

## **Recreation Resources**

### **Introduction**

The Monongahela offers a wide variety of recreation settings and opportunities. The Forest manages 31 campgrounds, 16 picnic areas, 14 observation sites, 1 National Scenic Highway, 83 trailheads, 6 fishing sites, and 1 cabin rental. There are an estimated 60 concentrated use areas (areas of high general dispersed recreation activities) and 44 developed dispersed camping areas across the Forest. There are 5 Wildernesses (78,100 acres), 16 Semi-primitive Non-motorized recreation areas (124,500 acres), the Spruce Knob-Seneca Rocks National Recreation Area (57,000 acres), and 260 miles of eligible Wild and Scenic Rivers. There are also over 250 known caves and well over 800 miles of trail on the Forest.

### **2006 Program Accomplishments**

A number of Recreation, Wilderness, and Scenery Program activities for 2006 are summarized below.

The developed sites listed in the Introduction were managed to meet all critical health and safety standards were met 100 percent of our 150-220 day operating season.

Concentrated use areas and developed dispersed camping areas were managed to meet critical health and safety standards being met 100 percent of the 250-day managed season.

The Forest continued to inventory and complete condition surveys on concentrated uses areas within its Wildernesses and completed wilderness education plans for 2 wilderness areas.

Condition surveys were completed on assigned trails and developed recreation sites.

10 miles of trails were improved, while 134 miles of trails were maintained. An estimated 510 miles of our trail system were maintained to standard.

We began implementation of our Forest Recreation Strategy (Vision). This document provides the overall framework for managing the Recreation, Trails, and Wilderness Programs on the Forest.

We began implementation of a participating agreement with WVU to complete a Management Plan for the Spruce Knob-Seneca Rocks NRA. The final plan is expected by 3/08.

We met 100 percent of all Recreation, Trails, and Wilderness MAR Targets and INFRA protocols while staying within budget allocations.

An estimated 1,989,013 Recreation PAOTs were administered to standard, while 107 recreation education products were provided to standard. Thirty-seven recreation special use permits were administered to standard.

The honey comb rocks interpretative trail was completed through a Scenic Byway grant, and the Cranberry Mountain Nature Center grant for brochures and AV equipment was also completed.

We cooperated with Pocahontas County, who sponsored a Recreation Trails grant project to improve the trail system located at the base of Gauley Mountain. We directed the County's contractor, who completed major trail tread improvements on the Powerline and Roaring Run Trails.

Dispersed sites were improved on the Greenbrier Ranger District in the Stonecoal and Little River areas as well as along the Williams Rivers on the Marlinton Ranger District.

All recreation fee sites on the Forest were managed either through concessionaire or Federal Lands Recreation Enhancement Act (FLREA). The FLREA revenues supplement the Forest recreation allocation by approximately \$200,000 per year.

Accessible toilets were replaced/installed at Bishop Knob Campground, Laurel Fork Campground, Bear Heaven Campground, Lower Glady Dispersed Area, and Blue Meadows Campground for \$174,000. The Accessible Honeycomb Rocks Trail was constructed for an estimated \$54,800 and Summit Lake Campground was paved for \$72,651.

The emphasis this summer in our wilderness areas was to continue campsite inventory and conduct NNIS inventories along trails and near campsites. This effort is moving us toward meeting the national goal of managing all wildernesses to standard by 2010. As a result 2 wilderness areas were maintained to standard.

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## **Monitoring and Evaluation**

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### **1986 FOREST PLAN MONITORING ITEMS FOR RECREATION RESOURCES**

There are several monitoring items in the 1986 Forest Plan as amended that are specific to Recreation Resources. On page 259, the following monitoring items are listed for Recreation Management Practices:

- *Compare recreation use with estimates (annual)*
- *Identify site deterioration and maintenance needs (annual)*
- *Identify social conflicts (every 10 years)*

There are also similar monitoring items for the NRA (page 255) and Forest recreation in general (page 257) to:

*Determine if expectations of visitors are being met and identify conflicts (1) between users, and (2) with other resources uses.*

Finally, there is a required general monitoring item applicable to Recreation management on page 250 to:

*Compare outputs/services/accomplishments with those projected in the Forest Plan.*

Monitoring results for these items are reported below.

