

NATIONAL VISITOR USE MONITORING PROGRAM REPORT SUPERIOR NATIONAL FOREST



WHAT IS THE NATIONAL VISITOR USE MONITORING PROGRAM ABOUT? (TEXT THROUGHOUT REFERENCED FROM THE NVUM NATIONAL MANUAL)

Between 2000 and 2003, national forests & grasslands collected information about national forest visitors using an improved statistical method compared to past surveys of this nature. The data have already shown that visitors were incorrectly counted using older methods - In 1996, 850 million national forest visitors were reported, and the data show there were actually about 205 million visitors. This relatively “new” way of counting is called the National Visitor Use Monitoring program or NVUM for short. There have been improvements in the definition of the sample population, field operations, and in the estimation procedure which have led to significant changes in forest visitation estimates. This process more accurately measures visitor use and characteristics, and will hopefully allow managers to make more confident decisions about managing forest resources. The Superior National Forest’s first survey was 2000, then again 5 years later in 2006.

The Forest coordinator, program managers and field Interviewers had to operate as a team for the success of this process. The field Interviewer collected extremely useful information from forest visitors. Being an interviewer takes special skills, persistence, understanding, patience, discipline, confidence, and sometimes even courage.

The information collected from forest visitors will be used to better understand who our visitors are, why they come to the national forest, how satisfied they are with the facilities and services provided, and how much they spend on their visit. While we gather more information about recreation visitors, we are also gathering information about how all people use the national forest road systems and facilities. This includes people commuting to work on forest service roads, commercial traffic, and people just passing through. This information will hopefully assist managers in understanding all the uses occurring on the forest. A final national report should be out in 2007.

The data answers questions such as:

- How many visitors come to the national forest?
- How long do they stay?
- Is day use the majority of the use as we predicted?
- Is over half the visitation occurring in the undeveloped areas that the Chief identified as one of the biggest threats?
- What activities do they participate in while they are here?
- Where do our visitors come from?
- How much money do they spend in local communities?
- Are they satisfied with the quality of the facilities and services we provide?
- What facilities need improvement in their opinions?
- Why did they pick this national forest to visit?

Objectives:

- Obtain baseline information and track trends
- Link recreation with change in ecological conditions
- Allocate and prioritize resources
- Analyze effects or need for closures or other admin
- Improve communication with visitors
- Prove and disprove assumptions



NVUM PARTICIPANT ROLES



District Program Managers:

- Train interviewers
- Initiate field checks once interviewers are out collecting data
- Check forms the interviewers turn in for completeness and accuracy
- Provide the Forest Coordinator quarterly report information
- Mail completed survey forms to the Forest Coordinator every 2 weeks
- Set up communication system and check-in, check-out procedures
- Assist concessionaires when questions arise

Interviewers:

- Learn how to set up the survey location & the field placement of signs and traffic counters
- Make visitors comfortable with the interview process
- Are tactful and keep the interview on track
- Present themselves with a professional appearance, attitude, and dress
- Know why the information they collect is important, and let the visitor know the information is confidential and valuable

- Remain neutral and don't show personal reactions when visitors answer the questions
- If visitors have trouble answering the questions, interviewers use the time proven techniques of pause, repeat, and investigate

Forest Coordinators:

- Order & organize initial supplies
- Issue and manage the NVUM contract
- Write and receive Forest Supervisor approval on a job hazard analysis and law enforcement plan
- Manage the NVUM database

- Write letters to recreation providers such as campground concessionaires informing them of information needed in the upcoming year
- Issue a press release so the local public knows why employees are in the field doing interviews
- Check forms the interviewers turn in for completeness and accuracy
- Mail completed survey forms to the NVUM team every 2 weeks
- Find lost or missing data
- Review survey calendar
- Troubleshoot

COMMON NVUM TERMS/CODES

Quarterly Reports: Four times during the survey year, the forest was required to submit a quarterly proxy report. This report lists every site or area that was shown as having proxy data.

