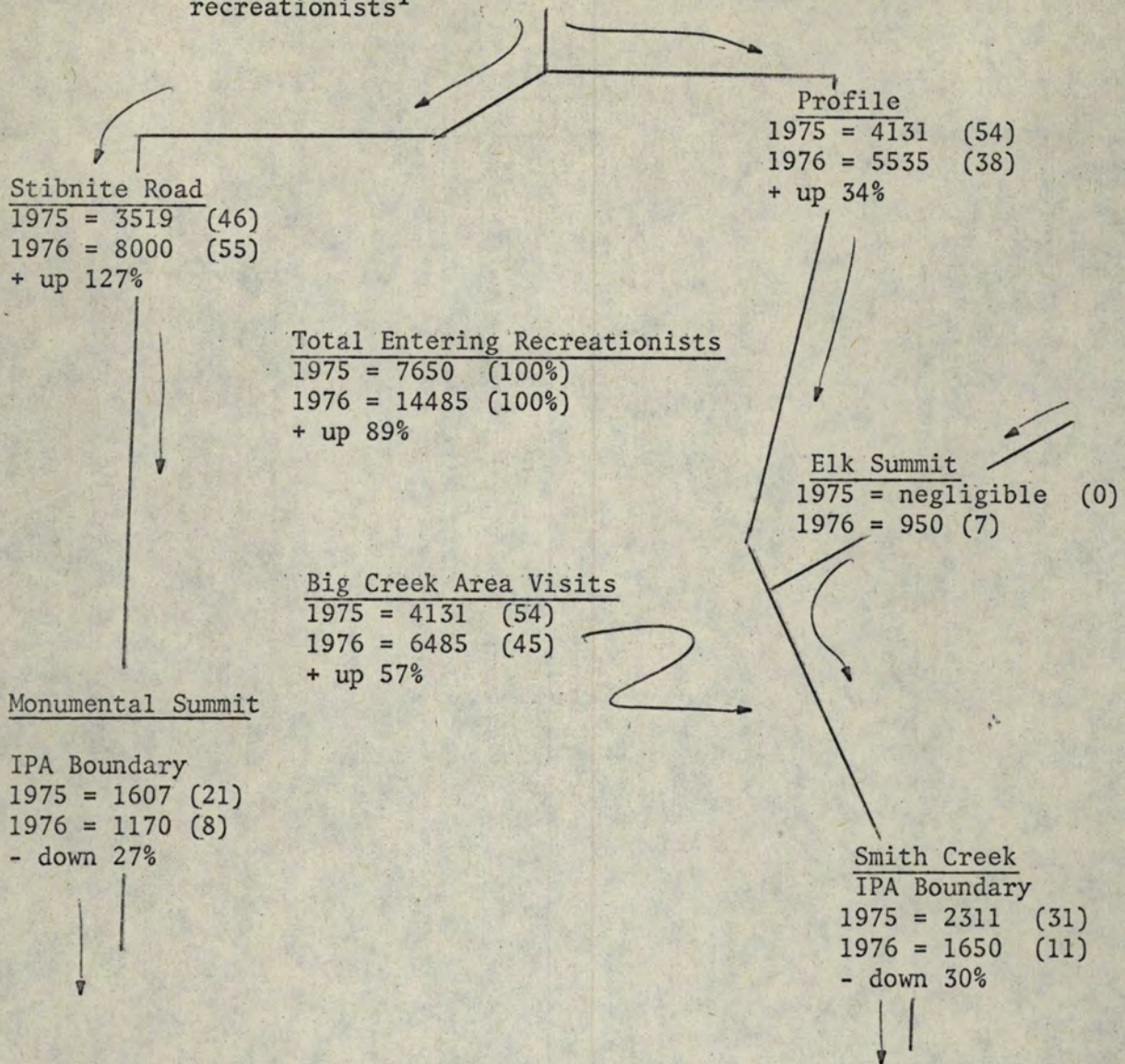
TABLE 1. - Summary of 1976 road survey data by counter location¹