**Monitoring Item 1. Compare recreation use with estimates. Compare outputs/services/accomplishments with those projected in the Forest Plan.**

These monitoring items are combined in this report because the only recreation outputs projected in the 1986 Plan are recreation use estimates. These use estimates appear on page 41 of the Plan and are reproduced in the table below.

**Table RC-1. 1986 Forest Plan Current and Projected Recreation Outputs**

Output (Annual Averages)	Current Level	1986-1990 Projected Level	1991-2000 Projected Level
SPNM Recreation Use (RVDs)	182,000	523,000	582,000
SPM and RN Recreation Use (RVDs)	757,000	739,000	818,000
Rural Recreation Use (RVDs)	69,000	93,000	104,000
Trail Construction (Miles)	10.3	10.0	43.2
Wilderness Management (Acres)	78,131	78,131	78,131

RVD = Recreation Visitor Day, or twelve hours of recreation use in any combination of persons and hours.

These outputs are all related to the following 1986 Forest Plan goals:

I – Manage the spectrum of recreation opportunities that exist on the Forest with an emphasis on recreation activities that require a large land area, such as hiking or hunting, and facilities that support that use.

II – Manage the Spruce Knob-Seneca Rocks NRA in accordance with the Act of September 28, 1965, for multiple resource uses with an emphasis on semi-primitive recreation uses.

III – Manage National Forest Wilderness in order to preserve the Wilderness attributes for which the areas were designated.

**Recent Visitor Use Monitoring** - The Monongahela National Forest participated in the NVUM project from October 2002 through September 2003. No unusual weather or forest fire circumstances that may have affected recreation use were reported during the sample year. Visitor use estimates are available at the national, regional, and Forest level. Only Forest level data is provided here. For national and regional reports visit the following web site: (<http://www.fs.fed.us/recreation/programs/nvum>).

Recreation use on the Forest for fiscal year 2003 at the 80 percent confidence level was 1,021,887 Forest visits +/- 13.2 percent. There were 1,302,988 site visits, an average of 1.25 site visits per Forest visit. Included in the site visit estimate are 38,596 Wilderness visits.

**Table RC-2. 2003 Monongahela National Forest Recreation Use Estimates**

Visit Type	Visits	80% Confidence Interval
Site Visits	1,302,988	11.2
National Forest Visits	1,021,887	13.2
Wilderness Visits	38,596	31.1

**National Forest Visit** - the entry of one person onto 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.

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

**Monitoring Item 1. Evaluation, Conclusions, and Recommendations**

**Recreation Use** - The recreation use numbers in Tables RC-1 and RC-2 are not directly comparable, as they use somewhat different units of measurement, and they are not measuring exactly the same components. Table RC-1 uses the Recreation Visitor Day (RVD), which represent 12-hours of recreation use, whereas Table RC-2 uses site and Forest visits, which represent the entry of one person onto the Forest or a Forest site for an unspecified period of time. Use in Table RC-1 is broken out by Recreation Opportunity Spectrum (ROS) Class, while use in Table RC-2 is not. Still, some assumptions and conclusions may be made.

Table RC-1 projects about a 50 percent increase in overall recreation use between current (1,000,000) and 2000 (1,500,000). The projections stop at 2000, but it is assumed that recreation would continue to increase thereafter. However, the 2003 NVUM estimates that there were only about 1,300,000 site visits to the Forest, indicating that recreation use probably has not increased at the rate that was predicted in the 1986 Plan. Indeed, if a site visit is assumed to be less than or equal to an RVD, the Plan projected much more overall recreation use than has likely occurred.

Table RC-1 also predicts that much of the increased use would occur in Semi-Primitive Non-Motorized (SPNM) areas of the Forest. SPNM use increases from 182,000 RVDs in 1986 to 582,000 RVDs annually by 1991-2000. Although Table RC-2 does not break out measured use into ROS Classes, it does show that Wilderness use was only about 38,600 visits in 2003. On the Monongahela, Wilderness areas are considered to be SPNM, and are likely the most popular SPNM use areas on the Forest. The comparatively low use numbers would seem to indicate that SPNM has not grown nearly as much or as fast as predicted in 1986.

