

**Rattlesnake National Recreation Area and Wilderness
Limits of Acceptable Change based Management Direction - 2009 Annual Report
Missoula Ranger District / Lolo National Forest**



Early Morning at Fly Lake in the Rattlesnake Wilderness fall 2009

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Introduction:

This is the **seventeenth annual** monitoring report for the Limits of Acceptable Change (LAC) based Management Direction for the Rattlesnake National Recreation Area (NRA) and Wilderness (RNRAW), which was approved in December 1992. Monitoring is the final step in the LAC planning system. It is an ongoing, continuous process and is instrumental for evaluating management effectiveness and sustainability of resource values and conditions.

The LAC process recognizes that wilderness conditions change. Wilderness areas are dynamic systems with many forces continually affecting the landscape. These forces of change include people and their impacts, fire, insects and disease, invasive species and many others. It defines what conditions are desirable and how to achieve or maintain those conditions. Based on citizen involvement, laws and regulation, it identifies what changes are acceptable rather than attempting to prevent change.

Monitoring is based upon the indicators and standards outlined in the LAC direction. The indicators and their specific standards provide methods of measurement to effectively monitor factors and area wide issues. Refer to the December, 1992 Limits of Acceptable Change Based Management Direction for the RNRAW for a more complete discussion of the LAC process.

The factors monitored during the 2009 field season include: education, use and users, trails and roads, Wilderness characteristics, vegetation, vandalism, wildlife, fire, goals and policies. Refer to Table 1 for a complete description of the factors, indicators and standards for each opportunity class (OC).

Several portions of the environment were not systematically monitored during 2009. These include the following: riparian zones, water, wildlife, and some fish populations. Reasons for not monitoring these factors varied. Some of the factors do not have specific standards, others are to be monitored every 3 to 5 years, and some require additional support from specialists.

The RNRAW is a high priority resource for the staff on the Missoula Ranger District. The RNRAW was staffed in 2009 by:

- one permanent wilderness program manager (part time wilderness duty)
- one permanent recreation manager (part time NRA duty)
- one seasonal NRA recreation guard (part time NRA duty)
- one seasonal mountain bike ranger (part time NRA duty)
- one seasonal Wilderness ranger (95% Rattlesnake duty)
- one Wilderness volunteer (95% Rattlesnake duty)

In addition, the District weeds program leader spent time working in the RNRAW on weed issues.

Rattlesnake National Recreation Area

Factor: Education

Table 1 Factors, indicators and standards for each opportunity class

Indicator	Opportunity Class	Standard
Number of formal education trips into the RNRRAW	1 & 2	No limit on number of trips as long as encounter and solitude standards are not exceeded: group size limited to 10 people
	3-5	Total group size limited to 10 or fewer people
	6	Total group size limited to 50
Number of educational brochures used per year	n/a	No standard; keep track of brochures used; distinguish between classroom and field use
Vandalism	n/a	No standard; monitor number of incidents; upward trend in number of incidents will trigger management actions

In 2009 the Missoula Ranger District presented Nature Walk Week to Missoula area third grade students in the Rattlesnake NRA and at Maclay Flats again. The students were brought to either the Rattlesnake NRA or Maclay Flats and rotated through education stations teaching about wildlife, Leave No Trace (LNT) outdoor ethics, weed and plant identification, forest and aquatic insects, birds, and fire ecology. The statistics for the students that were taught LNT outdoor ethics on nature walks for the Rattlesnake NRA are recorded in the Wilderness Education section of this report.

The District also supported the Leave No Weeds program with the Missoula County Weed District. This is an educational program targeted mainly to 5th grade students. The classroom presentation defines noxious weeds, impacts on the environment, identification, management, and prevention. The students then participate in an outdoor field trip in a local wildland setting where they participate in a weed pull, plant identification hike, and record what they learned in a journal. The program was developed by the Lolo NF, and since 2001 has been coordinated and presented by the Missoula County Weed District staff with support from the Lolo NF. Refer to Table 2 for statistics.

Table 2 NRA Education – Leave No Weeds Presentation Spring 2008

Teacher	School	Grade	Number of presentations	Number of kids
Lou Haas	Cold Spgs	5 th	1	25
Dave Rott	Cold Spgs.	5 th	1	28
Marvin Smith	Cold Spgs.	5 th	1	28
Patti O'Sullivan	Frenchtown	5 th	1	20
	Frenchtown	5 th	1	22
	Frenchtown	5 th	1	21
	Frenchtown	5 th	1	21
Carole Addis	Lowell	5 th	1	25
Holly Jaspersen	Lowell	5 th	1	30
Liz Golembiewski	DeSmet	5 th	1	15
Sue Larson	Rattlesnake	5 th	1	30
Ben Demers	Bonner	5 th	1	30
Jan Clouse/Ebelt	Target Range	5 th	1	30
Weedpull Teresa Toller	Washington Middle School	8 th	1	250
Nature Walk Week	Lolo	3 rd	1	200
Marian Cornelius	Bonner	5 th	1	20
Mandy McGill	Clinton	5 th	1	25
Kathy Meyers	Hellgate	5 th	1	30
Cooper, Collien, Ellis	Hellgate	5 th	1	75
Total Presentations			19	925

Factor: Roads and Trails

Table 3 Indicators, Opportunity Classes and Standards

Indicator	Opportunity Class	Standard
Various: clearing width, tread width, maximum sustained grade, maximum sustained tread depth	1	No trails or roads; no new trails or trailheads
	2	Clearing 3'-4' wide, 8' high; tread width: 12"-18"; maximum sustained grade: 30% for no more than 300'; max. sustained tread depth: 4" for no more than 200'; new trails only for correction of resource damage or public safety and possible new access from Grant Creek or Marshall Canyon; no new trailheads
	3	Clearing width: 6'; tread width: 24"; max. sustained grade: 15%/500'; max. sustained tread depth: 4"/200'; road clearing may require extra width for drainage (ditch maintenance); smoothness of tread/removal of obstacles may differ between classes 4 & 5; new trails only for resource protection and public safety; no new trailheads
	4 & 5	Clearing width: 8' wide by 10' high for trails and roads; tread width 24"; max. sustained grade 15 % for no more than 200'; max. sustained tread depth: 4"/200'; road clearing may require extra width for drainage (ditch maintenance); smoothness of tread / removal of obstacles may differ between classes 4 & 5; new trails only for resource protection and public safety; no new trailheads
	6	Road as currently exists; no paving beyond parking area; new trails or trailheads for resource protection, public safety and dispersal of use

Trail work:

The Missoula District Trail Crew and Montana Conservation Corps accomplished trail openings for the NRA.

Table 4 Mileage of Trail Work Accomplished in the NRA in FY2009

Type of Trail Work	Miles of Trail
Miles of Trail Maintenance / Opening	81.6
• Mineral Peak Tr. No. 511	2.2
• East Fork Rattlesnake Tr. No. 514	3.7
• Sheep Mountain Tr. No. 513	6
• Sheep Mountain Loop Tr. No. 1513	1.5
Trail construction / relocation *	2.7
Drainage improvement	81.6
Brushing	61.2
Hazard Tree Reduction	All Obvious
Trail Obliteration	
• 3 Larches Tr. No. 513.1	700 feet

Mountain Bike Ranger Trail Patrols:

The RNRA was patrolled by the Mountain Bike Ranger (MBR). The MBR did patrols for twenty-four hours a week and covered the NRA, Pattee Canyon and Blue Mountain.

In 2009 the Missoula Ranger District continued to patrol and monitor system and non-system mountain bike trails in the NRA. From 2002 through 2009 the Missoula Ranger District has employed a mountain bike ranger. The general duties of the MBR include:

- visitor contact, law enforcement and agency presence.

- enforcing group size limit.
- recon of user trail development and success of past trail rehab work
- trail maintenance.
- Signing the existing trail system to match the existing trail map in a manner that allows users, especially bike riders, to clearly understand and navigate trail junctions quickly.
- Documenting inconsistencies between the trail map and existing conditions.
- Patrolling for dog violations (one leashed dog was encountered on Trail 24.0 at Sawmill Gulch trailhead).
- Checking non-system monitor trails for use and resource damage.
- Recon on non-system trail and “hotspots” (areas of user created trails, structures, and unregulated resource use). User created trails were located with a GPS unit, mapped in GIS, and in most cases slashed to deter use

Any trails found that was not on the working map were recon’ed or reported for future investigation.

In 2008, the Missoula Technology and Development Center installed a trail counter in the lower RNRA. The device was not operational all of summer of 2009, but typically data is collected in the fall for a two week period, and it is relevant to note the University of Montana was in session during these times. The 2009 trail counter data indicated mountain bike use in October dropped significantly compared to September’s numbers. The average number of bikers during the week in the last half of September was 90 per weekday and 198 per weekend day. In the first half of October, the average number of bikers per weekday was 24 and the average per weekend day was 44. The difference in use is most likely credited to changes in weather as temperatures cooled suddenly at the start of October.

Combining October and September’s data provides these results:

- Average of 57 bikers per week day
- Average of 121 bikers per weekend day

Peak use times stayed consistent through both months with peak use happening between 3pm and 6pm on the weekdays and 1pm to 4pm on the weekends.

Visitor Reaction: Many of the forest visitors that saw the MBR were surprised to see Forest Service (FS) presence on a bike in the NRA. Bikers, hikers, and horse riders seemed pleased that someone was patrolling by bike.

Patrols: In 2009 the mountain bike ranger reported patrolling the following trails in the NRA and encountering the following parties:

Table 5 Trails traveled and not traveled

Trails Traveled	24.2, 24.0, 24.5, 24.8, 24.7, 24.5, 24.4, 24.3, 24.1, 28.1, 34, 28.2, 28.3, 515*, 517*, 517.1, 29.1, 29.2, 515.8, 515.7, 515.2, 515.3, 515.1, 515.4, 515.5, 515.6, 513*, 513.1, 513.2, 326, 326.1
Trails Not Traveled	24.6, 24.3

* Not traveled in their entirety.

Table 6 Mountain Bike Ranger Trail Encounter Totals for 2009, 2008, and 2007

Party Type	Number Of Groups 2009/2008/2007	Individuals 2009/2008/2007	Percent (Party Type/Group Total) 2009
Hike	265/133/14	563/78/31	40.3%
Bike	245/115/5	420/269/8	37.2%
Run	40/19/4	57/21/5	6.1%
Horse	3/2/0	5/3/0	.5%

Party Type	Number Of Groups 2009/2008/2007	Individuals 2009/2008/2007	Percent (Party Type/Group Total) 2009
Backpack	6/2/NA	12/5/NA	.9%
Fish	2/1/NA	4/3/NA	.3%
Dogs	97/NA/11	119/NA/16	14.7%
Group Total/ Individual Total	658/272/34	1180/379/60	100%

Signing:

The RNRA was generally well signed prior to the 2009 field season. Junction markers were moved in a few locations to make navigation easier and some repetitive trail markers were removed. Dog on leash signs were also added at the 1.3 and 1.7 mile markers up the main Rattlesnake trail system to help users identify where they need to leash their dog on the way back to the main trailhead.

Other work in the RNRA included documenting and dismantling transient camps, extinguishing a small fire near Spring Creek, and clearing trees that fell across the trails. Below is a listing of the signs posted and work completed in 2009.