Counter location	Type of counter	Total count	Days of counter operation	Estimated entering vehicles	Estimated persons entering during census period	Average persons entering per day	Estimate of total entering recreationists for season ²
Stibnite Road	Loop	6744	177	3000	7870	44.5	8000 (180)
Profile Road	Pneumatic	2439	80	1120	2950	36.9	5535 (150)
Elk Summit	Beam	556	68	240	630	9.3	950 (120)
TOTAL RECREATIONISTS ENTERING BIG CREEK DISTRICT VIA ROAD							14485
Monumental Summit	Beam	907	104	390	1025	8.4	1170 (140)
Smith Creek	Beam	1782	100	400	1390	11.8	1650 (140)
TOTAL RECREATIONISTS ENTERING IDAHO PRIMITIVE AREA VIA ROAD							2820

¹ Appendix I documents the major assumptions and conversion factors utilized to convert counter data to estimates of recreationists.

² Length of season in days shown is in parentheses, and varies according to access availability of that route.

Figure 1. - Road Access to Big Creek Ranger District, estimated entering recreationists¹



¹ Percentage of total estimated recreational visits shown in parentheses for each site and year.

TRAIL USE SURVEY - 1976

A system of fourteen (14) trail registration stations was used during the 1976 field season as a means of collecting trail use information. The locations of these registration stations were unchanged from the ^{sp}preceeding year except for the Lookout Mountain Ridge Station, which was relocated. Data collected thru District maintenance of these stations is shown in Table 2.

Of the three hundred three (303) usable registration cards collected, 38% were from hikers, 29% from recreationists traveling with stock, 25% from recreationists primarily road or airstrip oriented (predominately at Roosevelt Lake and Chamberlain) and 8% from Middle Fork floaters stopping at the mouth of Big Creek. A comparison of this season's data with that of 1974 and 1975 shows the following:

	1974	1975	1976
Number of registration cards	227	354	303
Average registered group size	3	3.5	3.9
Average registered length of stay	4.3	4.1	4.4
Percent of registrants with stock	27%	16%	29%

Overall registered use (as measured by recreation days) declined slightly (by about 8%) over the previous season. Roosevelt Lake had increased visitation (56% more visits were registered) as did Beaver Creek, where 165% more visitors were recorded, due presumably, to the trail work which reopened that trail to stock. The relocation of the Lookout Mountain Ridge trail registration box also resulted in increased registration, from only two (2) groups in 1975 to eight (8) in 1976. At all other stations there was a decline in the number of cards collected, and in all but one instance, (at Ranch Creek) a decrease in the number of visitors registered. At the Ranch Creek box, the number of cards declined by 38%, however, the total number of visitors registered by these cards increased by 13%.

Poor assumptions see above

Trail traffic counters were utilized in conjunction with registration stations at four sites during the 1976 field season. If we assume that non-registrants have the same group characteristics as registrants, a traffic count can be used to calculate registration rates. This facilitates the conversion of raw registration data to more accurate estimates of total use by simple ratio expansion. The traffic count must be accurate and easily related to specific registration data or observations. Attempts at double sampling registration rates by stationing an observer at the site have been largely unsuccessful due to the generally low traffic volume on most Big Creek District trails.

Data collected by the trail counters and the calculated registration rates are shown in Table 3. The Lick Creek and Beaver Creek trails

show similar summer registration rates, 55% and 53% respectively. Due to problems with the Lick Creek counter no fall comparison is available. The registration rate at Mosquito Ridge box is about half that of either Lick Creek or Beaver Creek (27%). This figure may be a reflection of the higher proportion of stock users to hikers entering via the Mosquito Ridge trail head, and lower registration rates among users traveling with stock. The Roosevelt Lake figure seems unacceptably high and is probably due to poor counter location. As a result the Roosevelt Lake count is of questionable value for determining registration rates.

The overall registration rate calculated for 1976, based on the Lick Creek, Beaver Creek and Mosquito Ridge data was 35%, substantially higher than the 15% and 11% rates estimated for 1974 and 1975 respectively.