Proxy site: Proxy sites are those sites where a direct count of something (campground fee envelope, concessionaire daily count of occupied sites, wilderness permits, etc.) is already taken that represents recreation visitation to a Forest Service site or area by an individual, a group, or a vehicle on National Forest Service System lands. This information is then used by the National team to compare numbers. They call it their "magical statistical Process"...

National Forest Visit: A "National Forest visit" is the entry of one person upon a national forest to participate in recreation activities for an unspecified period of time. A national forest visit can be composed of multiple site visits. For a visit to count as a multiple day visit, the visit must be contiguous. A visitor who spends the night off of National Forest System lands begins a new National Forest visit each day. Interviews are "exit" interviews only.

Trip: A trip is from the time a visitor left their home until they return. The visit to the national forest may have only been a small part of a larger trip away from home.

Interview Site Types: Every recreation site or area on the forest is divided into one of five site types. Day Use Developed Sites (DUDS), Overnight Use Developed Sites (OUDS), Wilderness (W), General Forest Areas (GFA), and View Corridors (VC).

Site Visit: A national forest site visit is the entry of one person onto a national forest site or area to participate in recreation activities for an unspecified period of time.

MA1: Mandatory Wilderness permits issued per individual (these 3 acronyms are used on the last 3 pages of this report in data set)

DUR4: Daily Use Record of sites with PAOT of 14 or less, use for OUDS campgrounds where either FS or concessionaire records occupied campsites on a daily basis, DUDS same idea

FE4: Fee Envelopes issued per family site with a PAOT of 14 or less, use in OUDS and DUDS

HOW DID WE SAMPLE?

The first full cycle of the national NVUM program occurred from January 2000 to September 2003. During each of these 4 years, 25% of the national forests were surveyed. Since October 2004, on-going sampling now occurs on about 20% of national forests each year.



How do several hundred interviews on a forest give a true statistical picture for millions of visitors? Many years of experience plus using some well established principles of statistics and science went into the NVUM design. Each sample day was carefully selected from a well thought out design approved by District Program Managers.

What about bias? Interviewers can unintentionally introduce bias into the respondent's answers. Sometimes body language, voice inflection, and attitude can introduce bias. Interviewers had to use the survey form exactly as written and stay neutral while visitors gave their answers to collect more accurate data. If the visitor got off track and asked the interviewer's opinion or advice, the interviewer said something like "I'd be glad to talk to you about that after we complete the interview" or "As a government representative I am not allowed to share my personal beliefs on the job." There's also a problem of interviewer selection bias. Only one person was interviewed when there were more than one person in a car or group. To avoid Interviewer selection bias, the interviewer asked, "Which one of you had the most recent birthday and is at least 16 years of age?" This random selection tool helps to avoid picking the same type of person to interview all the time, and gives more accurate overall results in the study.

Once the Interviewer began collecting data in the field, they were responsible for ensuring its accuracy. Several items of particular importance included getting accurate answers to the questions on the survey, marking and recording the answers clearly, and using the traffic counters and hand tally counter correctly.

HOW DID WE USE THE SURVEY CALENDAR?



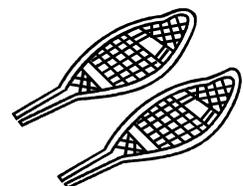
The sample calendar lists the site or area name, a site identification number, a date, AM or PM (if non-proxy), a code for site type, and a proxy code if a proxy site. The interviewer had to understand exactly which kind of survey (Overnight, Day Use Developed, Wilderness, General Forest, or View Corridor) to use on a given day. For example, General Forest Area surveys use different parts of the interview form, while Overnight, Day Use and Wilderness sites use another. View Corridor days use a completely different form. If the survey day is a proxy site interviewers have to ask an additional question. It takes time to understand the system and use it effectively. There is also a "back-up" calendar that may only be utilized if there's a recreation event taking the survey site, an equipment and logistical problem, or the interviewer is sick. It can't be used for bad weather, if a fire closes the area, there's a low snow year, a District has more interviews than other Districts, or an unexpected closure.