**Recommendations:**

1. The Forest should continue to use these types of information-gathering surveys to keep abreast of use trends in the future. The Monongahela is on a 5-6 year National Visitor Use

Monitoring cycle. The next year of visitor use monitoring is FY-09. Forest Service managers need to know how many visitors we have, where they are recreating, and how they are using NF lands. Over time, trends in recreation use will also become more apparent, allowing managers to better plan and allocate resources.

2. The Forest should remove the current RVD by ROS monitoring item and replace it with a combination of NVUM and tracking changes to ROS opportunities and settings. RVDs are no longer commonly used by the Forest Service, the NVUM program provides the Forest with a convenient, consistent and statistically reliable visitor use information at the Forest level, and the Forest has more influence over its ROS settings than it does recreation use.

**Trail Construction** – Table RC-1 shows that 10.3 miles of trail were constructed on the Forest in the baseline year. Construction was projected to remain around 10 miles per year from 1986 through 1990, and then increase dramatically to 43 miles per year between 1991 and 2000. It is assumed that this increase was related to the projected increase in SPNM recreation use on the Forest during the same period. Although the projections stopped at 2000, it can also be assumed that increased use and the need for more trails would continue to some degree beyond 2000. However, the Forest has not seen this level of use or heard from the public that there is a substantial need for new trails. Users have not been complaining of trail overcrowding. No new trails were constructed in 2006 on the Forest. Indeed, little if any new construction has occurred since 2001. Since then the trails program has primarily focused on maintaining the over 800 miles of Forest trails to standard. We are interested in creating more loop trail opportunities for users in the future, but the overall trail mileage is expected to remain fairly constant over the short term, as some trails are added and others are decommissioned, depending on use levels and our ability to adequately maintain the trails we have.

**Recommendations:**

1. Remove trail construction as a Forest monitoring plan item during Forest Plan revision, as projections have not proven to be accurate, and this item no longer appears to be a valid indicator of recreation use or need.
2. Continue to monitor trail maintenance needs and public trail concerns through Recreation work planning, site-specific trail use monitoring, Forest Plan revision comments, Forest trail management planning efforts, and other Forest project comments.

**Wilderness Management** – Table RC-1 shows that the indicator for Wilderness management was projected to remain constant at 78,131 acres, the amount of Wilderness on the Forest. This amount has not changed since 1986, and was still 78,131 acres in 2006, although our GIS measuring capability now estimates the acreage to be closer to 78,700 acres. The Forest was able to hire seasonal wilderness rangers in 2006 to inventory campsites and NNIS and create wilderness education plans, but this was not a result of monitoring the amount of Wilderness we had to manage. The Wilderness Management acreage monitoring item has little apparent value, as the Forest has no control over the amount of Wilderness that it manages; only Congress can designate Wilderness.

**Recommendations:**

1. Remove Wilderness Management acreage as a Forest monitoring plan item during Forest Plan revision, as it has little apparent use. If Congress designates more Wilderness on the Forest, it

is assumed that we will have more Wilderness to manage, and the appropriate amount of personnel and funding to do so.

2. The Forest evaluated the availability, capability, and need for more potential Wilderness on the Forest through the Forest Plan revision process. The Forest made Wilderness recommendations in its Forest Plan Record of Decision.

**Monitoring Item 2. Identify site deterioration and maintenance needs.**

Site deterioration and maintenance needs are identified as part of Recreation Program work planning on an annual basis and as a result of condition surveys that were completed as required by protocol for certain developed sites and trails. The Forest continued to inventory campsites and NNIS within its Wildernesses. NNIS were not considered an issue in Dolly Sods or Otter Creek Wilderness. Some NNIS were detected in Laurel Fork Wilderness and will be monitored. 236 miles of our existing trail system were maintained to standard (29 percent capability). We were able to meet 100 percent of all maintenance-related Recreation, Trails, and Wilderness MAR Targets and INFRA protocols, while staying within our budget.