Table 7 RNRA Signing Status 2009

Sign	Location	Status	Future Work
Trail 24.2 marker	Sawmill TH	Installed	Maintain
TR 515.7 marker	Jct. of 515.7 and 515.8	Installed	Maintain
Jct. G sign and TR 515.8 marker	Poe Meadow	Moved closer to jct.	Maintain
No dog sign	Jct. J at Curry Gulch	Installed	Maintain
Trail 28.3 marker	Jct. U	Replaced	Maintain
Trail 24.3 marker	Jct. of 24.3 and 24.1	Replaced	Maintain
Trail 24.1 marker	Jct. of 24.3 and 24.1	Installed	Maintain
Trail 28.2 marker	Jct. of 28.2 and 24.1	Removed repetitive sign	
Trail 24.1 marker	Jct. R	Replaced	Maintain
Trail 24.1 marker	Jct. R	Removed repetitive sign	
Rock	TR 112	Removed from trail because of public's safety concerns	
No dog sign	Jct. L	Installed	Maintain
Two TR 513.1 markers	Jct. with 513	Removed	
Old trail 513.1	Prior to jct. W	Slashed, seeded, mulched	Monitor for use and add slash as needed
Trail closed for restoration	Each end of old TR 513.1	Installed	Maintain
TR 513.1 marker	Jct. with TR 513 and 513.2	Installed	Maintain
Jct. X plaque, sticker and trail marker	Jct. X	Installed	maintain
Current RNRA map	Woods Gulch TH	Installed	maintain
Special orders	Woods Gulch TH	Installed	Maintain
TR 24.6 and TR 24.7 markers	Sawmill Gulch, jct. of 24.6 and 24.7	Installed new post and trail markers	Maintain
No dog sign	Jct. of 28.3 and 24.1	Installed	Maintain
Jct. K plaque and trail marker	Jct. K	Installed	Maintain
Log on trail	¼ mile from Main TH	Removed	
Log on road	Between Main TH and Sawmill Gulch TH	Removed	
Fire in south zone	Off TR 517, ¼ mile from Schoolhouse Jct.	Extinguished	

Sign	Location	Status	Future Work
Log on trail	Ravine Trail	Removed	
Barbed wire pile	Near jct. of 24.5 and 24.7	Removed	
Jct. U plaque and sticker	Jct. U	Replaced	Maintain
Transient camp	Off TR 517 near Schoolhouse Jct. on hillside	Photographed, dismantled, and scattered camp	Monitor for signs of rebuilding
Log on trail	TR 515	Removed	
Items left at campsite	Poe Meadow	Items were photographed, collected, and taken to LEO	Monitor Poe Meadow dispersed campsites for garbage and stay limits
Dog symbol, dog on leash symbol, trail courtesy sign	MP 1.7 on TR 515	Set post, installed signs	Maintain
Dog symbol, dog on leash symbol, trail courtesy sign	MP 1.3 on TR 517	Set post, installed signs	Maintain
Trail closed for restoration	Bottom of meow mix trail	Set post, installed sign	Maintain
Trail closed for restoration	Top of meow mix trail	Installed sign	Maintain
Dog symbol, dog on leash symbol, trail courtesy sign	MP 1.3 on TR 517.1	Set post, installed signs	Maintain

User Created / Non-system Trails: The RNRA requires continuous maintenance and monitoring for non-system and user created developments. There are several user created trails in the NRA. Most of the user trails in this recreation area had debris placed on them to deter use. One priority for the ranger in FY2010 will be to monitor user trails with the debris placed on them in 2009 and determine the effectiveness of the closure. While an effort should be made in FY2010 to naturalize these areas, continuous monitoring to locate other areas of development is also important. The table below summarizes all of monitoring of user created non-system trails in FY2009.

“Meow Mix” Hotspot located up the Marshall Grade off of Road 55. In the past, one area of particular concern is the “hot spot” known as the meow mix trail. On three separate occasions during the FY 2008 field season the trail was closed and reopened by users. On the fourth closure, the trail crew assisted in scarifying the soil, seeding and mulching, and felling trees across the trail. The trail was also signed as being closed for restoration. As of September 18, 2009, the trail has remained closed. This hot spot should continue to be monitored for use in FY 2010.

New Trail Just below the restrooms on Stuart Peak Trail 517, there is a trail that goes off to the south towards an old chimney and broken foundation. This trail eventually connects with Trail 517.1. This trail sees frequent foot traffic and is not on the map as a non-system or non-system monitor trail.

Table 8 NRA Non-system and User-created Trails

Development	Location	Status	Future Work
User trail	Private land section of 24.5	Open but not seeing much use	GPS location and monitor for increased use
User trail	Jct. of 24.6 & 24.7	Open area, hard to slash	GPS location, and monitor use
User trail	Off TR 24.2	Slashed in several user trails between TR 24.2 and road	GPS locations, monitor use, and obliterate as needed
User trail	Between TR 515 and TR 515.7	Slashed in	GPS location and maintain closure
User trail	Poe Meadow, at South Zone sign	Open	GPS location, Check status, consider adding it to non-system monitor list
User trail	1 st switchback on TR 513	Re-slashed after opening back up	GPS location, monitor use, and add slash if necessary
Fire Pit and user trail	Just past bridge at Fraser Creek on north side of road	Fire pit was dismantled and trail slashed in	GPS location, and monitor for use
User trail	Below bathroom on TR	Open	Add trail to non-system monitor list

Development	Location	Status	Future Work
	517.1		
User trail	Near jct. of 24.5 and 24.1	Slashed in	Monitor use and add slash if necessary
Decommissioned trail 513.1	2 nd creek crossing on TR 513	Rehabbed with trail crew	Monitor for use and add slash if necessary
User trail	“mule trails” see GIS map	Open, mapped part of the trail system but not all	Track mule trails with GPS to see if more trails are being added
User trail	“meow mix” trail, first gate up road to Marshall ski area	Slashed in early July, opened up in mid-July, slashed again in late July, slashed a third time in late August	Monitor for use

Factor: Use And Users

Table 9 Indicators, Opportunity Classes and Standards

Indicator	Opportunity Class	Standard
Trail encounters	1-5	10 persons per party
	6	50 persons per party
	1	1 group per day
	2	3 groups per day
	3	10 groups per day
	4	5 groups per day
	5	10 groups per day
Campsite encounters	6	20 groups per day
	1	0 groups per night
	2	1 group per night
	3	2 groups per night
	4	1 group per night
	5	2 groups per night
Campsite density	6	No overnight camping
	1	No increase in existing number of campsites
	2 & 3	No more than three sites at each of the lakes. Other areas: no more than three per mile or no increase over existing situation
	4 & 5	Strive for visual and auditory separation, but no more than 3 per mile or no increase over existing situation
Campsite condition	6	0 – no overnight camping
	1	Evidence of camping not to persist from year to year
	2 & 3	None worse than moderate
	4 & 5	Not more than one (of the 3 per mile) to be heavy; no extreme
Reports of user conflict	6	Day use sites. No more than one heavy, two moderate per mile
	all	No standard; will monitor number of incidents; upward trend in incidents will trigger management actions

Growth: The Missoula Valley population is increasing. As more people move into the area, there is increasing pressure on adjacent National Forest System lands, including the Rattlesnake. Between 2000 and 2006, Missoula County population increased by 5.9%. During the same time, the Missoula city population increased by 11.9% (US Census Bureau). Many recreationists in the Missoula area have a strong passion for their outdoor recreation. Be it mountain biking, folging, skiing or another activity, pressure is increasing to develop National Forest lands adjacent to Missoula. National Forest managers hear about developing Missoula into another national mountain biking destination, developing national class folf courses to attract top tournament talent, expansion of XC grooming to bring more people onto the NF and allowing developed lift served skiing into adjacent wilderness. With these kinds of pressures, managers are challenged to meet the LAC standards, and maintain a *quality* recreation opportunity in the Missoula area. The pressure is to provide *quantity* rather than quality recreation and increase trail and facility development in our local NF recreation areas.

Wilderness Rangers collected NRA trail encounter information while en route to and from the Wilderness. Only encounters beyond the 3 mile mark (from the main NRA Trailhead) were recorded. Encounters were monitored from May 2009 to October 2009. One group encountered was out of standard for party size. They had 11 people with them and were leaving hunting camp at Elk Meadows.

Table 10 Use and Users - Wilderness Ranger Campsite Encounters in the Rattlesnake National Recreation Area

Date	Location	OC#	Party Type	Party Size	Type And # Of Animals	Trip Length	Camp Encounters Per Night By OC	Standard Met?
6/6/09	Poe Meadows	5	Camp	3	0	7	2	GS=Y, CE=Y
6/6/09	Poe Meadows	5	Camp	4	0	2	2	GS=Y, CE=Y
7/25/09	Poe Meadows	5	Camp	5	0	2	2	GS=Y, CE=Y
7/25/09	Rd. 99	5	Camp	2	Dog-1	2	2	GS=Y, CE=Y
7/25/09	Rd. 99 Site#99-20	4	Camp	1	0	5	1	GS=Y, CE=Y
7/26/09	Franklin Bridge	4	Camp	2	0	2	1	GS=Y, CE=Y
7/31/09	Rd. 99 Site# 99-31	4	Camp/Bike	1	0	4	1	GS=Y, CE=Y
9/19/09	Rd. 99	4	Camp/Hunt	2	0	3	1	GS=Y, TE=Y

GS=Group Size; CE=Campsite Encounters

Large group use increased substantially in NRA in 2008. Mountain bike groups of up to 30 riders were encountered in the NRA. At least one such group had a portable stereo on a backpack playing while the riders rode one handed and drank beer. Large groups come from local bike shop rides, "Thursday Night Ride Club" rides, University of Montana Outdoor Recreation group and friend riding groups. Large groups exceeded LAC standards and adversely impacted other non mountain biking publics recreation experience.

The group size standard in the NRA was only a standard prior to 2008 and was not supported as a rule by a Special Order. In 2008 a Special Order was developed, signed and put into effect limiting group size to 50 horses and/or people in Opportunity Class (OC) 6 (from main trailhead to MP 0.8) and 10 horses and/or people in OC 1 through 5. For the purpose of the Order, when breaking up groups of greater than 10 horses and/or 10 people, groups of 10 or less horses and/or people need to be separated by a minimum of 30 minutes.

Table 11 Use and Users Wilderness Ranger Trail Encounters Rattlesnake National Recreation Area 2009

Date	Location	OC#	Party Type	Party Size	Type And # Of Animals	Trip Length	Groups /OC	Standards Met?*
6/6/09	Rd. 99	5	Hike	1	Dog-1	7	10	GS=Y, TE=Y
6/6/09	Rd. 99	5	Run	2	0	1	10	GS=Y, TE=Y
6/6/09	Rd. 99	5	Bike	2	0	1	10	GS=Y, TE=Y
6/7/09	Rd. 99	5	Bike	1	0	1	10	GS=Y, TE=Y
6/7/09	Rd. 99	5	Bike	1	0	1	10	GS=Y, TE=Y
6/7/09	Rd. 99	5	Run	1	0	1	10	GS=Y, TE=Y
6/7/09	Rd. 99	5	Bike	1	0	1	10	GS=Y, TE=Y
6/7/09	Rd. 99	5	Run	1	0	1	10	GS=Y, TE=Y
6/7/09	Rd. 99	5	Hike	2	Dog-1	1	10	GS=Y, TE=Y
6/7/09	Rd. 99	5	Bike	3	0	1	10	GS=Y, TE=Y
7/3/09	Rd. 99	4	Hike	2	0	1	5	GS=Y, TE=Y
7/3/09	Rd. 99	4	Hike	1	Dog-1	1	5	GS=Y, TE=Y
7/3/09	Rd. 99	4	Bike	2	0	1	5	GS=Y, TE=Y
7/3/09	Franklin Bridge	4	Hike	2	0	4	5	GS=Y, TE=Y
7/3/09	Franklin Bridge	4	Hike/Fish	1	0	1	5	GS=Y, TE=Y
7/3/09	Rock slide area above Franklin Bridge	4	Bike	1	0	1	5	GS=Y, TE=N

Date	Location	OC#	Party Type	Party Size	Type And # Of Animals	Trip Length	Groups /OC	Standards Met?*
7/3/09	Parking area at end of Rd. 99	4	Hike	5	Dog-2	2	5	GS=Y, TE=N
7/3/09	Parking area at end of Rd. 99	4	Hike	1	Dog-1	3	5	GS=Y, TE=N
7/25/09	Rd. 99	5	Bike	2	0	1	10	GS=Y, TE=Y
7/25/09	Rd. 99	5	Bike	1	0	1	10	GS=Y, TE=Y
7/25/09	Rd. 99	5	Run	1	0	1	10	GS=Y, TE=Y
7/25/09	Rd. 99	5	Hike	2	0	1	10	GS=Y, TE=Y
7/26/09	Rd. 99	5	Run	3	Dog-1	1	10	GS=Y, TE=Y
7/26/09	Rd. 99	5	Bike	1	0	1	10	GS=Y, TE=y
7/26/09	Rd. 99	5	Hike	2	0	1	10	GS=Y, TE=Y
7/26/09	Rd. 99	4	Bike	2	0	1	5	GS=Y, TE=Y
7/26/09	Rd. 99	4	Bike	1	0	1	5	GS=Y, TE=Y
7/26/09	Rd. 99	4	Bike	1	0	1	5	GS=Y, TE=Y
7/26/09	Rd. 99	4	Run	1	0	1	5	GS=Y, TE=Y
7/26/09	Rd. 99	5	Bike	2	0	1	10	GS=Y, TE=Y
7/26/09	Rd. 99	5	Bike	3	0	1	10	GS=Y, TE=Y
7/31/09	Parking area at end of Rd. 99	4	Bike	1	0	1	5	GS=Y, TE=Y
7/31/09	Parking area at end of Rd. 99	4	Bike	1	0	1	5	GS=Y, TE=Y
8/02/09	Parking area at end of Rd. 99	4	Bike	2	0	1	5	GS=Y, TE=Y
8/02/09	Franklin Bridge	4	Bike	1	0	1	5	GS=Y, TE=Y
8/02/09	Just before Franklin Bridge	4	Bike	2	0	1	5	GS=Y, TE=Y
8/02/09	Rd. 99	4	Bike	1	0	1	5	GS=Y, TE=Y
8/02/09	Poe Meadows	5	Run	1	0	1	10	GS=Y, TE=Y
8/14/09	Tr. 517	2	Hike/Camp	1	Dog-1	2	3	GS=Y, TE=Y
9/05/09	Rd. 99	4	Bike	2	0	3	5	GS=Y, TE=Y
9/05/09	Rd. 99	4	Bike	1	0	3	5	GS=Y, TE=Y
9/06/09	Rd. 99-Dalles	4	Bike	2	0	1	5	GS=Y, TE=Y
9/06/09	Franklin Bridge	4	Bike/Camp	2	Dog-2	2	5	GS=Y, TE=Y
9/06/09	Rd. 99	4	Bike/Fish	2	0	1	5	GS=Y, TE=Y
9/06/09	Rd. 99	4	Bike	1	0	1	5	GS=Y, TE=N
9/06/09	Rd. 99	4	Bike	2	0	1	5	GS=Y, TE=N
9/06/09	Rd. 99	5	Bike	3	0	1	10	GS=Y, TE=Y
9/06/09	Rd. 99	5	Run	2	0	1	10	GS=Y, TE=Y
9/19/09	Rd. 99	5	Bike/Hunt	1	0	1	10	GS=Y, TE=Y
9/19/09	Rd. 99	4	Bike/Hunt	2	0	3	5	GS=Y, TE=Y
9/19/09	Rd. 99	4	Bike	1	0	1	5	GS=Y, TE=Y
9/19/09	Rd. 99	4	Bike	2	0	1	5	GS=Y, TE=Y
9/19/09	Rd.99	4	Bike	1	0	1	5	GS=Y, TE=Y
9/19/09	Rd. 99 at Elk Meadows	4	Horseback	11	Horse-4	4	5	GS=N, TE=Y
9/19/09	Rd. 99	5	Run	1	0	1	10	GS=Y, TE=Y
9/19/09	Rd. 99	5	Run	2	0	1	10	GS=Y, TE=Y
9/19/09	Rd.99	5	Hike/Camp	3	0	2	10	GS=Y, TE=Y