WHAT WAS A SURVEY DAY?

There are three basic elements to the typical survey day; the 24-hour traffic count, the 6-hour hand-tally count, and the interview. The basic concept on each survey day is to obtain a 24-hour count of the traffic flowing through the area and during that 24-hour period, conduct 6 hours of on-site

interviews. The traffic counter counts everyone passing through and the interviewers are used to describe the type of traffic. Since the traffic counter counts traffic in both directions (in most cases), a hand-tally counter is used to count exiting traffic. This information is then used to determine

the in/out ratio for the traffic counter. Used together with the descriptive information about the traffic from the interviews, we can then determine the total amount of recreation traffic in the survey area for that day.



HOW DID WE SELECT THE SURVEY SITE LOCATIONS?

Our survey sites were chosen 5 years ago for the first round, and had to remain the same or rendered inactive in the database if Districts no longer approved.

Employees considered several things when selecting the exact interview spot: road/weather conditions, type of road, and stopping distance. Adequate room for both the employee's vehicle and the visitor's vehicle was also considered. The inter-

viewer factored in the extra long vehicle combinations such as a truck pulling both a 5th wheel and a car. During the winter, with snowy and icy road conditions, extra stopping distance was required, longer pullouts were needed, or the survey location was adjusted to go where the cars were parking rather than waiting for them to drive down the icy road and pull-over. Only existing pullout locations such as overlooks

were used. If none were available, then a site was moved to the GFA entry point where people were already parking. Wet and muddy road conditions also warranted adjustments of pullout locations or setups.

Since employees were conducting exit interviews, the survey site location was on the side of the road where the traffic exited. If a unique situation was encountered, the employee checked with the road engineers.

Signs provided by the NVUM team included:

TRAFFIC SURVEY AHEAD
– 5" letters, 36" sign, black on orange

BE PREPARED TO STOP-
4" letters, black on orange
(30" x 48")

SURVEY SITE *PLEASE STOP*
- 4" letters, black on orange

YIELD –36" triangular sign-
Red and White

SURVEY SITE ARRANGEMENT

Recreation Site Complexes—Many times recreation sites occur in a complex, or multiple types of sites using the same road or area. For example, a campground with a day use picnic area within it is one example. If it is day use, then anyone exiting the road who used the campground but did not use the day use site, would be considered "some other reason".

Trailheads—When collecting information at trailheads, the infrared traffic counter is usually setup along the trail 200 feet or more away. Interviews are conducted as people exit the trail, or at their car while they are getting ready to leave. In areas where there are multiple trails leaving from the same parking lots, it gets tricky. You can use multiple counters, set up in the parking lot only, or randomly select a trail.

Parking lots—Use a grid pattern to choose people for interviews as they return to their vehicles. Avoid any bias when selecting people to interview. Placing traffic counters in parking lots can be problematic as well. Sometimes there is no distinct exit road; instead there is just a wide pullout. In these situations it's possible to use traffic cones to create a specific traffic movement on the survey day.

Road side—There are many unusual road situations, intersection patterns, lack of wide pull-offs, blind curves and other factors that take judgment and adjustment in the field. There are several types of road setups that might help solve more "common" unusual situations. These were illustrated in the NVUM manual.