TABLE 2.- Trail registration station data, 1976

Registration box by name	All Cards		Traveling by foot				Traveling with stock			
	Usable Cards	No. persons registered	Average stay	No. of groups	Ave. group size (persons)	Avg. Stay (days)	No. of groups	Ave. group Size (persons)	Ave. stay (days)	No. of stock registered
Lick Creek ¹	38	130	3.6	30	3.4	2.9	7	3.4	6.7	27
Roosevelt Lake ¹	64	244	2.8	20	3.2	3.0	7	3.1	8.4	39
Chamberlain Cr. ¹	29	80	3.3							
Ranch Cr.	20	143	3.9	12	3.9	3.0	8	6.1	5.3	46
Mosquito Ridge	15	39	6.9	6	1.5	4.5	9	3.3	8.4	51
Pueblo Summit ¹	10	26	4.0	1	2.0	3.0	5	2.8	6.8	18
Cold Meadows ¹	8	28	5.8	5	2.6	6.8	2	5.5	5.5	11
Copper Camp ²	5	24	10.0	2	7.5	15.5	2	2.0	5.5	4
Monumental Bar	3	7	5.7	1	1.0	4.0	2	3.0	11.0	13
Upper Big Cr.	9	20	5.3	7	2.4	3.1	2	1.5	6.0	8
Snowshoe Mine	10	27	6.8	3	1.7	4.0	7	3.1	8.0	41
Beaver Creek ¹	29	69	6.1	18	2.1	6.0	9	3.2	7.4	34
Mouth Big Cr. (Stock/hikers)	14	37	5.0	9	2.3	5.1	5	3.2	4.8	19
Mouth Big Cr.(floaters)	25	214	.3							
Lookout Mtn.	8	29	17.6	1	4	1	7	3.6	8.6	50
Field Registration ³	16	75	9.7				16	4.7	9.7	141
Averages			4.4		2.9	4.2		3.7	7.6	
Totals ⁴	303	1192		115			88			522

¹ Registered use includes car/motorcycle and aircraft oriented recreationists.

² One party on skies.

³ Collected by contact patrol.

⁴ Omitted from tabulation are 51 cards from USFS personnel and 42 incomplete (unusable) cards.

TABLE 3. - Trail registration rates as calculated from traffic counter and registration box data for 1976

Variable	Registration Station				Overall
	Lick Creek	Roosevelt Lake ²	Beaver Creek	Mosquito Ridge	
SUMMER SEASON					
Beam counts	486	344	202	151	839
Registered traffic	134	152	54	20	208
Registration rate	55%	88%	53%	27%	50%
FALL SEASON					
Beam counts	-	197	318	484	802
Registered traffic	-	61	50	35	83
Registration rate	-	62%	31%	14%	21%
1976 SEASON					
Beam counts	486	541	520	635	1641
Registered traffic	134	213	104	55	291
Registration rate	55%	79%	40%	17%	35%

1

Appendix II documents the major assumptions and calculations utilized to determine registration rates.

2

The trail traffic counter at Roosevelt Lake is in a poor location. Due to the popularity of Roosevelt Lake for road oriented recreationists it becomes difficult to relate registration data to traffic counts on this trail. Roosevelt Lake is omitted from computation of the overall registration rate.

Airstrip Use Sampling - 1976

A tentative schedule for censusing use at the three major Forest Service airstrips on the Big Creek District was drawn up previous to the start of the 1976 field season. This schedule provided for stratified sampling based on varying combinations of season and time of week. Four strata were established: 1. Summer/weekday, 2. Summer/weekend or holiday, 3. Fall/weekday and 4. Fall/weekend or holiday. The ideal sampling unit was suggested to be an entire day - with all airport activity being recorded. The summer period was defined as the period July 1 to August 31; fall as September 1 to October 31 (consistent with the definitions made by the 1975 visitor use survey).