GS=Group Size TE=Trail Encounters

Table 12 User Summary Wilderness Rangers Encounters in the Rattlesnake National Recreation Area (Beyond Mile 3 in NRA)

Type of Use	Number of Groups			Number of People		
	Day Use	Overnight	Total	Day Use	Overnight	Total
Hike	5	6	11	9	13	22 / 21.3%
Run	10	0	10	15	0	15/ 14.5%
Bike	28	3	31	44	5	49 / 47.6%
Horseback	0	1	1	0	11	11/ 10.7%
Bike/Fish	1	0	1	1	0	1/ 1%
Hike/Fish	1	0	1	2	0	2/ 2%
Bike/Hike	0	0	0	0	0	0/ 0%
Bike/Hunt	1	1	2	1	2	3/ 3%
Hike/Hunt	0	0	0	0	0	0/ 0%
Totals	46	11	57	72	31	103

Beyond the Three Mile marker, the NRA trail encounters by wilderness rangers increased in FY2009, and is most likely because more time was spent in the NRA than the previous year. The majority of use the Wilderness Rangers encountered above the 3 mile marker in the Rattlesnake Recreation Area were bikers (47.6%) and hikers (21.3%). Eleven of the 57 groups encountered were overnight stays. This constitutes about 19% of all groups we encountered. No horse users were encountered in FY2009, but a significant number of horse trailers were seen parked at the Rattlesnake Horse Trailhead.

Table 13 Use And Users Yearly User Trends Wilderness Ranger Encounters of People Numbers In The Rattlesnake National Recreation Area (Beyond Mile 3 In NRA)

Type Of Use	Year									
	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Hike	11	15	11	16	24	34	25	59	137	112
Run	10	5	18	7	5	18	6	7	13	*
Bike	31	14	71	63	80	29	44	72	101	49
Horseback	0	2	2	1	0	9	1	8	1	1
Bike/Fish	1	4	1	4	*	*	*	*	*	*
Hike/Fish	1	0	1	0	*	*	*	*	*	*
Bike/Hike	0	0	6	3	*	*	*	*	*	*
Bike/Hunt	2	0	1	*	*	*	*	*	*	*
Hike/Hunt	0	0	1	*	*	*	*	*	*	*
TOTAL	56	40	112	94	109	90	76	146	252	162

*indicates item not recorded

Table 15 is compiled from information recorded by the NRA recreation guard who worked 15 hours per week (separate from bike and wilderness rangers' information). Due to staff and budget limitations, the Rattlesnake NRA Guard divided his time between the Rattlesnake, Pattee Canyon and Maclay Flats. This person patrols the south zone of the NRA below Mile 3 where wilderness rangers do not record encounters.

The NRA Guard's general observations for 2009 are as follows:

- February 2009 there was no snow decreasing the number of cross-country skiers
- March 2009 had very wet conditions reflecting the low user counts.
- The use of Mutt Mitts has had a definite reduction in dog feces along the first 200 yards of the Rattlesnake Trail and the area has been noticeable cleaner within the last three years.
- The use of a dog "hitching post" would help keep the restrooms cleaner in wet/snowy conditions because visitors bring their dogs into the restroom with them.

Table 14 Use And User Summary NRA Guard Contacts Below Mile 3

Month	Hiker/ Jogger	Skier	Biker	Horse Rider	Totals	Dogs	Vehicles at trailhead
Oct. 08	180	0	67	6	253	17	674
Nov. 08	59	414	17	0	490	22	560
Dec. 08	4	10	0	0	14	0	509
**Jan. 09	12	0	0	0	12	0	63
**Feb. 09	37	0	0	0	37	0	210
March 09	24	0	0	3	27	27	116
April 09	78	0	19	2	99	39	360
May 09	67	0	42	2	111	39	610
June 09	201	0	183	3	387	76	792
July 09	269	0	216	2	487	94	833
Aug. 09	306	0	138	0	444	89	792
Sept. 09	143	0	62	7	212	54	587
TOTALS	1380	424	744	25	2573	299	6106
Percentage of use	53.6%	16.5%	28.9%	0.9%			

*No dogs allowed during Dec, Jan and Feb.

**Trails covered in ice for January and most of February

Table 15 Use and Users Yearly Trend Summary NRA Guard Contacts Below Mile 3

Type Of Use	Year									
	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Skier	424	71	0	506	272	540	85	603	488	1689
Hiker/Jogger	1380	1794	4712	4393	2333	4747	6077	4836	3648	3179
Biker	744	766	536	494	436	488	584	697	56	78
Horseback	25	54	32	27	8	35	32	102	0	113

The FS, in cooperation with the Missoula Nordic Ski Club (MNSC), started setting a cross country ski track in the lower NRA (trailhead to MP 8 / Franklin Bridge) on a trial basis in 2003. Since that time our monitoring indicated that skier use was more related to snowfall than track grooming. Some members of the public expressed concern about use of a snowmobile up the corridor in the winter (to set the track) and a review of the LAC trail standards indicated that trail development should be done only for public safety and resource protection, not for user convenience. Grooming is a user convenience, but one that many skiers want and have become accustomed to (when snowfall is sufficient). We approached the MNSC with these concerns in late 2007 and Club, members expressed concern that they might not be permitted to continue grooming. In 2008 we worked with the MNSC to develop a Challenge Cost Share Agreement to mitigate and monitor XC ski track grooming impacts, both on the trail and resource and in relation to meeting group size and encounter LAC standards. This agreement was signed 12/23/08 and includes close monitoring. Below is an excerpt from the MNSC Annual Report to the Missoula Ranger District. Information was collected from December, 2008 to March, 2009.

Winter 2008/2009 Monitoring during XC Track Grooming: For the first three miles from the main parking lot, the club packs the middle of the Road 99 / Trail 515 for hikers and snowshoers, and set tracks on each side. Hikers walking on the ski tracks are a problem for skiers and it happens every day of the season. Skate skiers also occasionally damage the tracks. The Club is not grooming the Rattlesnake for skate skiing and that activity is discouraged. Mountain bikes also occasionally appear and damage the groomed surface.

Dogs on groomed trails in the Rattlesnake was not a severe issue in winter 2008/2009. At the beginning of the grooming season in late December, there were two 50-gallon size full trash bags found inside the 3 mile toilet in the Rattlesnake. The Forest Service was notified and they promptly hauled it out on a sled. The two upper Rattlesnake toilets stayed relatively clean through the winter, needing only toilet paper. There was rarely any litter left along the trail.

Campsites

Table 16 Campsite Indicator Opportunity Classes and Standards

Indicators	Opportunity Class	Standards
Campsite encounters	1	0 groups per night
	2	1 group per night
	3	2 groups per night
	4	1 group per night
	5	2 groups per night
	6	No overnight camping
Campsite density	1	No increase in existing number of campsites
	2 & 3	No more than three sites at each of the lakes. Other areas: no more than three per mile or no increase over existing situation
	4 & 5	Strive for visual and auditory separation, but no more than 3 per mile or no increase over existing situation
	6	0 – no overnight camping
Campsite condition	1	Evidence of camping not to persist from year to year
	2 & 3	None worse than moderate
	4 & 5	Not more than one (of the 3 per mile) to be heavy; no extreme
	6	Day use sites. No more than one heavy, two moderate per mile

Condition standards in the 2009 monitoring report are based both on David Cole's (1983) rating index (to incorporate impact index weightings used on campsite inventory sheets), and the condition standards found on page 32 of the LAC direction. Campsite condition surveys in both the NRA and Wilderness are on a 3 year rotation.

Condition standards are exceeded when there is more than one high impact site per mile. Several of the sites exceeding condition standards may exceed them based primarily on historic impacts. For example, site #2 at Poe Meadows is at a historic cabin site. Franklin Bridge #20 is also at a historic site. Both of these sites show significant tree scaring, exposed roots and bare mineral soil. These impacts most likely originated before congressional designation as an NRA in 1980, and current use has perpetuated the impacts. The historic use and durable surfaces associated with sites, such as these, make for interesting and ideal campsite locations in Opportunity Classes (OC) 4 and 5. Managers take these details into consideration when taking action on condition standards.

Most campsites in the NRA are in OC 4 and 5. The density standard for these classes states, "Strive for visual and auditory separation, but no more than 3 per mile or no increase over existing situation." Based on auditory and visual separation, campsites at Elk Meadows and Poe Meadows are out of density standard. According to LAC standards, Elk Meadows is in OC 4 and should provide low levels of inter-party contact while camped based on campsite density; however campsites at this area are within visual distance from each other. Poe Meadows campsites, in OC 5, have frequent inter-party contact, and auditory and visual separation between sites is minimal. A cursory assessment of campsite density and use suggests that there are more campsites than will be filled during peak use. Therefore, sites inventoried at Poe and Elk Meadows were considered out of density standard.

The decision to leave Elk Meadows out of density standards for 2008 and 2009 was influenced by the Montana Fish Wildlife and Parks early elk hunt. This meadow is heavily used during the hunt and at times all three campsites are full. Naturalizing one of the sites would put pressure on the remaining sites and may create new campsites by visitors. Management action is still being considered for Poe Meadows and will be discussed further in FY2010.

Other campsites in OC 4 and 5 have auditory and visual separation to a greater degree, but exceed the three sites per mile standard. It is unclear if campsites are above or below the "existing situation" standard, the reference point being 1992 conditions put forth in the LAC management direction. Therefore, these sites were considered to be within density standards based on their auditory and visual separation. Again, the

comprehensive inventory of campsite density in OC 4 and 5 done by Brett Melcarek in 2006 will continue to provide helpful management direction for the future.

Technical Note: In an effort to create a more detailed and complete campsite database, campsite names are being replaced by campsite numbers. The first number indicates the closest road or trail to the site, followed by the site number. Wilderness rangers now record latitude and longitude waypoints for each site which are correlated by Site #.