QUICK PROJECT DETAILS & VISITOR COUNT OVERVIEW

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|--|---|---|--|
| <ul style="list-style-type: none"> • NFIM costs of \$80,000 • One contractor working July, August and September at 834 hours for \$23,760. • Twenty-five force account employees at over 625 hours. • Forest Coordinator at over 100 hours from August 2005 through December 2006. | <ul style="list-style-type: none"> • First quarter totals 10/05 to 12/31/2006: campground sites at 1,707 and wilderness visitors at 2,655. • Second quarter totals 1/06 to 3/31/06: campground sites at 0 and wilderness visitors at 2,550. | <ul style="list-style-type: none"> • Third quarter totals 4/06 to 6/30/06: campground sites at 7,310 and wilderness visitors at 93,777. • Fourth quarter totals 7/06 to 9/30/06: campground sites at 16,004 and wilderness visitors at 153,619. | <p>Totals:</p> <ul style="list-style-type: none"> - Wilderness: 252,601
(includes day use, overnight use and boat sticker use estimates) - Campgrounds: 25,021
(* see data discussion page 5) |
|--|---|---|--|



PROJECT DILEMMAS

- Before the third round 5 years from now, the NVUM process and its' importance should be presented at FLT. The money and workload involved is tremendous, and the project wasn't given the priority it needed for optimum success.
- Data discussion points:
 1. Wilderness data - * We don't know the compliance rate of all self-issue day use permits or overnight self-issue permits during the off season, so the number may be higher. Also, the locally owned boats with exempt stickers are an estimate as those numbers aren't officially tallied.
 2. The concessionaires did not return all the proxy information, nor did they follow directions, so numbers appear low.
 3. Due to District work hours and lack of personnel during non-contract survey periods, once in a while a random employee filled a survey shift, but didn't have the training, so interviews were conducted slightly different or not during the right month.
 4. Infrared and pneumatic trail and road counters failed at times giving false numbers or no numbers.
- Interview/survey sites needed a thorough field review by the Districts before finalization in the NVUM database. There were several sites that were not safe or logical as noted by the contractor, and participating Forest Service employees. The contractor and crew were forced to make logistical decisions without Forest Service discussion.
- The NVUM summer contractor continued to call the Forest Coordinator instead of the District representative through out the life of the project. A relationship with the corresponding District contact and contractor is vital for good logistics.
- The Forest didn't receive the necessary survey site signs, but received unneeded signs. Many of the signs were "first come, first served" and should have been made more available nationwide. The "Survey Site Ahead" sign confused some visitors thinking it meant a road survey and didn't think to stop and converse. Forests received "Recreation Survey Ahead" signs later, but not us.
- The numerous hours cleaning up hundreds of interview sheets from the field were not anticipated. There were stray marks, unfilled bubbles, incomplete and inaccurate data (wrong date or site #), torn sheets, coffee spills, etc. This caused significant delays in sending the forms to the national team for computer processing. We also ran out of interview forms.
- Many of the NVUM participants called the Forest Coordinator with questions on various topics. This would have been reduced or eliminated by using the manual as a resource. The newest NVUM manual was much improved over the previous manual and user friendly.
- The contractor had an entire camp stolen from a Forest campground while on assignment – not sure how to prevent that other than let future contractors know this risk.
- The contractor must be very clear on logistical needs. Our contractor did not anticipate the required driving between survey sites, survey days, employee logistics, and sharing of equipment. The contractor needs to involve the District contacts sooner and more intricately on logistical planning. There was often a shortage of time and equipment.
- Obtaining proxy (occupied campground sites) information from the concessionaires for the quarterly reports proved to be a difficult process, even though they received a letter several months in advance. *ALL* of the proxy information was late.
- The contractor kept some equipment at FS facilities, but during our large fire season with crews spread out, employees inadvertently moved the contractor's equipment causing confusion and missed survey dates. All District employees need to be aware of the contractor's presence and any stored equipment.
- The contractor was incredibly difficult to contact. A cell phone should be a required "tool" in the future contract. There are some 'dead spots' along the shore, but it would have been better than the missed calls and constant phone tag.
- There were only 3 allowable reasons the back-up survey calendar could be used, as discussed earlier, but many of the documented reasons didn't fit within the allowable parameters. Some reasons included office closed on weekends, forgot, no time, etc.
- There could have been more wilderness-related questions on visitor perceptions of wilderness issues.