The number of sampling days per stratum, proposed sampling intensity and sampling success for the season is shown in Table 4. Sampling success varied considerably between the three stations. Neither Big Creek nor Chamberlain succeeded in ~~censusing~~ ^{sampling} at the proposed intensity, while Cold Meadows considerably surpassed the proposed sampling intensity. The sampling schedule initially drawn up provided for specific census days, selected randomly, if it was impossible to sample that particular day the next closest day within the same stratum was to be used as a replacement. At Cold Meadows airstrip traffic was recorded on numerous additional days, resulting in a very high intensity census.

Use data collected by the 1976 airstrip survey are summarized in Tables 5, 6 and 7 for Big Creek, Cold Meadows and Chamberlain airstrips respectively. Due to the low intensity sampling done at Big Creek and Chamberlain it is impossible to make reliable estimates of total landings and difficult to make meaningful conclusions concerning seasonal use variations or type of use occurring at the airstrips. In contrast, the high intensity sampling done at Cold Meadows should provide an extremely reliable base for a ratio estimation of total use in terms of landings.

Big Creek: From the available data, as shown in Table 5, it appears that summer use is approximately twice as intense as fall use. This result conflicts with the findings of the 1975 use survey. A large percentage of the use apparently comes in the form of non-recreational landings related to access by local property owners with private recreational and Forest Service administrative landings accounting for respectively smaller proportions of the landings. A ratio estimation of landings for the entire use season would equal about 500 (assuming 80% of the landings occur within the defined census period, July 1 to Oct. 31). However, due to the small sample this figure is not considered reliable.

Cold Meadows; The total estimated number of landings at the Cold Meadows airstrip is about 425, based on data shown in Table 6 and assuming the census period contains 90% of the total use. This figure is only slightly less than the 1975 estimate of 450 landings.

There appears to be a very distinct difference in seasonal use, with an average of slightly over 1 landing per day in the summer and 5 landings per day during the fall. The 1976 survey reveals use patterns similar to those suggested by the 1975 census, although showing a slight decrease in summer landings and increase during the fall period. A brief comparison of the 1975 and 1976 results at Cold Meadows shows the following:

	1975	1976
Estimated landings for season	<u>450</u>	<u>425</u>
Estimated total summer landings	135	85
Estimated total fall landings	315	340
Average landings/summer day	2	1.3
Average landings/fall weekday	4	4.6
Average landings/fall weekend or holiday	6.6	6

Sub 7
Chamberlain: Tables 7 and 8 display use data collected at the Chamberlain airstrip during 1976. No estimate of total landings is possible with the available data. The value of data shown in Table 8 is limited since it is uncertain whether the census was conducted at random or is simply a tally of planes which landed (this same problem exists to a degree with the Cold Meadows census data). Due to the nature of this data no conclusive use estimates could be derived.

TABLE 4. - Definition of strata, proposed sampling, and sampling success for 1976 airstrip use census

Stratum Number	Season	Time of Week	Total days/stratum	Number of days proposed for censusing ¹	Number of proposed census days actually sampled by station ²		
					Cold Meadows	Chamberlain	Big Creek
1	Summer	Weekday	44	2 (5)	18 (41)	1 (2)	1 (2)
2	Summer	Weekend/holiday	18	4 (22)	6 (33)	2 (11)	1 (6)
3	Fall	Weekday	42	4 (10)	14 (33)	1 (2)	4 (10)
4	Fall	Weekend/holiday	19	2 (11)	5 (26)	0 (0)	1 (5)
Entire season			123	10 (12)	43 (35)	4 (3)	7 (6)

¹ Proposed sampling intensity in percent is shown in parentheses.

² Actual sampling intensity in percent is shown in parentheses for each airstrip.

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TABLE 5. - Summary of 1976 airstrip census data - Big Creek

Stratum	Number of days Censused ¹	Average Landings per census day	Number of landings recorded by type of flight ²				
			Commercial outfitting	USFS	Recreational Private	Commercial	Other non-rec.
1	1 (2)	4	-	1 (25)	2 (50)	-	1 (25)
2	1 (6)	5	-	-	-	-	5 (100)
Summer	2 (3)	4,5	-	1 (11)	2 (22)	-	6 (66)
3	4 (10)	2	-	1 (13)	2 (25)	1 (13)	4 (50)
4	1 (5)	2	-	-	1 (50)	-	1 (50)
Fall	5 (8)	2	-	1 (10)	3 (30)	1 (10)	5 (50)
Total 1976 Season	7 (6)	2,7	-	2 (11)	2 (26)	1 (5)	11 (58)

¹ Sampling intensity in percent is shown in parentheses.