Table 17 Use and Users 2008 NRA Campsite Inventory

Site #	Latitude	Longitude	Elevation	Condition Index	Condition Index Change	Year Last Inventoried
99-1	46.9504	113.90418	3908	22		2009
99-2	46.9517	113.927	3806	24	+3	2009
99-3	46.95198	113.923	3793	41	-9	2009
99-4	46.97752	113.83883	4170	28	+2	2007
99-5	46.95233	113.92241	3806	13	-13	2009
99-6	46.95244	113.92325	3806	24	-9	2009
99-7	46.95245	113.92325	3806	24,NAT	-11	2009
99-8	46.95382	113.92152	3998	29	+7	2009
99-9	46.9544	113.91822	3825	NAT	-26	2009
99-10	46.95541	113.92029	3992	24	+1	2009
99-11	46.95575	113.92029	3960	NAT	-22	2009
99-12	46.95584	113.91931	3948	NAT	-21	2009
99-13	46.95594	113.91973	3967	NAT	-21	2009
99-14	46.95869	113.89585	3990	36	-11	2009
99-15	46.95916	113.90232	3997	27	-3	2009
99-16	46.95928	113.90403	3911	21	-13	2009
99-17	46.95939	113.90985	3873	21	-13	2009
99-18	46.95965	113.88941	3932	NAT	-24	2009
99-19	46.96003	113.87759	3941	30	-4	2009
99-20	46.96098	113.90217	3912	24	+4	2009
99-21	46.96161	113.90213	3906	NAT	-21	2009
99-22	46.96439	113.87133	4057	35	-9	2007
99-23	46.96532	113.87222	4079	23	-2	2009
99-24	46.96618	113.86657	4005	NAT	-	2007
99-25	46.9669	113.86367	3997	NAT	-21	2009
99-26	46.96712	113.86352	4106	36	+6	2009
99-27	46.96805	113.8587	4065	38	+10	2009
99-28	46.96808	113.8587	4072	28	+7	2009
99-29	46.96816	113.85756	4107	NAT	-21	2009
99-30	46.96906	113.85493	4112	NAT	-21	2009
99-31	46.96975	113.8534	4101	35	+2	2009
99-32	46.97745	113.83888	4147	34	-9	2009
99-33	46.98045	113.83682	4217	45	-2	2009*
99-34	46.98086	113.83633	4270	36	-5	2009
99-35	46.9815	113.83732	4284	NAT	-21	2009
99-36	47.02239	113.84716	4762	21	-4	2007

The following scale of the weighted impact index is used in part to assess campsite condition:

Minimum impact: 20-23 Moderate impact: 24-34 High impact: 35-45 Extreme impact: 46-60

NAT indicates a site was naturalized and not evaluated

Factor: Vandalism/Regulation Violations

Table 18 Opportunity Classes and Standards

Opportunity Class	Standard
1-6	No standard; monitor number of incidents; upward trend in number of incidents will trigger management actions

In 2006, incident reports and violation notices on the Lolo NF were consolidated with the Bitterroot and Flathead NFS. The system is not fully functional yet so we could not get a list of incident reports and violation notices specific to the Rattlesnake NRAW in 2006, 2007 or 2008. Therefore, the table below displays zeros for those years.

In 2008 and 2009 there were noted incidents of dogs off leash, illegal dumping, damaging government property, illegal shooting, parking other than as authorized, and fires where they are prohibited. Warning notices and violation notices were issued for these violations throughout the year. Unauthorized camping/transients are down due to an increased FS presence that started in the fall of 2008.

Table 19 NRA Incident Reports/Violation Notices and Trends

Violations	Incident Reports										Violation Notices									
	99	00	01	02	03	04	05	06	07	09	99	00	01	02	03	04	05	06	07	09
Parking at horse trailhead	82	82	79	87	83	89	83	0	0	6	0	0	0	0	0	0	1	0	0	1
Dogs not on leash	46	46	21	29	16	25	7	0	0	2	0	0	0	0	0	0	2	0	0	1
Dogs in closed area	4	4	0	7	4	1	0	0	0	4	0	0	0	0	1	0	0	0	0	2
Damaging Govt. Property	6	6	1	2	5	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Illegal dumping	3	3	1	1	0	1	0	0	0	11	0	0	0	0	0	0	0	0	0	0
Camping in South Zone	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Illegal ORV use	1	1	2	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Parking in disabled spot	0	0	3	9	6	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Car Vandalism	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil Spill on Walkway	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Camping in area where prohibited	0	0	0	0	0	0	0	0	0	2	0	0	0	1	1	0	0	0	0	0
Chainsaw use / trail const.	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike on Stock Bridge	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unattended camp / over 14 day limit	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	2	0
Illegal Shooting	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Biking where prohibited	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Damaging/cutting trees	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Campfire in South Zone	0	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0
Horse Trailer @ Main Trailhead	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Illegal parking	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
TOTALS	143	148	110	135	115	128	91	0	0	44	0	0	1	1	3	0	3	0	2	4

***In addition in 2009 we had 4 citations and 6 warnings issued for violating state motor vehicle law, 6 vehicle break-ins at the main Rattlesnake Trailhead, 2 incidents of building a structure without authorization, 1 bear encounter, 1 incident of abandoned drug paraphernalia and 1 fatality.

Factor: Vegetation

Table 21 Indicators, Opportunity Classes and Standards

Indicators	Opportunity Classes	Standards
Insect Threat	1,2, & 4	No control
	3,5, & 6	Need to complete risk survey before setting standards (2-4 years?)
Noxious weeds	all	Controls are desirable; biological control preferred, other methods will be considered in project environmental analysis. Cutting meadow in Sawmill Gulch acceptable/desirable until more positive control approved
Vegetative diversity	all	Monitor. Compare vegetative community composition every 10 years against previous decade's communities by aerial photo interpretation

Weeds

Invasive weeds such as spotted knapweed, common tansy, goatweed, sulfur cinquefoil, Canada thistle, Dalmatian toadflax, common toadflax, leafy spurge, houndstongue and orange hawkweed are found in the NRA and along the following trails:

- Sawmill Trail #24,
- Stuart Peak Trail # 517,
- Rattlesnake Rd 99/Trail #515,
- East Fork Rattlesnake Trail #514,
- Sheep Mountain Trail #513,
- West Fork Gold Trail #52,
- Grant Creek Ravine Trail #34 and in areas of concentrated use throughout the NRA.

Dalmatian toadflax was first found and treated in one of the old farmstead openings along Road 99 / Trail #515 in the spring of 1999 and infestations of Dalmatian and common toadflax have established and are expanding in Sawmill Gulch. Infestations also occur on Strawberry ridge.

In the spring of 2000, Dalmatian toadflax was found and treated in small infestations of 5-15 plants in all of the old farmstead openings. During treatment of the NRA corridor in spring 2006 and 2009 all of the farmstead sites were monitored and no Dalmatian or common toadflax was found. A new infestation was found and pulled in 2005 in the SW corner of the Spring Gulch meadow, east of the trail at the toe of the slope, this infestation has not reestablished as of 2009. A second new infestation was found in the Curry Meadow above and to the NW of the junction of Curry and Stuart Peak trails. This site was treated with herbicides in 2005 and again in 2006 and has reduced the population by approximately 60 %. Six new small infestations were pulled and treated with herbicides in the spring of 2005 in Sawmill Gulch. In 2005 and 2006 volunteers with the Grant Creek Homeowners Associations in Grant Creek mapped and pulled weed infestations on the National Wildlife Federation lands and adjacent Lolo NF lands in Sawmill Gulch. In the spring of 2007 Grant Creek Homeowners again volunteered to spend a day in the field and direct us to the sites that were mapped and pulled in 2005 and 2006 and these sites were treated with herbicide. Both species of toadflax have established, generally in small, isolated, scattered infestations in Sawmill and Curry. Sawmill was treated in the spring of 2009 but the primary targets for this treatment were leafy spurge and houndstongue in the meadows, along the haul routes from the Sawmill Fuels project and in disturbed areas resulting from the fuel reduction project. Treatment within the Sawmill Fuels treatment units and project area was planned for and funding obligated to contract for a fall treatment in 2009 but due to extremely cold weather in early October and plant phenology and growth, treatment was postponed until spring 2010.

Continued monitoring and follow-up treatments will be necessary. Once established toadflax is very difficult to eradicate but can be contained and kept from expanding and spreading to uninfested areas. Treatments to-date have been effective in eradicating in some cases and reducing or containing these infestations but the NRA is

surrounded on three sides by Dalmatian and common toadflax infestations on other ownerships. Vigilance is required to find and treat the infestations when they are small and just starting. Sites treated with herbicide in 2009 include the Main Rattlesnake Trailhead and Trail #515/Rd #99 from the trailhead to the wilderness boundary, the homestead meadows/openings along the road and trail corridor and within Sawmill Gulch in the NRA.

In 2001 orange hawkweed was found in Spring Gulch along the Stuart Peak Trail #517, approximately ¼ mile above the Curry trail junction. This infestation has been monitored and treated as needed each year subsequent. In the spring of 2006 the site was monitored. Monitoring indicates success from previous applications, reducing the infestation by 95% but not yet eradicating it. A second small infestation (8-10 plants) was found and treated in the spring of 2005 approximately ¼ mile below the Curry trail junction, adjacent to Stuart Peak Trail #517. This site was treated at the time and no plants were found during monitoring of this site in 2006. In 2009 we looked for both of these infestations and had planned to treat them if needed but were not able to locate any plants at the time of monitoring. Later in the summer we received a report of orange hawkweed along the Stuart Peak trail which would be in the vicinity of the first infestation mentioned above. If not in the flowering stage, a few scattered orange hawkweed plants would be difficult to locate and we may have missed them in the spring. We will continue to monitor and treat these sites as needed or until we are confident they have been eradicated.

Herbicides and bio-controls are used for weed control in the NRA. In 2005, 4000 *Apthona nigricutis* (leafy spurge flea beetles) were released on a newly discovered leafy spurge infestation called Lower Sawmill #1 and 200 *Cyphocleonus achetes* (spotted knapweed weevils) were released at a spotted knapweed site near the Sawmill Gulch gate, called Sawmill B. No bio-controls were released in the NRA in 2006. Dalmatian toadflax and leafy spurge bio-controls were released in the NRA in Sawmill Gulch in 2007. In 2009 a new leafy spurge bio-control agent (*Oversea erythrocephala*, a stem borer) was released at four existing *Apthona* release sites in Sawmill Gulch and one existing site in Woods Gulch. 120 insects were released at each site to supplement the *Apthona* releases by introducing and hopefully establishing a new agent that will complement the *Apthona* releases by affecting another part of the plant or affecting the plant to a greater extent.

Leafy spurge and toadflax infestations on the forested slopes N/NE of Sawmill Meadows, between Sawmill and the Rattlesnake are expanding. These infestations are very difficult to treat with herbicide due to:

- terrain
- they are widely scattered in forested or semi-forested sites
- herbicide rate required to be effective could have undesired impacts to non-target species

Therefore, the Missoula Ranger District is trying to get bio-controls to become widely established over these slopes. Since 1992, 10's of thousands of *Apthona* flea beetles were released in this area and in 2009 an additional 3000 *Apthona lacertosa* were released at the Lower Sawmill site.

Both common and Dalmatian toadflaxes are also expanding with new satellite infestations being found nearly each year. In 2007 the first toadflax bio-controls were released in Sawmill Gulch, and 100 *Mecinus janthinus* were released on Dalmatian toadflax at 2 sites in Sawmill Gulch.

The Sawmill (Gulch) fuels project was conducted in 2008 in and adjacent to the NRA. The project involved commercial logging, thinning and fuel reduction. Weed prevention measures were built into this project. The logged and impacted area will be monitored in 2009 and beyond to see how effective the prevention measures were and if any follow up weed treatments are needed.

Table 22 Weed Control Other Than Biological Control Agents FY 2009 NRA/Wilderness Herbicide Treatments

Location	Weeds Treated	Control Used	Acres
Sawmill Gulch	SK, LS, H	Tordon/2,4-D mix	8.9
Rd #99/Tr #515	SK,SC	Aminopyralid	26 (entire rd/tr)
Homestead meadows off Rd# 99/tr #515	SK,SC	Aminopyralid	32

*spotted knapweed (SK), oxeye daisy (OD), Canada thistle (CT), houndstongue (H), Dalmatian toadflax (DT) yellow/common toadflax (YT), sulfur cinquefoil (SC) leafy spurge (LS)

Factor: Riparian Zones

Table 20 Indicators Opportunity Classes and Standards

Indicators	Opportunity Classes	Standards
Amount of bar soil in riparian zone	1-6	Not determined yet, but will define quantitative amount of bare soil in riparian zone; also will define riparian zone (20' contour from streambed?)

No survey or management action taken in 2009.

Factor: Fire

Table 21 Indicators Opportunity Classes and Standards

Indicators	Opportunity Classes	Standards
Ladder fuels in high use areas	3-6	Standard not yet firm. Tree cutting will be allowed to reduce high hazard ladder fuels and to facilitate prescribed burning. Cut designation will be by individual tree evaluation. Tree cutting will be allowed to meet resource objectives other than timber management.

An ecosystem maintenance burning environmental assessment was completed in 1997 for NRA. No prescribed burns were conducted in the NRA in 2009. Several units have been identified, but no dates have been selected for these potential burns. The goals for future prescribed burns are to:

- enhance winter range production
- reduce wildfire severity
- recruit old growth ponderosa pine
- protect the wildland interface zone.
- A new analysis was initiated in 2009 called Marshall Woods that will reexamine the 1997 ecosystem burning units and that may also include additional wildlife habitat improvement or fuels reduction burning. As of the end of FY 2009 however, the specific activities to be proposed in the Marshall Woods project had not been identified.