**Monitoring Item 2. Evaluation, Conclusions, and Recommendations**

The current management strategy appears to be working well as far as the Forest being able to meet targets and protocols for site and facility maintenance. Site monitoring and conditions surveys provide much needed information to prioritize and implement site maintenance or improvements. There will likely continue to be a backlog of maintenance and improvements on the Forest to address, and these information-gathering techniques should continue to be used as a critical first step in the overall process. However, because these techniques are already well incorporated into the Recreation Program of work, it is not clear whether they also need to be Forest Plan monitoring items. In other words, the identification of site deterioration and maintenance needs is now an accepted and fully integrated management practice on the Forest, one that is essential to the Recreation Program, regardless of its status as a monitoring item.

**Monitoring Item 3. Identify social conflicts. Determine if expectations of visitors are being met and identify conflicts (1) between users, and (2) with other resources uses.**

During the NVUM monitoring in 2003, a total of 2,519 visitors were contacted on the Forest. Of these, 9.2 percent refused to be interviewed. Of the 2,286 people who agreed to be interviewed, 28.7 percent were not recreating, including 1.9 percent who just stopped to use the bathroom, 8.4 percent were working, 11.9 percent were just passing through, and 6.4 percent had some other reason to be there. 71.3 percent of those interviewed said their primary purpose on the forest was recreation and 67.2 percent of them were exiting for the last time. Of the visitors leaving the forest agreeing to be interviewed, about 86 percent were last exiting recreation visitors (the target interview population). Table RC-3 displays the number of last-exiting recreation visitors interviewed at each site type and the type of interview form they answered.

**Table RC-3. Number of Last-exiting Recreation Visitors on Monongahela NF by Site and Form Type <sup>1/</sup>**

Form Type	Developed Day Use	Developed Overnight	General Forest Area	Wilderness
Basic	179	64	126	19
Economic	149	46	124	18
Satisfaction	168	68	124	11

<sup>1/</sup> Form type means the type of interview form administered to the visitor. The basic form did not ask either economic or satisfaction questions. The Satisfaction form did not ask economic questions and the economic form did not ask satisfaction questions.

**Survey Demographics** - The following tables display the gender, age, and ethnicity distributions for national forest visitors that were interviewed.

**Table RC-4. Gender Distribution of Monongahela NF Recreation Visitors**

Male	Female
70.8	29.2

**Table RC-5. Age Distribution of Monongahela NF Recreation Visitors**

Age Class	Percent	Age Class	Percent
UNDER 16	16.34	40 TO 49	20.40
16 TO 19	2.11	50 TO 59	19.13
20 TO 29	10.51	60 TO 69	11.19
30 TO 39	15.22	70 PLUS	5.11

**Table RC-6. Race/Ethnicity of Monongahela NF Recreation Visitors**

White	Hispanic or Latino	Native American	African American	Asian	Pacific Islander	Other
96.2	0.4	1.6	0.6	1.5	0.0	0.1

Less than one percent (0.4) of Forest visitors was from another country. The survey did not collect country affiliation. There was an average of 2.43 people per vehicle with an average of 2.03 axles per vehicle.

The purpose of this survey was to assist in resource allocation decisions by providing science-based, reliable information about the type, quantity, and location of recreation use on public lands in order for Congress and Forest Service leaders and program managers to be able to make sound decisions that best serve the public while protecting the environment.

**Visitor Satisfaction Survey Results** - One-third of visitors interviewed on the Forest rated their satisfaction with the recreation facilities and services provided. Although their satisfaction ratings pertain to conditions at the specific site or area they visited, this information is not valid at the site-specific level. The survey design does not usually have enough responses for every individual site or area on the Forest to draw these conclusions. Rather, the information is generalized to identify overall satisfaction with facilities and services on the Forest as a whole.