² Percent of landings in each category shown in parentheses.

TABLE 6. - Summary of 1976 airstrip census data - Cold Meadows

Stratum	Number of days Censused ¹	Average Landings per census day	Number of landings recorded by type of flight ²				
			Commercial outfitting	USFS	Recreational		Other non-rec.
			Private	Commercial			
1	18 (41)	1.3	2 (8)	7 (29)	-	5 (20)	10 (42)
2	6 (33)	1.0	3 (50)	1 (17)	1 (17)	1 (17)	-
Summer	24 (39)	1.3	5 (17)	8 (27)	1 (3)	6 (20)	10 (33)
3	14 (33)	4.6	34 (53)	3 (5)	13 (20)	13 (20)	2 (3)
4	5 (26)	6	20 (67)	-	-	10 (33)	-
Fall	19 (31)	5	54 (57)	3 (3)	13 (14)	23 (24)	2 (2)
Total 1976 Season	43 (35)	2.9	59 (47)	11 (9)	14 (11)	29 (23)	12 (10)

¹ Sampling intensity in percent is shown in parentheses.

² Percent of landings in each category shown in parentheses.

TABLE 7. - Summary of 1976 airstrip census data - Chamberlain

Stratum	Number of days censused ¹	Average Landings per census day	Number of landings recorded by type ² of flight ²				
			Commercial outfitting	USFS	Recreational ³		Other non-rec.
			Private	Commercial			
1	1 (2)	4	2 (50)	1 (25)	1 (25)	-	-
2	2 (11)	7	1 (7)	1 (7)	9 (64)	2 (14)	1 (7)
Summer	3 (5)	6	3 (17)	2 (11)	10 (55)	2 (11)	1 (6)
3	1 (2)	12	NOT AVAILABLE				
4	0 (0)	NO DATA AVAILABLE					
Fall	1 (2)	12	NOT AVAILABLE				
Total 1976 Season	3 (2)	10	NOT AVAILABLE				

¹ Sampling intensity in percent is shown in parentheses.

² Percent of landings in each category shown in parentheses.

³ Thirteen (13) additional days were partially censused at Chamberlain for private recreationists use only. This data is shown in table 8.

TABLE 8.- Chamberlain Airstrip, use by private recreationists, 1976

Season and day of week	Number of days censused ¹	Average landings per day	Type of flight ²		Ave. No. of recreationists	Ave. length of stay in days
			Private	Commercial		
Summer/weekday	8 (18)	1.5	11 (92)	1 (8)	2.9	5.4
Summer/weekend	5 (28)	1.6	7 (88)	1 (12)	3.5	4.5
Total summer	13 (21)	1.5	18 (90)	2 (10)	3.2	5.1

¹ Sampling intensity in percent is shown in parentheses.

² Percent of total landings in each category shown in parentheses.

RECOMMENDATIONS AND NEEDS FOR 1977 VISITOR USE SURVEY

Reliable use data will no doubt become increasingly valuable for management purposes. Any continuation of the visitor use survey during the 1977 field season should strive for increased reliability and detail. The following suggestions are made to improve the existing program of collecting road, trail and airstrip use data, and to guide its implementation in 1977.