Table 22 NRA Ecosystem Maintenance Burning Units Covered By the 1997 Decision

Unit	Acres	Status
West spring Gulch	569	Burned in 1998
Strawberry Ridge	1106	Burned in 1997
Pilcher South	296	
Sawmill North	108	
North Ray Gulch	178	
Upper Ray Gulch	40	
North Woods Gulch	655	
Upper Woods Gulch	46	

Sawmill Gulch Fuels Reduction Project

A Decision was signed on October 21, 2004 for 754 acres of fuel treatment in Sawmill Gulch in and adjacent to the NRA. A pilot/test 77 acre unit was offered for sale in September 2005, but no bids were received. The Decision was then revoked as part of a national lawsuit (called Camp Salvage). In spring 2007, the Sawmill Fuels Project was determined excluded from the national lawsuit by all parties. A Section 18.1 Changed Condition review was conducted and signed in June 2007 (documenting soil survey results). The original project was then reworked in June/July 2007 to include all the commercial harvest acres mix of logging systems under the 2004 Decision. The sale was offered again (for 178 acres of fuel treatment) on September 25, 2007 and again no bids were received due poor market conditions and the extensive resource protection provisions in the project. The sale was then sold by negotiation on October 22, 2007 and the road work began on November 6, 2007 and was completed about one week later. The timber purchaser completed the logging and associated work on this project in 2008.

Factor: Wildlife

Table 23 Indicators, Opportunity Classes, and Standards

Indicator	Opportunity Classes	Standards
Occupied beaver and other water dependent animal habitat	all	Limited trapping (removal) of animals permissible for research and information in pursuing knowledge about the occurrence and spread of <i>Giardia</i> . Removal is not defined as the elimination of a species. Maintain a minimum of three beaver colonies between Rattlesnake trailhead and Elk Meadows.
Big game distribution and population on winter range	n/a	Deer: Loop transects on Strawberry Ridge, two counts per year. Normal population is 40-60 mule deer. Standard is set at a range of 30-70 seen animals. If count outside this range for 2 consecutive years, investigation will follow Elk: Fixed-wing flights counts, two per year. Normal count is around 60 animals. Standard is set at range of 40-70 seen animals. If count outside this range for 2 consecutive years investigation will follow. Normal range is from Grant Creek east to Rattlesnake Creek. Elk moving west of Grant Creek indicates disturbance and/or displacement
Big game winter forage production	n/a	At least 500 acres of winter range should produce a minimum of 200 lbs. of desirable forage per acre per year
Animal species diversity		Bird and mammal species and count surveys will monitor occurrence of species. Standard surveys used repeatedly over time will provide the desired information.
Animal damage or harassment		Monitoring item – no standard

Grizzly Bear Occurrences

Over time tribal members have seen grizzly bears with cubs on a regular basis at the headwaters of the Jocko River on the Flathead Reservation which is adjacent to the RNRAW. Some grizzly bears have been reported on the south side of the divide in the Rattlesnake Creek drainage as well. In previous years unverified reports of grizzly bears have come from the Grant Creek, Upper Rattlesnake Creek, Wisherd Ridge, and the lower reaches of the Rattlesnake drainage

The current multi-agency effort to estimate the grizzly bear population in the Northern Continental Divide Ecosystem (NCDE) includes a portion of the Rattlesnake drainage. During 2004, a crew monitored hair snags and bear rub trees from June 15-August 18 (Vicki Edwards, Montana Fish Wildlife and Parks (FWP)) in the Rattlesnake drainage. Twenty-four “cells” (with 4 hair snag stations/cell) or a total of 96 hair snag stations, were monitored in the Rattlesnake Wilderness and 30 cells were monitored in the RNRA. Ten to fifteen rub trees were also sampled. A publication on this inventory was put out in early 2009 in the Journal Wildlife Management. There were no hits from grizzly bears at rub trees or stations during the sample period in the

RNRAW although multiple hits from grizzly bears occurred at rub trees or stations at the southern extent of the Mission Mountains, just north of the RNRAW.

In late fall 2009 FWP verified grizzly digging for biscuit root along the reservation divide, or northern boundary of the Rattlesnake Wilderness. FWP has received many good reports over the last few years, but none verified –other than a photo of a grizzly feeding on a dead cow near Arlee north east of the RNRAW. Grizzly activity has increased along the south end of the Mission Mountains, which has been verified by FWP, and may be an indication more grizzlies will move towards the Rattlesnake Wilderness.

Bear/Human Confrontations (including bluff charges, maulings, etc) and Bear/Deer Habituation Problems in Residential Areas

FWP estimates that thirty bears frequent the lower Rattlesnake Valley. Habituation to human food/garbage continues because food/garbage sources are still available in unprotected garbage cans, compost pits, bird-feeders, fruit trees, etc. The recently formed Middle Rattlesnake Bear Taskforce is working to reduce human/wildlife conflicts. This organization has developed a website <http://www.rattlesnakebears.org>, produced pamphlets and posters, removed attractants (i.e. fruit dropped on the ground from fruit trees) and installed additional bear-resistant dumpsters. The FS installation of bear-proof garbage cans at trailheads and bear poles in the RNRAW also help prevent food-conditioned bears from having conflicts with humans or dogs on National Forest lands.

Conflicts with humans continue to drop in the NRA and residential part of the Rattlesnake drainage (one bear confrontation was noted in the lower RNRA in 2009). Managers attribute this to bear food storage poles at the most popular RNRAW campsites, and increased sanitation measures at FS trailheads and in residential areas, as well as increased education efforts and the Middle Rattlesnake Bear Taskforce (which has allowed people to exchange information about bear issues and learn more about how to avoid bear conflicts).

Compliance with the Region One Grizzly Bear Sanitation Order

In 2003, 16 bear poles (overhead food hanging poles) were installed in areas frequented by campers to reduce the availability of food/garbage to bears in the RNRAW and improve compliance with the sanitation order. Four of the poles are in the NRA and 11 are in the Wilderness and one is outside the RNRAW but next to the wilderness (Gold Ridge Cabin). Two new bear-resistant garbage cans were installed in 2007 at the main Rattlesnake Trailhead. In the eighth year, the bear poles continue to be utilized by visitors. In 2009 there were no reports of bears getting food from RNRAW visitors. The trees holding up the Glacier Lake bear pole fell over in winter 2007/2008, so it was replaced in September of 2009. A new bear pole is scheduled for installment on Fly Lake campsite #2 due to heavy public use over the last three years and absent a food pole, it is difficult to hang food in a bear resistant manner in the area.

Table 24 Bear Pole Locations

Location	Number Of Poles Installed 2003
Boulder Lake	2
Fly Lake	1
Elk Meadows*	1
Poe Meadows*	1
Gold Cr / Fly Lake. Jct.	1
Gold Ridge Cabin*	1
Upper Twin Lake	1
Lower Twin Lake	1
Little Lake	1
Glacier Lake	1 which fell down in 07/08 and was replaced in 2009
Sanders Lake	1
Carter Lake	1
Worden Lake	1
Big Lake	1
Elk Meadows*	1
TOTAL	16

*In NRA

Beaver Habitat in Rattlesnake Creek

In 2009, rangers had hoped to do a basic assessment of beaver colonies on Rattlesnake Creek but were not able to get this task done. This task has been put on the Wilderness Program of Work and will be attended to when time permits. The LAC standard is to maintain a minimum of three colonies between the main trailhead and Elk Meadows.

Big Game Winter Range Monitoring

Big Game Use: Under the LAC monitoring direction, two deer loop transect counts should be conducted yearly on Strawberry Ridge. A normal population is 40-60 mule deer. No monitoring was done in 2004 through 2009. Rangers are hoping to conduct this monitoring in 2010 but are waiting for protocol.

In July of 2004, MTFWP did an aerial survey of mountain goats in the RNRAW. Twelve goats and 14 bighorn sheep were recorded, with concentrations in the High Falls and Lake Creek drainages. Probability of detection for goats is around 60%, therefore the population in the RNRAW is predicted to be approximately 20 individuals. Bighorn probability of detection is around 75%, therefore populations are estimated to number around 20 individuals. These numbers are thought to be stable. There were no goat or sheep surveys done in 2009.

Forage Production: No monitoring was conducted in 2009. The fires of 2003 are believed to have resulted in a temporary decrease in forage for both bears and big game, although the long term outlook for burned areas is for an increase in potential forage (MTFWP pers. Comm.). In 2010, Wilderness Rangers hope to be able to evaluate whether forage production meets the standard of 500 acres of winter range producing 200 lbs of desirable forage per acre per year.

Recreation Use: No recreation user monitoring in big game winter range was conducted in the RNRAW in 2009.

Recreation use was monitored on adjacent Lolo NF, FWP, and City lands on Mount Jumbo. Signs were posted at the Wood's Gulch trailhead (and elsewhere) informing hikers of the winter closure on Mt. Jumbo. However, enforcing city regulations that protect wintering elk on Mount Jumbo is sometimes a challenge as some Missoula residents seek winter recreation opportunities on Mount Jumbo. Education and enforcement are recognized as key to reducing human activities in the Mt. Jumbo closure area. In FY2006 the city had volunteer patrols of the Lincoln Hills area during the closure period. These citizen patrols were sporadically conducted in the winters of 2007, 2008 and 2009. Overall, adherence to the closure has been well accepted by the public and few have been seen violating the closure. Reports from FWP indicate the number of elk in the Mt. Jumbo elk herd to be holding steady at between 50 and 60 head.

Animal Damage / Harassment / Trapping

There were no reports of animal damage or harassment in the RNRAW in FY2009.

In 2008 a task group was formed by MTFWP to address conflicts between trappers and people who let their dogs loose and subsequently get caught in traps. While an infrequent occurrence, the incidents that do occur in the Missoula area get substantial publicity and evoke strong emotions. This situation is yet another symptom of growth and urbanization in the Missoula valley and the associated impacts on the NF recreation areas adjacent to Missoula. Based on the task force work, MTFWP recommended that the FS close the three NF recreation areas around Missoula, including the Rattlesnake NRA, to predator and non game trapping year round. MTFWP closed the same areas to fur bearer trapping year round. The FS Order closing the NRA to predator and non game trapping was developed was signed and in force in 2009.

Rattlesnake Wilderness

Factor: Education

Table 25 Indicators, Opportunity Classes, and Standards

Indicators	Opportunity Classes	Standards
Number of formal education trips into the RNRAW	1 & 2	No limit on number of trips as long as encounter and solitude standards are not exceeded: group size limited to 10 people

There were no formal educational trips into the Wilderness Area in 2009. Educational contacts are made with users as the Wilderness Rangers encounter them in the Wilderness. During these encounters, Rangers discussed Leave No Trace principles and practices and handed out LNT material. Additional education efforts were made at the area trailheads by posting Wilderness regulations; leave no trace information, and food storage regulations.

Other off-site wilderness education activities included the in-school Leave No Trace program, which explores the role of wilderness in our society and how we impact our environment. The presentation defines and discusses the concept of wilderness, explains how visitors impact the backcountry, and demonstrates techniques to reduce those impacts by leaving no trace when visiting these areas. The LNT education program is directed at sixth grade students (see Table 29).

Table 26 Wilderness Education Leave No Trace Programs in 2009

School	Grade	Number Of Presentations	Number of Students / Attendees
Bonner	6	2	45
Cold Springs	6	3	75
Franklin	6	2	40
Paxson	6	1	25
Russell	6	2	40
St. Joseph	6	2	40
Washington	6	2	50
Nature Walk Week	6	16	400
Boys and Girls Club	1-4	4	80
Total	N/A	34	795

Factor: Vandalism/Regulation Violations

Table 27 Vandalism

Indicators	Opportunity Classes	Standards
Vandalism	n/a	No standard; monitor number of incidents; upward trend in number of incidents will trigger management actions

In 2007, we reviewed tree cutting regulations in wilderness and concluded that no standing trees, dead or alive, can be cut down in the Wilderness area. Only branches and trees on the ground can be used for firewood or tent poles. This clarification is being distributed to visitors when encountered by Wilderness Rangers and should be posted at all trailheads leading into the wilderness. High stumps from past cutting are being lowered over time as a wilderness ranger duty.

Wilderness Rangers noted more dead standing trees cut down at Boulder Lake and Fly Lake designated campsites. These areas will need to be patrolled heavily in 2010 to help educate visitors with the clarified regulation on cutting standing trees. Signs may need to be put up at these areas letting visitors know the regulation.

Mountain bike use has been decreasing in the Rattlesnake Wilderness in the past years. This was an issue in the late 1990s and after the turn of the century. Three mountain bike violations were reported by visitors and FWP employees in FY2008 on Stuart Peak Trail #517. In FY 2009 a motor bike violation was reported by wilderness rangers (based on tracks on the trail) on Gold Creek Trail #518 from the Main Gold Creek Trailhead. In July 2009 three mountain bikers were caught in the wilderness and each was given a Notices of Violation. They were on Boulder Lake Trail #333 just above Boulder Lake. Other areas of concern for mountain bike use include:

- Wrangle Creek Trail # 502
- Lake Creek Trail #534
- Stuart Peak Trail 517.

Boulder/Fly Lake Area: In the summers of 2007 and 2008 reports of a trail from Boulder Lake to Fly Lake were explored. No evidence of a trail connecting the two lakes was apparent in 2009, but monitoring will continue.