Visitors' site-specific answers may be colored by a particular condition on a particular day at a particular site. For example, a visitor may have been in a developed campground and may have been very unsatisfied with the cleanliness of restrooms from an act of vandalism or the result of a party event before the facility was cleaned.

In addition to how satisfied visitors were with facilities and services, they were asked how important that particular facility or service was to the quality of their recreation experience. The importance of these elements to the visitors' recreation experience was then analyzed in relation to their satisfaction. Those elements that were extremely important to a visitor's overall recreation experience and the visitor rated as poor quality are those elements needing most attention by the Forest. Those elements that were rated not important to the visitors' recreation experience likely need the least attention.

**Table RC-7. Satisfaction of Monongahela NF Recreation Visitors at Developed Day Use Sites**

ITEM	Poor	Fair	Average	Good	Very Good	Average Rating*	Mean Importance**	# of Obs
Restroom cleanliness	1.1	0.5	5.1	19.6	73.7	4.6	4.5	132
Developed facility condition	0.0	0.0	6.6	20.1	73.3	4.7	4.3	149
Condition of environment	0.0	1.5	0.0	20.7	77.8	4.7	4.6	164
Employee helpfulness	0.0	0.0	1.0	20.4	78.6	4.8	4.4	132
Interpretive display	0.0	1.2	4.4	26.4	68.1	4.6	4.1	128
Parking availability	0.0	0.4	3.9	23.9	71.7	4.7	3.8	158
Parking lot condition	0.0	0.0	0.9	27.9	71.2	4.7	3.7	155
Rec. info. available	4.3	1.2	9.7	27.4	57.4	4.3	4.3	134
Road condition	4.0	1.6	9.6	38.1	46.7	4.2	4.1	111
Feeling of safety	0.0	0.0	2.1	22.5	75.4	4.7	4.6	156
Scenery	0.0	0.7	0.3	10.2	88.8	4.9	4.5	166
Signage adequacy	1.1	3.8	7.7	42.0	45.3	4.3	4.3	152
Trail condition	1.2	3.1	8.6	43.6	43.5	4.3	4.3	94
Value for fee paid	8.7	0.0	3.8	25.3	62.2	4.3	4.5	39

\*Scale: Poor = 1 Fair = 2 Average = 3 Good = 4 Very Good = 5

\*\* Scale: 1 = not important, 2 = somewhat important, 3 = moderately important, 4 = important, 5 = very important

# of Obs means the number of observations, or the amount of visitors who responded to this item.

Note: For items with less than 10 responses the data was not reported

Tables RC-7 and RC-8 summarize visitor satisfaction with the Forest facilities and services at day use developed sites and overnight developed sites. To interpret this information for possible management action, one must look at both the importance and satisfaction ratings. If visitors

rated an element a 1 or 2, they are telling management that particular element is not very important to the overall quality of their recreation experience. Even if the visitors rated that element as poor or fair, improving this element may not necessarily increase visitor satisfaction because the element was not that important to them. On the other hand, if visitors rated an element as a 5 or 4 they are saying this element is very important to the quality of their recreation experience. If their overall satisfaction with that element is not very good, management action here can increase visitor satisfaction.

**Table RC-8. Satisfaction of Monongahela NF Recreation Visitors at Developed Overnight Sites**

ITEM	Poor	Fair	Average	Good	Very Good	Average Rating*	Mean Importance**	# of Obs
Restroom cleanliness	0.5	13.5	16.0	24.6	45.4	4.0	4.3	62
Developed facility condition	5.2	7.8	6.5	41.8	38.6	4.0	4.5	65
Condition of environment	0.0	5.4	11.7	25.4	57.5	4.4	4.6	66
Employee helpfulness	0.0	0.0	5.1	26.1	68.8	4.6	4.2	48
Interpretive display	10.2	0.8	11.9	42.8	34.2	3.9	3.9	38
Parking availability	0.5	4.9	7.9	50.9	35.8	4.2	4.3	66
Parking lot condition	0.0	5.7	6.5	58.8	29.1	4.1	4.3	62
Rec. info. available	6.1	5.2	11.3	45.6	31.8	3.9	3.9	54
Road condition	24.7	14.5	8.5	33.1	19.1	3.1	4.3	64
Feeling of safety	0.0	0.0	8.3	36.8	54.8	4.5	4.4	65
Scenery	0.0	0.5	10.8	22.4	66.4	4.5	4.7	66
Signage adequacy	0.0	0.5	13.8	37.3	48.4	4.3	3.7	64
Trail condition	0.0	0.0	7.5	62.1	30.3	4.2	4.1	43
Value for fee paid	5.3	5.7	13.2	24.0	51.8	4.1	4.4	62