Road Traffic Survey - 1977

1. If possible maintain the 1976 road counter sites during 1977. This would necessitate the reinstallation of the Stibnite loop counter at the mouth of Profile Creek, and the installation of either a loop or pneumatic counter on the Profile road, also near the mouth of Profile Creek. The beam counter used on the Elk Summit road during 1975 should be replaced with a pneumatic counter if possible. It may be necessary and advantageous for the District to explore the option of purchasing loop traffic counters, or pneumatic counters for use on District roads.
2. Continue to use two beam counters at Monumental Summit and Smith Creek (on the Big Creek road), to count road traffic. If pneumatic counters become available explore the possibility of their use at these locations. This latter alternative would perhaps be the most desirable, and allow the use of two additional beam counters on trails.
3. Provide additional road sampling at counter sites - especially at the mouth of Profile Creek to collect additional data related to:
 - a. Ratio of recreationists to non-recreationists.
 - b. Number of occupants/vehicle.
 - c. Ratio of vehicular to non-vehicular traffic.

The mouth of Profile is preferable since it offers the opportunity to sample two roads simultaneously, collect additional data concerning relative use of the two roads, and has a relatively high traffic flow.

4. Provide a suggested road sampling schedule, instructions and data recording forms prior to the 1977 field season.
5. It appears that a fairly good estimate of road entering recreationists is being achieved, it may be time to start looking at the following types of questions and ways to answer them:

a. Recreationists that travel up the East Fork of the South Fork to Stibnite, or over Profile toward Big Creek, but not into IPA (55% of total estimated road recreationists in 1976); 1. What do they do? 2. How long do they stay?

b. Recreationists that do enter the IPA via road (on Big Creek or over Monumental Summit), but do not leave roaded area; 1. What do they do? 2. How long do they stay? 3. Are their activities or length of stays appreciably different from those recreationists that do not enter the area?

Trail Use Survey - 1977

1. Relocate the Roosevelt Lake Trail traffic counter - preferably past the mouth of Mule Creek.
2. Maintain the other trail traffic counters on the Lick Creek Mosquito Ridge and Beaver Creek trails. Analyse location of Lick Creek counter and relocate if necessary.
3. As beam counters become available install them on, 1. Upper Big Creek trail, 2. Crooked Creek trail, 3. Monumental Creek trail, and, 4. Lookout Mountain Ridge trail in that order of priority. Consider using a counter in conjunction with the Chamberlain (Flossie) registration station.
4. Continue a regular schedule of collecting counter data and servicing the existing registration stations. Provide instructions, a general maintenance schedule and necessary supplies prior to 1977 field season.
5. On higher use trails station observers to double sample registration rates and to note relative stock/hiker use and registration rates. Sampling forms, instructions and a general sampling schedule should be prepared. Trails where this sampling would most likely have maximum value are Beaver Creek and Lick Creek. Utilize SCA volunteers for this sampling.
6. Investigate the possibility of initiating a revision of registration card with OMB number 40-R3855. This should be given a high priority. This form has two different formats (both with an expiration date of 12/31/78), the newer version causes a great deal of confusion. Consideration should be given to design of a registration form which will accommodate the recreationist in terms of simplicity and ease of completion, yet still provide the desired information. If design of a new registration card is not feasible, provide necessary stocks of the current registration form for use in District trail registration boxes.

Airstrip Use Survey - 1977

1. Set up a stratified sampling schedule similar to last season. Attempt to sample at a 10 to 15 percent intensity in each stratum (as defined in Table 1A).
2. If airport activity is recorded on days supplemental to the sampling schedule (as was done this season at Cold Meadows and to a degree at Chamberlain) it is important that all days of observation be noted - even if no planes landed. Maintaining a running tally of airport activity can provide important information, but it is important that such a tally reflect a random selection of sampling days, and be as unbiased as possible. This can be achieved by simply noting days during any period of maintaining a running tally where there was no aircraft activity.
3. To the extent possible landings should be categorized into one of the following classes:
 - a. Commercial outfitting flight.
 - b. USFS administrative flight.
 - c. Recreational - commercial flight.
 - d. Recreational - private flight.
 - e. Other, non-recreational flight(i.e, mail, research)
4. For recreational flights - commercial and private - it is desirable to record the number of recreationists and their length of stay; brief interviews may be necessary, however, observation should often suffice.
5. Consider expanding the defined "use season" by 6 weeks, recognizing that use occurs prior to July 1 (during a 3 week period) and following October 31 (also during a 3 week period). To properly sample this use may require employees at field stations somewhat earlier or later than has often been the case in previous years.
6. Provide the necessary censusing forms; instructions; and sampling schedules prior to the field season.
7. Pre-field test the available sound recording device for censusing airstrip traffic. If testing proves satisfactory, plan for installation at one of the three major F.S. airstrips during the 1977 field season.