Stock use on trails closed to stock: During August 2009 a group violated the posted stock closure of the Fly Lake Trail # 336 to the lake. Horse use was also documented in September 2009 on Glacier Trail #521 to the lake which is also closed to stock.

Non system user developed trails: In the fall 2007, a user trail known as the Porcupine User Trail (aka The Notch) was recon'ed and mapped. This trail has been used mainly by hunters with livestock for many years during hunting season. This use is in violation of LAC standards for OC 2. The trail goes from the end of FS system Road 4323 (aka Three Cougars Road) to Porcupine Creek Trail #504 (a FS system trail). Chainsaw use has been evident on this non-system user trail for trail maintenance and for firewood cutting. Forest Service trail crews did restoration work on the trail in late October 2007 and two Montana Conservation Corps groups helped with obliteration of the trail in July 2008, and more debris was placed on the trail in August 2009 by wilderness rangers. The trail has not been cut out again as of October 2009, but some debris has been moved off the trail. This cannot without question be attributed to visitors moving debris because the area has substantial big game use and the trail is also used and probably originated as a game trail.

Another user trail was found in the early development stage in early September 2008 branching off of the Porcupine User Trail and ending up on lower down on Road 4323. This trail is another access route into the Porcupine Creek Area and may have been blazed out as a shortcut or workaround to the restoration/obliteration of Porcupine User Trail. The trail was recon'ed, mapped, the flagging was removed and the blazes were obliterated. A two person horse party with a pack string was encountered during the rehab work. These two people, who were traveling on the flagged and blazed route, said they did not blaze or flag the trail. This trail was monitored again in fall 2009 by wilderness rangers and found no new blazes or flagging but encountered rock cairns leading from Porcupine User Trail, following the ridge running southeast, and joining with Road 4323. These were taken down October 2009.

Low flying aircraft and associated noise: During the 2007 and 2008 seasons, low elevation aircraft (helicopters) and associated noise increased and were common over and in the Rattlesnake Wilderness. In 2004, the Federal Aviation Administration (FAA) issued Advisory Circular (AC) 91-36D which recognizes these impacts and encourages pilots to make every effort to fly not less than 2,000 feet above ground level over wilderness and other noise sensitive areas. In AC 91-36D, the ground level of noise-sensitive areas is defined to include the highest terrain within 2,000 feet above ground level laterally of the route of flight, or the uppermost rim of a canyon or valley. Avoidance of noise sensitive areas such as wilderness, if practical, is preferable to over flight at relatively low altitudes. According to the FAA, adherence to these practices is a practical indication of pilot concern for the environment, which will build support for aviation and alleviate the need for any more statutory or regulatory actions. The current FAA low flying / noise advisory circular is voluntary.

A two pronged attempt at reducing this impact is used for the Rattlesnake Wilderness. First, several local helicopter operators and some operators who advertise Rattlesnake scenic helicopter tours were contacted in person and by letter and asked to help us reduce low flying aircraft and noise impacts. A trailhead poster was also developed and posted in 2009 at Main Gold Creek and West Fork Gold Creek Trailheads advising wilderness visitors what to do and where to report low flying aircraft and associated noise impacts on their wilderness experience. We received one report of low flying aircraft in 2009, we advised the person reporting it to report it to the FAA, sent them a copy of FAA AC 91-36D and never heard back.

Food Storage Order: Food storage violations were steady during FY2007, and in FY08 food storage violations decreased. One violation occurred in 2009 at Boulder Lake where visitors had hung their food, but left a garbage bag hanging on a tree at their campsite. With each incident we leave LNT information tags and provide a note describing the violation. Almost all visitors wilderness rangers encounter said they know of the Food Storage Order and have rope to hang food. No Violation Notices were issued for the Food Storage Order in FY2009 and this may be due to either not finding violators or increased LNT education efforts are working.

Factor: Trails

Table 28 Trails

Indicator	Opportunity Classes	Standards
Various: clearing width, tread width, maximum sustained grade, maximum sustained tread depth	1	No trails or roads; no new trails or trailheads
	2	Clearing 3'-4' wide, 8' high; tread width: 12"-18"; maximum sustained grade: 30% for no more than 300'; max. sustained tread depth: 4" for no more than 200'; new trails only for correction of resource damage or public safety and possible new access from Grant Creek or Marshall Canyon; no new trailheads

All 49.95 miles of system trails in the Wilderness were cleared in 2009. Most of the trail clearing was done by the Wilderness Ranger with one volunteer, but the Missoula District Trail Crew helped on drainage improvements and hazard tree reduction of 25.1 miles of trail on Wrangle Creek Tr. No. 502, Lake Creek Tr. No. 534, Big Lake Tr. No. 1265, and Stuart Peak Tr. No. 517. Eight hazard trees were felled.

Factor: Use and Users

Table 29 Use and Users

Indicator	Opportunity Classes	Standards
Group size	1-5	10 persons per party
Trail encounters	1	1 group per day
	2	3 groups per day
Campsite encounters	1	0 groups per night
	2	1 group per night
Campsite density	1	No increase in existing number of campsites
	2 & 3	No more than three sites at each of the lakes. Other areas: no more than three per mile or no increase over existing situation
Campsite condition	1	Evidence of camping not to persist from year to year
	2 & 3	None worse than moderate
Reports of user conflict	all	No standard; will monitor number of incidents; upward trend in incidents will trigger management actions

Trail and campsite visitor encounters were recorded from June 19th, 2009 to October 18th, 2009. Two Wilderness Rangers from the Missoula Ranger District recorded encounters during their patrols.

Table 30 Use and User Campsite Encounters Rattlesnake Wilderness

Date	Location	OC #	Type of Party	Party Size	Type and # of Animals	Trip Length	Camp Encounters / Night by OC	Standard Met?
6/19/09	Gold Ridge Cabin	NA	Hike	3	Dog-2	2	NA	NA
7/3/09	Sander's Lake	2	Hike	4	2	2	1	GS=Y, TE=Y
7/18/09	Boulder Lake #1	2	Hike	4	0	3	1	GS=Y, TE=Y
8/1/09	Upper Twin Lake	2	Hike	2	Dog-2	2	1	GS=Y, TE=Y
9/20/09	Porcupine Creek User Trail Hunting Camp	2	Hike/Hunt	1	0	3	1	GS=Y, TE=Y

GS=Group Size, TE=Total Encounters

Table 31 Use and Users Trail Encounters Rattlesnake Wilderness

Date	Location	OC #	Type of Party	Party Size	Type and # of Animals	Trip Length	Groups per OC	Standard Met?
6/21/09	Boulder Lake Tr. No. 333	NA	Hike	2	0	2	NA	NA
6/21/09	Boulder Lake tr. No. 333	2	Hike	2	Dog-1	1	3	GS=Y, TE=Y
7/4/09	St. Peak Tr. No. 517	2	Hike	2	Dog-1	2	3	GS=Y, TE=Y
7/4/09	St. Peak Tr. No. 517	2	Hike	1	0	2	3	GS=Y, TE=Y
7/4/09	St. Peak Tr. No. 517	2	Hike	2	0	1	3	GS=Y, TE=Y
7/5/09	St. Peak Tr. No. 517	2	Run	1	0	1	3	GS=Y, TE=Y
7/5/09	St. Peak Tr. No. 517	2	Run	1	0	1	3	GS=Y, TE=Y
7/5/09	St. Peak Tr. No. 517	2	Hike	2	Dog-1	2	3	GS=Y, TE=Y
7/18/09	Boulder Lake Tr. No. 333	2	Hike	3	0	3	3	GS=Y, TE=Y
7/20/09	Boulder Lake Tr. No. 333	2	Hike	3	0	2	3	GS=Y, TE=Y
7/26/09	Primm Lake	2	Horseback	3	0	1	3	GS=Y, TE=Y
8/26/09	St. Peak Tr. No. 517	2	Hike	1	0	1	3	GS=Y, TE=Y
10/18/09	St. Peak Tr. No. 517	2	Hike	2	0	1	3	GS=Y, TE=Y
10/18/09	St. Peak Tr. No. 517	2	Hike	3	0	1	3	GS=Y, TE=Y

GS = Group Size and TE = Total Encounters

Table 32 Use and Users FY2009 Wilderness Ranger Summary of Encounters in the Rattlesnake Wilderness

Type of Use	Number of Groups			Number of People		
	Day Use	Overnight	Total	Day Use	Overnight	Total
Hike	5	11	16	8	27	35 / 73%
Hike/Fish	0	0	0	0	0	0
Hike/Hunt	0	0	0	0	0	0
Bike	0	1	1	0	3	3 / 6%
Bike/Fish	0	0	0	0	0	0
Bike/Hunt	0	0	0	0	0	0
Horseback	1	0	1	3	0	3 / 6%
Horseback/Fish	0	0	0	0	0	0
Horseback/Hunt	0	2	2	0	5	5 / 10%
Run	2	0	2	2	0	2 / 4%
Work (MCC / MWCo)	0	0	0	0	0	0
TOTALS	8	14	22	11	35	48*

*Total number of people in past reports has included MCC crews; however in FY 2009 no MCC crews were encountered bringing the total number of people encountered down.

Registration Program:

The volunteer Wilderness Registration Program in the Rattlesnake Wilderness Area started in FY2000. Five registration boxes were installed in June and July, 2000, at trail access points into the Rattlesnake Wilderness

(Point Six, West Fork Gold TH, Gold Creek TH., Stuart Peak Trail at Wilderness boundary, Road 99@ MP 12). Registration cards are been collected at every opportunity.

The Stuart Peak Trail register box has been vandalized and destroyed on two occasions. It was rebuilt and reinstalled July 18, 2005. More damage was discovered when cards were collected that fall. A suspected squirrel had chewed the box considerably and used filled out and blank cards as nesting material in the box. The Wilderness Rangers took out the chewed up registration box on Stuart Peak Trail #517 and installed a new steel registration box at the Wilderness boundary on October 13, 2007.

West Fork Gold register box was vandalized sometime in late July 2008. The box was broken and on the ground, and the registration cards were torn and mostly disintegrated from rainfall. The Wilderness Rangers fixed the box in August 2008.

The following summary describes percentages based on responses given for each registration card question. Two hundred twenty six cards were filled out in 2008.

- 91.7% were from Missoula or the surrounding area
- 3.2% percent of registries were from out of state and
- 5.1% unknown.

Actual Wilderness use is not reflected in the registration card numbers because it is not mandatory for people to register. These numbers are a good sample of the numbers and type of use in the Rattlesnake Wilderness. In 2003 Wilderness Rangers asked visitors they encountered in or near, the Wilderness area if they had registered. Their preliminary impression is that approximately one out of every four parties registered. However, actual wilderness use may not be four times the registration amount because many registered parties used trails with boxes but did not actually visit the wilderness area. This scenario is especially applicable for the boxes on Road 99 (Mile 12) and Stuart Peak Trail 517 (Mile 6). Table 36 displays registration results by location and date. Table 37 displays activity types for the registered parties this summer.

Table 33 2009 Rattlesnake Wilderness Area Registration Date and Locations

Box Location	Install Date	Total	AUG 08	SEP 08	OCT 08	NOV 08	DEC 08	JAN 09	FEB 09	MAR 09	APR 09	MAY 09	JUN 09	JUL 09	AUG 09	SEP 09	OCT 09
Point Six	6/7/00	4	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0
Gold Cr.	6/8/00	14	0	0	0	0	0	0	0	0	0	0	0	0	9	5	0
W. Fk. Gold Cr.	6/9/00	37	0	0	0	0	0	0	0	0	0	1	15	5	9	7	0
Road 99	6/16/00	37	0	0	8	4	0	0	1	0	0	6	7	1	7	2	0
Stuart Peak	7/18/05	66	0	1	7	2	0	0	0	0	0	0	3	10	18	22	3

Table 34 2009 Rattlesnake Wilderness Registration Activity Types

Box Location	Total #	Foot	Bike To Boundary	Snow Travel	Pack Stock
Point Six	4	4	0	0	0
Gold Cr.	14	13	0	0	1
W.Fk.Gold Cr.	37	36	0	0	1
Road 99	37	10	24	1	0
Stuart Peak	66	58	6	0	2
TOTALS	158	121	30	1	4

Table 34 is data recorded only if the information was given on the registration cards.

Snowbowl Ski Area:

Snowbowl Ski area provides summer chair lift services Friday through Sunday 12:30 pm to 5 pm during the summer months (June – September) to both hikers and mountain bikers. Due to the proximity of the ski area to the OC 1 in the Rattlesnake Wilderness (Grant Creek Basin), Snowbowl is required to count and report chairlift riders with overnight backpacks and parties that plan overnight use from the chairlift. The monitoring objective is to ensure that the chairlift does not serve as a de facto Wilderness trailhead and use in the Wilderness does not exceed standards. Only the lower Grizzly lift operates in the summer to discourage lift served Wilderness access. The upper Lavelle Lift doesn't operate in the summer because it would take visitors right up to the Wilderness boundary. The hours of operation are also designed to discourage lift served access to the most remote parts of the wilderness. The lift operation season in 2009 was June 27 through September 13, Friday – Sunday, 12:30 to 5 pm. The operating season in 2009 was 35 days compared to 27 days in 2008 (mechanical and weather delays).