\*Scale: Poor = 1 Fair = 2 Average = 3 Good = 4 Very Good = 5

\*\* Scale: 1 = not important, 2 = somewhat important, 3 = moderately important, 4 = important, 5 = very important

# of Obs means the number of observations, or the amount of visitors who responded to this item.

Note: For items with less than 10 responses the data was not reported

**Monitoring Item 3. Evaluation, Conclusions, and Recommendations**

For Developed Day Use Sites, visitors average ratings for all items ranged between good (4.0) and very good (5.0). Mean importance ratings were mostly “important”, with a few “moderately important”. The highest satisfaction ratings were assigned to Scenery and Employee Helpfulness, with the lowest rating for Road Condition. The items that rated out as most important to visitors—Condition of Environment and Feeling of Safety—also rated out relatively high for visitor satisfaction (4.7).

For Developed Overnight Sites, most visitors average ratings for all items ranged between good (4.0) and very good (5.0). The notable exceptions were Interpretive Display (3.9), Recreation Information Available (3.9), and Road Condition (3.1). Mean importance ratings were mostly “important”, with a few “moderately important”. The highest satisfaction ratings were assigned to Scenery, Employee Helpfulness, and Feeling of Safety, while the lowest rating was for Road

Condition. The items that rated out as most important to visitors—Condition of Environment and Scenery—also rated out relatively high for visitor satisfaction (4.4 and 4.5, respectively).

The survey results indicate that the Forest visitors interviewed were fairly satisfied with the conditions and facilities at both day use and overnight recreation facilities on the Forest. The most dissatisfaction was with roads and available recreation information and displays.

**Recommendations:**

1. It would be interesting to know what visitor road expectations were before they came to the sites, as many Forest access and facility roads tend to be native-surfaced or gravel, with only intermittent maintenance. Regardless, this information can be useful in prioritizing future road maintenance or improvement projects. In 2005, for example, the Forest began work on paving the popular road to Spruce Knob, the highest point in West Virginia.
2. The Forest should look into ways to improve recreation information and displays, particularly at popular developed overnight sites.
3. The Forest should continue to use these types of information-gathering surveys or interviews to be more responsive to public needs in the future. The Monongahela National Forest is on a 6-year National Visitor Use Monitoring cycle. The next year of visitor use monitoring is FY-09. The Forest Service needs to gain the trust of Congress, the public, and our agency partners by providing a consistently measured, scientifically credible use estimate. Past recreation use was inconsistently measured with various non-standard methodologies.

**SUMMARY**

In general, the Monongahela received about 1.3 million recreation site visits, over 1,021 million National Forest visits and an estimated 38,600 wilderness visits annually. The Forest ranks 68<sup>th</sup> out of 119 nationally, 8<sup>th</sup> out of 15 regionally, for recreation use, and 5<sup>th</sup> of 15 regionally for wilderness use. The gender make up of Forest visitors is about 70% male and 30% female and over 96% are white. The highest use age class is between the ages of 40-49 (20.4 percent) and the lowest is 16-19 years old (2.1 percent). The satisfaction level of visitors at both day use and overnight recreation facilities is generally good to very good, with interpretive displays, recreation information, and road condition being average.

The information gained through this monitoring was used in Forest Plan revision to help:

- Develop the Analysis of the Management Situation for Recreation, Wilderness, Trails, and Scenery,
- Determine current use for potential Wilderness evaluations,
- Establish baseline conditions and trends in the EIS Recreation effects section, and
- Revise monitoring items in the 2006 Revised Forest Plan.