APPENDIX I

The following constitute the major assumptions and figures for converting traffic counter data to estimates of entering recreationists as shown in Table 1.

1. Traffic flow is, on the average, equally divided between entering and departing traffic.

2. Conversion factors for each of the road traffic counters are as follows:

a. For Stibnite loop counter: A conversion factor of .89 was used to calculate vehicular traffic from actual counts. This factor is based on 1975 sampling and implies that for every 31 vehicles there are 4 motorcycles.

b. For Profile pneumatic counter: A conversion factor of .92 was used to calculate vehicular traffic from actual counts. This factor is based on 1975 sampling (see a preceding).

c. For beam counters on Monumental and Elk Summit roads: A conversion factor of .86 was used based on 1975 observations (a ratio of vehicles to "other counts") to calculate vehicular traffic.

d. For the beam counter at Smith Creek: A conversion factor of .45 was used, also based on 1975 observations and traffic. This factor reflects higher horse and foot traffic than the conversion factor of point c above.

3. Assume 2.5 persons/vehicle, based on 1975 observations.

4. Assume that 80% of the non-vehicular traffic accounts for an additional visitor (motorcycle).

5. The estimate of total recreational use is a simple ratio expansion of the census period to the entire use period. Assuming that 15% of the entering traffic is non-recreational in nature, consistent with 1975 visitor use survey and observations.

APPENDIX II

This appendix contains the major assumptions and associated formulas used to determine trail registration rates based on trail counter data and registration cards.

The major assumptions are that:

1. Traffic flow on the trail is, on the average, equally divided between entering and exiting groups.
2. Group characteristics between registrants and non-registrants are the same.

These assumptions yield the following calculations if given:

1. X' groups registered, accounting for X traffic counts (from registration cards).
2. A total traffic count of Z , then $Z/2$ must account for Z' total entering groups, at a rate proportionate to that for registered groups.
3. The traffic counts not accounted for by registration cards (Y counts) must be associated with the unregistered groups, (Y'), at a rate proportionate to that for registered groups.

$$\text{Therefore: } \frac{X'}{\bar{X}} = \frac{Y'}{\bar{Y}} = \frac{Z'}{\bar{Z}/2}$$

The registration rate is defined by: $\frac{\text{Registered groups}}{\text{Total entering groups}} = \frac{X'}{\bar{Z}'}$

$$\text{Hence the registration rate: } \frac{X'}{\bar{Z}'} = \frac{X}{\bar{Z}/2}$$

And since X and $Z/2$ are known values the group registration rate can be computed.

APPENDIX III

The following is a brief summary of 1976 river use on the Main Salmon and Middle Fork of the Salmon.

Main Salmon

- Floaters: - 294 groups launched from Corn Creek
 - A total of 3935 persons, up 32% over 1975
 - Average trip duration of 5 days

- Jet Boaters - 114 groups departed from Corn Creek (prior to Nov. 10)
 - A total of 1214 persons, no comparable report for 1975
 - Average trip duration of 1 day

As reported by North Fork Ranger District, Salmon National Forest. The Big Creek District receives and reports approximately 1/3 of the visitor use days generated by these boaters.

Middle Fork

- Floaters: - 1,684 boats launched
 - A total of 5,964 persons, up 27% over 1975

	<u>No. people</u>	<u>Average No./party</u>	<u>Avg. No. days</u>
Commercial	4,072	17.1	6.8
Private	1,787	8.5	6.0
USFS	105	-	-

As reported by Middle Fork Ranger District, Challis National Forest. The Big Creek District touches the Middle Fork of the Salmon at the mouth of Big Creek. It is estimated that between 25% and 40% of the Middle Fork floaters stop at Big Creek, for an average stay of 4 hours (1/3 VD)