Table 35 Summer Chairlift Use at Snowbowl Ski Area

Year	Adult	Child/Senior	Mountain Biker	Overnight Use	Total Use
2009	1479	243	578	2	2300
2008	1207	178	513	6	1898
2007	1294	196	516	6	2012
2006	1143	237	559	5	1944
2005	1802	143	412	4	2361
2004	1570	108	178	1	1857
2003	633	169	266		1068
2002	1104	223	335	4	1666
2001	1166	174	183	4	1527
2000	566	137	282	4	989
1999	728	200	306	18	1252
1998	919			0	919

Trend – Number of Users

The upper Snowbowl Ski area lies directly adjacent to the wilderness boundary. This has led to the “creep” of MSB ski use off developed runs and into the Rattlesnake Wilderness.

Yo-yo skiing (John Korb, former Forest Service Rocky Mountain Region Winter Sports Administrator) is a term that means that skiers use the ski lift to go into the wilderness, ski down the slope and then traverse back into the ski area all by lift assisted gravity skiing. At Snowbowl, “yo-yo” use meant skiing off upper Paradise and the North Dakota Down hill to the point that the slopes above Rankin Lake was getting significant use and skiers were using the Wilderness as an extension of the ski area. Skiers were using the lift to yo- yo ski in the wilderness without the climb required to enter the wilderness through the established exit at Point Six. This exclusively lift assisted wilderness access without climbing had developed distinctive runs in the wilderness which constitute developed recreation and ski area “creep” into the wilderness. Developed recreation is not allowed in congressionally designated wilderness areas. In 2005, the boundary management policy for Montana Snowbowl was updated in the annual operating plan to prevent the creep of developed lift served skiing and ski runs into OC 1 of the wilderness. Monitoring in the winter of 2008 – 2009 indicated this boundary management was relatively effective, but still need attention and maintenance in the winter to be effective.

The Lolo NF does not want to limit appropriate access to backcountry skiing experiences in the Wilderness. Skiers from Montana Snowbowl are welcome to exit the ski area at the established exit gates and ski from the ski area into the wilderness and exit through the wilderness, ski into the wilderness and climb back up into the ski area, or enter the wilderness and enter the ski area.

This boundary management is intended to keep OC 1 (Pristine) in the Grant Creek Basin as an undisturbed, unmodified natural environment with outstanding opportunity for isolation and solitude with an emphasis on sustaining natural ecological processes.

Campsite Inventories

There are currently 95 Wilderness campsites in the inventory as of 2009 (site # 517-16, and site # 330-7 were taken off the inventory because there was no sign of a campsite in the area). Sixty-five of those sites have been naturalized and are no longer considered sites but are kept on the inventory to monitor and assess change to naturalized campsites, leaving 30 usable campsites in the Wilderness. 28 campsites were inventoried in 2009 and three of those were naturalized.

Six campsites are close to being out of density standards as of FY2009. Three of these sites are at Boulder Lake and three are at Sanders Lake. In an effort to reduce the overall impact to the resource, the managers have decided to designate these frequently used sites as the three sites per lake, instead of trying to naturalize them and have users establish new sites somewhere else. We will try and keep these within density standard through site management and restoration techniques.

A new campsite map with camp locations was created for all camps inventoried in 2004 through 2006. The map will continue to be updated in following years. Naturalized campsites will be kept on the map so that their condition can be easily investigated in the future, but it is important to note that many of the campsites (identified by waypoints) have naturalized and are no longer sites. (The campsite map is located in the *Wilderness* file under *camps, rattlesnake, 06 inventory map.tpo* and *06 inventory map.tpg*.) A database was created in 2005 that lists all campsite inventories for 2005 and hyperlinks to pictures of the sites. (This spreadsheet is located in the *Wilderness* files under *camps, rattlesnake, campsite inventories.xl*.)

Technical Note: In an effort to create a more detailed and complete campsite database, campsite names are being replaced by campsite numbers. The first number indicates the closest road or trail to the site, followed by the site number. Some sites not evaluated since we began recoding latitude and longitude for each site still have a site name and number.

Table 36 Use and Users 2009 Rattlesnake Wilderness Campsite Inventory

Site Number	Latitude	Longitude	Elevation	Current Condition Index	Condition Index Change	Last Year Inventoried
52-1	47.03370	-113.83134	6099	NAT	NAT	2009
52-2	47.01801	-113.83048	5649	NAT	NAT	2009
336-1	47.08914	-113.8380	6374	55	+2	2009
336-2	47.08699	-113.82104	6374	NAT	-20	2009
336-3	47.08822	-113.82106	6374	39	-2	2009
336-4	47.08182	-113.79704	5862	30	+7	2009
336-5	47.06709	-113.83652	7160	21	-13	2007
336-6	47.06648	-113.83696	7160	20	-14	2007
333-1	47.07386	-113.84247	6523	31	NAT	2009
333-2	47.07391	-113.84272	6506	NAT	NAT	2008
333-3	47.07469	-113.84211	6500	NAT	NAT	2008
333-4	47.07465	-113.84275	6514	NAT	NAT	2008
333-5	47.07616	-113.84140	6504	52	-8	2008
333-5B	47.07622	-113.84195	6562	28	+28	2008
333-6	47.07391	-113.84792	6843	NAT	NAT	2008
333-7	47.08454	-113.84729	6843	NAT	NAT	2008
333-9	47.07723	-113.83641	6516	NAT	NAT	2008
333-10	47.07718	-113.83604	6497	NAT	NAT	2008
333-11	47.07548	-113.83333	6499	46	-3	2008
333-12	47.07333	-133.82983	6498	26	-5	2008
333-13	47.07247	-113.84096	6525	NAT	NAT	2008
333-15	47.07699	-113.83798	6501	39, NAT	-6	2008
Five Lakes Basin, Lake 3 – 1				NAT	NAT	2004
Five Lakes Basin, Lake 1 – 1				22, NAT	NAT	2004

Site Number	Latitude	Longitude	Elevation	Current Condition Index	Condition Index Change	Last Year Inventoried
Upper Stuart Peak 1				-	-	-
Upper Stuart Peak 2				NAT	NAT	2009
Upper Stuart Peak 3				NAT	NAT	2009
Upper Stuart Peak 4				NAT	NAT	2009
Upper Stuart Peak 5				NAT	NAT	2009
534-4	47.02752	-113.92532	6753	31	+7	2007
534-5	47.02687	-113.92578	6752	NAT	NAT	2008
534-6	47.02880	-113.92585	6778	NAT	NAT	2007
534-7	47.02888	-113.92560	6808	NAT	NAT	2007
534-2	47.02637	-113.91308	6302	35	+5	2007
534-3	47.02658	-113.91403	6310	24(NAT)	NAT	2007
Carter lake 3				NAT	NAT	2004
1265-1	47.03913	-113.91615	6888	NAT	NAT	2008
1265-2	47.03829	-113.91615	6897	38	+5	2008
Big Lake 3				NAT	NAT	2008
Sheridan Lake 1				NAT	NAT	2008
534-8	47.01910	-113.92089	6855	28	+28	2008
534-9, 9b	47.01863	-113.92013	6890	35	-7	2008
534-10	47.01950	-113.92095	6879	(22)NAT	NAT	2008
534-11	47.01953	-113.92122	6905	NAT	NAT	2008
534-12	47.01935	-113.92143	6904	22	+22	2008
534-13	47.01896	-113.92239	6868	NAT	NAT	2008
534-14	47.01860	-113.92352	6901	NAT	NAT	2008
534-15	47.01777	-113.92475	6890	NAT	NAT	2008
534-16	47.01848	-113.92041	6860	34	No previous information	2008
534-19, 19b	47.01820	-113.91997	6874	NAT	NAT	2009
534-20	47.02600	-113.92047	6529	45	+8	2009
330-1	47.01123	-113.91459	7081	27(NAT)	-9(NAT)	2007
330-2	47.01143	-113.91523	7083	36	No previous information	2007
330-3	47.01097	-113.91473	7060	26(NAT)	NAT	2007
330-4	47.00980	-113.91383	7099	30(NAT)	NAT	2007
330-5	47.01040	-113.91368	7089	NAT	NAT	2007
330-6	47.00922	-113.91520	7073	NAT	NAT	2008
330-8	47.01103	-113.91528	7059	NAT	NAT	2007
330-12	47.01014	-113.91818	7224	45	+2	2009
330-13	47.01012	-113.91840	7222	NAT	NAT	2009
330-14	47.01072	-113.92028	7216	36	+36	2009
330-11	47.00368	-113.90151	6774	25	No previous information	2007
330-16	47.01151	-113.91884		NAT	NAT	2009
330-17	47.01070	-113.91933	7229	41	+6	2009
Cliff Lake 1				NAT	NAT	2008
Cliff Lake 2				NAT	NAT	2008
Cliff Lake 3				NAT	NAT	2008
Cliff Lake 4				27	NAT	2008
Lost Lake 1				NAT	NAT	2008
Lost Lake 2				NAT	NAT	2008
Peterson Lake 1				NAT	NAT	2008
Peterson Lake 2				NAT	NAT	2008

Site Number	Latitude	Longitude	Elevation	Current Condition Index	Condition Index Change	Last Year Inventoried
502-1	47.04978	-113.92395	6443	27	-3	2008
502-2	47.04897	-113.92492	6439	NAT	NAT	2008
502-3	47.04867	-113.92299	6457	NAT	NAT	2008
502-4	47.04883	-113.92325	6453	22, NAT	NAT	2008
517-1	47.05912	-113.93270	6938	NAT	NAT	2007
517-2	47.05965	-113.93300	6847	32, NAT	0	2009
517-3	47.05960	-113.93372	6912	40	+40	2009
517-4	47.06037	-113.93303	7049	NAT	NAT	2009
517-5	47.06135	-113.93657	6909	43	+1	2008
517-6	47.06150	-113.93705	6879	40	-4	2008
517-7	47.06223	-113.93787	6961	NAT, 28	NAT	2009
517-8	47.06205	-113.93858	6924	NAT	NAT	2009
517-9	47.06217	-113.93997	7073	NAT	NAT	2009
517-10	47.06058	-113.93995	6944	26(NAT)	NAT	2008
517-11	47.01953	-113.92122	6905	NAT	NAT	2009
517-12	47.04608	-113.93204	6892	NAT	NAT	2008
517-13	47.04600	-113.93353	7013	25(NAT)	NAT	2008
517-14	47.04550	-113.93248	6998	45	-6	2008
517-17	47.00608	-113.92094		NAT	NAT	2009
517-18	47.00615	-113.92097		NAT	NAT	2009
516-1	47.01961	-113.96867		NAT	NAT	2006
516-2	47.03158	-113.98376	6830	NAT	NAT	2009
Rankin Lake	47.03291	-113.98186	6850	25	No previous information	2007

The following scale of the weighted impact index is used in part to assess campsite condition:

Minimum impact: 20-23 Moderate impact: 24-34 High impact: 35-45 Extreme impact: 46-60
BOLD indicates 2009 condition surveys

Factor:Vegetation

Table 37 Indicator, Opportunity Classes and Standards

Indicator	Opportunity Class	Standard
Insect Threat	1,2, & 4	No control
Noxious weeds	all	Controls are desirable; biological control preferred, other methods will be considered in project environmental analysis. Cutting meadow in Sawmill Gulch acceptable/desirable until more positive control approved Decisions subsequent to 1992 have included herbicide and biological weed controls.
Vegetative diversity	all	Monitor. Compare vegetative community composition every 10 years against previous decade's communities by aerial photo interpretation

The movement of knapweed and other weeds into the Wilderness has been slowed by treatment in the Wilderness, in the NRA and along Road 99 / Trail 515, but is a continuing, persistent threat to the Wilderness. Rattlesnake Road 99 serves as a primary vector for the movement of weeds. Weed treatment, by the Forest Service, in areas of concentrated recreation use has reduced weed spread. Special attention is being paid to roads, trails, trailheads, campsites, winter ranges, dam maintenance areas, areas disturbed by wildfire and heli-spots. Certified weed-free feed is required on all federal lands in Montana to reduce the spread and introduction of weeds, although stock use in the Wilderness is very low.