SURVEY DATA PRELIMINARY RESULTS



NOTE: CG numbers include # of sites occupied. Wilderness permit #'s include self-issue and overnight # of visitors. The following three pages attached are FYI and contain the raw data sent to the national team for final NVUM reporting.

	Site Type	Proxy code	10/1/05- 12/31/05	1/1/06- 3/31/06	4/1/06- 6/30/06	7/1/06- 9/30/06
Whiteface Reservoir CG	OUIDS	DUR4	0	0	1543	No data
Trails End CG	OUIDS	DUR4	0	0	536	1279
Sawbill Lake CG	OUIDS	DUR4	151	0	661	2227
Fall Lake CG	OUIDS	DUR4	180	0	1315	4640
Echo Lake CG	OUIDS	DUR4	0	0	192	443
Pfeiffer Lake CG	OUIDS	DUR4	0	0	252	No data
Cadotte Lake CG	OUIDS	DUR4	0	0	126	No data
Devil Track Lake CG	OUIDS	DUR4	1266	0	194	790
Ninemile Lake CG	OUIDS	DUR4	14	0	240	634
Two Island Lake CG	OUIDS	DUR4	0	0	377	696
Crescent Lake CG	OUIDS	DUR4	53	0	397	906
Flour Lake CG	OUIDS	DUR4	6	0	286	831
Birch Lake CG	OUIDS	DUR4	5	0	209	480
Fenske Lake CG	OUIDS	DUR4	6	0	141	337
McDougal Lake CG	OUIDS	DUR4	13	0	58	135
Kimball Lake CG	OUIDS	DUR4	0	0	199	444
Iron Lake CG	OUIDS	DUR4	0	0	123	279
East Bearskin CG	OUIDS	DUR4	0	0	No data	466
Temperance River CG	OUIDS	DUR4	0	0	69	293
Lake Jeanette CG	OUIDS	DUR4	0	0	203	490
South Kawishiwi River CG	OUIDS	DUR4	6	0	138	476
Divide Lake CG	OUIDS	FE4	7	0	18	79
Little Isabella CG	OUIDS	DUR4	0	0	33	79
25 Moose Lake	Wild	MA1	155	457	17699	30307
54 Seagull Lake /54A	Wild	MA1	18	74	5733	6464
30 lake One	Wild	MA1	136	2	3509	7424
27 Snowbank Lake	Wild	MA1	101	0	4491	6603
55 Saganaga 55A	Wild	MA1	8	0	12267	20869
24 Fall Lake	Wild	MA1	181	365	16352	19344
6 Slim Lake	Wild	MA1	55	8	206	691
41 Brule Lake	Wild	MA1	45	2	1154	2875
40 Homer Lake	Wild	MA1	20	0	155	531

CONTINUED SURVEY DATA PRELIMINARY RESULTS



The results include day use and overnight use data:

	Site Type	Proxy code	10//105- 12/31/05	1/1/06- 3/31/06	4/1/06- 6/30/06	7/1/06 - 9/30/06
37 Kawishiwi Lake	Wild	MA1	62	1	1137	2435
35 Isabella Lake	Wild	MA1	46	0	625	1052
67 Bog Lake	Wild	MA1	10	4	38	51
64 East Bearskin Lake	Wild	MA1	9	7	2435	3269
51/52 Missing Link and Brandt Lakes	Wild	MA1	4	20	846	917
31 Farm Lake	Wild	MA1	56	65	619	1645
36 Hog Creek	Wild	MA1	26	0	650	859
38 Sawbill Lake	Wild	MA1	156	22	2509	5624
39 Baker Lake	Wild	MA1	52	0	464	843
8 Moose River South	Wild	MA1	1	0	109	211
1 Trout Lake	Wild	MA1	21	8	2444	3333
14 Little Indian Sioux River North	Wild	MA1	25	5	1233	2141
77 South Hegman Lake	Wild	MA1	130	329	541	1471
60 Duncan Lake	Wild	MA1	122	134	560	1638
61 Daniels Lake	Wild	MA1	10	32	218	440
11 Blandin Trail	Wild	MA1	1	1	0	0
13 Herriman Lake Trails	Wild	MA1	1	0	21	53
9 Little Indian Sioux River South	Wild	MA1	12	1	71	73
12 Little Vermilion Lake	Wild	MA1	8	0	441	851
12A LacLaCroix only	Wild	MA1	NA	NA	NA	19
16 Moose/Portage River	Wild	MA1	11	0	1546	2412
4 Crab Lake and Cummings lake	Wild	MA1	5	0	361	915
7 From Big Lake	Wild	MA1	6	0	43	152
19 Stuart River	Wild	MA1	27	6	210	272
20 Angleworm Lake (paddle)	Wild	MA1	63	76	272	671
22/23 Mudro Lake and restricted	Wild	MA1	94	248	1718	2704
26 Wood Lake	Wild	MA1	28	109	341	668
29 North Kawishiwi River	Wild	MA1	6	0	168	327
32 South Kawishiwi River	Wild	MA1	27	50	361	924
33 Little Gabbro Lake	Wild	MA1	26	42	618	824



CONTINUED SURVEY DATA PRELIMINARY RESULTS

The results include day use and overnight use data:

	Site Type	Proxy code	10/1/05- 12/31/05	1/1/06 - 3/31/06	4/1/06- 6/30/06	7/1/06 9/30/06
43 Bower Trout Lake	Wild	MA1	0	0	193	302
44 Ram Lake	Wild	MA1	0	46	194	305
45 Morgan Lake	Wild	MA1	14	14	85	178
47 Lizz and Swamp Lakes	Wild	MA1	20	16	677	1339
48 Meeds Lake	Wild	MA1	0	0	127	483
49 Skipper and Portage Lakes	Wild	MA1	2	0	37	333
50 Cross Bay Lake	Wild	MA1	0	10	479	848
57 Magnetic Lake	Wild	MA1	0	0	297	781
58 South Lake	Wild	MA1	1	0	81	532
62 Clearwater Lake	Wild	MA1	40	58	4024	4984
66 Crocodile River	Wild	MA1	0	0	32	103
68 Pine Lake	Wild	MA1	14	4	240	337
69 John Lake	Wild	MA1	4	4	199	380
70 North Fowl Lake	Wild	MA1	0	0	34	182
80 Larch Creek	Wild	MA1	0	0	140	255
34 Island River	Wild	MA1	20	0	312	662
37 Kawishiwi Lake	Wild	MA1	156	18	1512	3748
75 Little Isabella River	Wild	MA1	4	6	101	180
84 Snake River	Wild	MA1	10	0	196	173
I South Farm Lake	Wild	MA1	0	0	617	1208
10 Norway Trail	Wild	MA1	0	0	2	1
15 Sioux Hustler	Wild	MA1	5	3	18	43
76 Big Moose Lake Trail	Wild	MA1	2	0	42	81
74 Kekekabic Trail West/Snowbank	Wild	MA1	13	12	74	103
56 Kekekabic Trail (east)	Wild	MA1	0	52	55	12
71 From Canada	Wild	MA1	0	0	223	457
59 Partridge Lake/South Lake Trail	Wild	MA1	20	6	12	32
79 Eagle Mountain Trail	Wild	MA1	468	178	1266	3018
81 Border Route Trail (west)	Wild	MA1	4	0	2	19
82 Border Route Trail (center)	Wild	MA1	52	49	119	450
83 Border Route Trail (east)	Wild	MA1	0	0	137	108
78 Brule Lake Trail	Wild	MA1	0	0	43	41
86 Pow Wow Trail	Wild	MA1	42	6	42	39