Mountain Water Company (MWC) has a special use permit for dam operations and maintenance in the Wilderness. There are also provisions in the Rattlesnake Act that allow for maintenance and operation of MWC dams in the wilderness. To address concerns about MWC spreading weeds into the Wilderness by dam maintenance, their permit includes a requirement for a weed management and prevention plan and MWC has

completed a weed prevention and management plan for their operations. MWC started a weed inventory of Lake Creek Trail and Carter Lake in 2004, and finished the inventory in 2006 in connection with work to be done on the Carter Lake dam. Weeds found on the inventory include Canada thistle, common tansy, Dalmatian toadflax, musk thistle, oxeye daisy, spotted knapweed and St. Johnswort. The “Carter Lake Weed Mitigation and Management Plan” was also completed by MWC and approved by the FS in 2006. Details of the inventory and plan can be found in the *Wilderness Folder* on the Missoula District’s network inside the *Mountain Water Co.* and *Weeds* files. MWC follows weed prevention measures contained in the mitigation and management plan designed to prevent and control new and established weeds along their travel corridors. In 2007 a weed mitigation plan was implemented requiring that MWC treat weed infestations along their travel corridors. They provide funding to the FS to monitor, map and treat weeds on areas affected by their dam maintenance activities. As a result of this funding, we were able to fund a six person crew from the MCC for one week in 2007. The crew spot treated the Carter Lake trail from Carter Lake to the wilderness boundary and the Wrangle Creek trail from Little Lake to approximately one mile beyond the wilderness boundary. In 2008, this funding was used to fund an FS wilderness ranger to go in for a week and do follow up on the 2007 treatments and conduct “search and destroy” weed treatments as shown below in Table 40. In 2009 following two years of herbicide treatment along the Lake and Wrangle creek trails and at the dams associated with the trails and MWC’s operations, MWC funding was used to monitor and update our weed inventory in order to determine the effectiveness of previous year’s treatments. Monitoring is a component of their Weed Mitigation and Management Plan. The inventory was accomplished and indicates that the previous year’s treatments have been successful in containing and or reducing infestation size but at this point not in eradication of the better established species and sites. We are reducing weeds but continued vigilance in monitoring and follow up treatments will be required in order to eradicate the better established infestations.

Table 38 2008 Wilderness Weed Treatments

Location	Weeds Treated	Control Used	Acres
Carter Lake Dam and Trail #534 from dam down to Sheridan Creek.	SK,CT,MT,OD,	Aminopyralid 6oz/ac	0.1
Wrangle Creek Trail #502	SK,CT,MT,OD,	Picloram 5oz/ac	0.33
Openings around Sheridan Creek off Trail #534.	SK,CT,MT,OD,	Aminopyralid 6oz/ac Picloram 16oz/ac	0.44
Rattlesnake Trail #515	SK, CT, MT, OD,	Picloram 6oz/ac	.66
Porcupine Creek Trail #504	SK, CT, MT, OD	Picloram 16oz/ac	.76

*spotted knapweed (SK), oxeye daisy (OD), Canada thistle (CT), musk thistle (MT), houndstongue (H), Dalmatian toadflax (DT) yellow/common toadflax (YT)

Manual control is another control technique that is used; especially on small isolated infestations in the wilderness Rangers also map and pull weeds (especially Canada thistle) in various locations within the Mineral-Primm 2003 wildfire burned area. As FS employees work in the backcountry and come across new infestations the locations are noted or mapped and small infestations of weeds are pulled. The Rattlesnake Wilderness Ranger pulled over 100 Canada thistle plants from Little Lake and Glacier Lake dams in FY2009.

Bull Lake has a substantial Canada thistle infestation that will need attention in 2010 and beyond.

Mountain Water Company Dam Maintenance

In 2006 the MWC completed their work on the Carter Lake outlet stream. Two MCC crews were used to lower the outlet stream channel from the dam in order to drain the backed up water against the dam and allow better access to the outlet pipe. (Engineering plans, a topo map and a photo log are located in the Lolo NF, Missoula Ranger District’s *Wilderness* computer file (2320_Wilderness\MtnH2O\Carter Dam Project)). Wilderness Rangers have developed a photo log and PowerPoint of Carter Lake project area. The 2007 pictures were compared to those taken in 2006 to assess revegetation, stream channel stability, and other resource damages occurring in the Wilderness at the time. The areas of impact are recovering with more vegetation present in

2007 than in 2006. The stream channel is stable as of June 2007 and no other resource impacts were found in the project area. The photo-points are to be repeated in 2010.

In the fall of 2009, MWCo continued maintenance on Big Lake from 2008. They also camped at Big Lake because this site is appropriate for larger groups and has high resiliency in regards to vegetation loss. These crews continue to be trained and reminded annually of the importance of Leave No Trace practices when working in the Wilderness.

Table 39 MWCo Dam Status as of fall 2009.

Lake	Value-Status
Sanders	Closed
Big Lake	Open
Little Lake	Open
Sheridan Lake	Open
Carter Lake	Open
Glacier Lake	Open
McKinley Lake	Closed
Worden Lake	Closed

Table 40 MWCo Activities, Including Mechanized / Motorized Use in Rattlesnake Wilderness FY2009

Rattlesnake Travel Log – Mountain Water Company 2009			
Date	Travel Mode	# of People	Purpose
05/28	Helicopter	3	Fly over inspections
06/04	Helicopter	3	Fly over inspections/maintenance
06/08	Vehicle	1	Road maintenance rd 99
06/08	Vehicle	2	Road maintenance rd 99
06/08	Vehicle	8	Road maintenance rd 99
06/09	Vehicle	1	Road maintenance rd 99
06/09	Vehicle	1	Road maintenance rd 99
06/09	Vehicle	1	Road maintenance rd 99
06/09	Vehicle	1	Road maintenance rd 99
06/09	Vehicle	1	Road maintenance rd 99
06/10	Vehicle	1	Road maintenance rd 99
06/10	Vehicle	1	Road maintenance rd 99
06/10	Vehicle	1	Road maintenance rd 99
06/10	Helicopter	4	Fly over inspections
06/11	Vehicle	1	Road maintenance rd 99
06/11	Vehicle	2	Road maintenance rd 99
06/11	Vehicle	1	Road maintenance rd 99
06/11	Vehicle	1	Road maintenance rd 99
06/11	Vehicle	2	Road maintenance rd 99
06/12	Vehicle	2	Road maintenance rd 99
06/12	Vehicle	1	Road maintenance rd 99
06/12	Vehicle	1	Road maintenance rd 99
06/15	Vehicle	8	Road maintenance rd 99
06/15	Vehicle	2	Road maintenance rd 99
06/15	Vehicle	1	Road maintenance rd 99
06/15	Vehicle	1	Road maintenance rd 99
06/15	Vehicle	1	Road maintenance rd 99
06/16	Vehicle	2	Road maintenance rd 99
06/16	Vehicle	1	Road maintenance rd 99
06/16	Vehicle	1	Road maintenance rd 99
06/16	Vehicle	1	Road maintenance rd 99
06/17	Vehicle	2	Road maintenance rd 99
06/17	Vehicle	1	Road maintenance rd 99
06/17	Vehicle	1	Road maintenance rd 99
06/17	Vehicle	1	Road maintenance rd 99
06/18	Helicopter	3	Fly over inspections/ lake maint.

Rattlesnake Travel Log – Mountain Water Company 2009			
Date	Travel Mode	# of People	Purpose
06/18	Vehicle	2	Road maint. rd 99/lake maint.
06/19	Vehicle	2	Road maintenance rd 99
09/02	Helicopter	3	Project design/Big Lake
09/02	Helicopter	3	Project design/Big Lake
09/28/09	Helicopter	1	Fly in supplies for project/Big Lake
09/28/09	Helicopter	1	Fly in supplies for project/Big Lake
09/28/09	Helicopter	1	Fly in camp/Snow Shoe Inn
09/28/09	Vehicle	18	Big Lake proj./Annual Maintenance
09/29/09	Vehicle	3	Big Lake proj./Annual Maintenance
09/30/09	Vehicle	3	Big Lake proj./Annual Maintenance
10/01/09	Vehicle	2	Big Lake proj./Annual Maintenance
10/02/09	Vehicle	2	Big Lake proj./Annual Maintenance
10/05/09	Helicopter	1	Fly in supplies for project/Big Lake
10/05/09	Helicopter	1	Fly in supplies for project/Big Lake
10/05/09	Vehicle	19	Big Lake proj./Annual Maintenance
10/06/09	Vehicle	2	Big Lake proj./Annual Maintenance
10/06/09	Helicopter	1	Fly in supplies for project/Big Lake
10/06/09	Helicopter	1	Fly in supplies for project/Big Lake
10/06/09	Helicopter	1	Fly in supplies for project/Big Lake
10/06/09	Helicopter	1	Fly in supplies for project/Big Lake
10/07/09	Vehicle	2	Big Lake proj./Annual Maintenance
10/08/09	Vehicle	2	Big Lake proj./Annual Maintenance
10/08/09	Helicopter	1	Fly out camp/Snow Shoe Inn
10/08/09	Helicopter	1	Fly out supplies project/Big Lake

Wildfires:

The RNRAW does not have a Fire Use Plan. This issue is planned to be addressed in the Forest Plan Revision.

There were no fire incidents in the Rattlesnake Wilderness in 2009.

In August 2008 some of the 2003 Mineral Primm wildfire fire effects were monitored. No major findings were reported. In 2009, Wilderness Rangers focused on monitoring more points in the Mineral Primm Monitoring Plan.

In 2006, rangers with the help of the Wilderness Institute monitored the Mineral-Primm fire effects. The monitoring followed the guidelines laid out in the Mineral-Primm Fire Suppression Monitoring Plan prepared in the fall of 2003 right after the fire. The plan lists 35 waypoints and lists the monitoring objectives for each point. These points are to be monitored by the Wilderness Rangers every two years. When the impacts are resolved at each of the points and no further monitoring is deemed necessary, the points will be removed from the list. Monitoring looks at soil condition, watershed impacts, recreational opportunities disturbed, and Wilderness quality per the guidelines laid out in the plan.

Points that were monitored in 2009 and recovered enough to drop from the monitoring list are identified in bold in the table below. The remaining points are scheduled for monitoring in 2011 because of weed and erosion concerns.

Table 43 Mineral Primm Fire Monitoring Points.

Site Description	GPS Name on Map	What to Monitor	Condition
Spike Camp ('09)	D SPIKE	Recovery, noxious weeds, future camping by public, and trash	Spotted knapweed and oxeye daisy present and treated in '04, no trash, no sign of continued camping.
Sling Site ('09)	D SLING 1	Noxious weeds and recovery	Spotted knapweed and oxeye daisy present and treated in '04.
Fireline explosives used on Porcupine Tr 504 ('09)	From TR LN INT to TR LN END	Noxious weeds, recovery, erosion, social trail development	Thistle in tributary, line not recovered due to heavy large game use. (both ends)
Fireline-explosive/ Hand Line ('09)	From HANDFLE to HANDFLEEND	Noxious weeds, recovery, erosion on steep parts, social trail development where line meets 504 and 515 trails.	Thistle present on line(47.04340, 113.86156 and 47.04388, 113.86401). Line present with game use.
Fireline-explosive ('09)	From FLE 1 to FLE 1 END	Noxious weeds and recovery	Trail still present but recovering with no sign of weeds.
Porcupine Trailhead ('09)	PORC TH	Noxious weeds and recovery	Spotted knapweed prevalent and treated in '04, '06', and '08'. Canada Thistle is becoming established at the trailhead and 1 mile up the trail.
Trail ('09)	From CREW T END on Rd #99 to CREW TR	Noxious weeds, recovery, erosion, and public social trail development	Trail still apparent, no apparent weeds, no apparent use
Gold Ridge Cabin and Meadow to North ('09)	GRCABIN	Noxious weeds, especially in meadow, recovery at cabin and grasses in meadow, social trail development from cabin to meadow and trash	Spotted knapweed and houndstongue found around cabin and water trail. No weeds were found in the meadow and it is recovering well after suppression tactics.
Trail ('09)	From W TRAIL to WHALEROCK	Noxious weeds, and social trail development off Trl 333	Very little sign of the trail from whalerock to Trail #333. No weeds present until DP14.
Handline ('09)	Around WHALEROCK and W HANDLINE	Noxious weeds, recovery, and erosion on steep slope	The line is still present but naturalizing with little to no erosion on steep slopes. Canada thistle found (47.06833, 113.81304), and dandy lion found (47.06807, 113.81248).
Small pond ('09)	RED LAKE	Monitor for wildlife use, retardant hit pond	Grass, lilly pads, and bull frogs are present in the area.
Boulder Meadow ('09)	BOULD MEDO	Noxious weed, recovery	Canada thistle found in three areas: 2 places on SE edge of meadow and in smaller adjacent meadow. Also found on a rise NW of meadow, where firefighters camped and a latrine is located. 2009 Canada Thistle still present but not widespread.
Hose line ('09)	From BOULD MEDO to PUMPSITE	Noxious weeds, recovery, social trail development from lake to meadow.	No weeds apparent, hoseline logged in, hard to travel, no sign of use.
Spike camp ('09)	D SPIKE	Recovery, noxious weeds, future camping by public, and trash.	Knapweed and oxeye daisy on Wrangle Cr. Trail are still present but deminishing.
Helispot ('06)	H2	Noxious weeds and recovery	
Sling Site ('05)	D SLING 1	Noxious weeds and recovery	Minimal sign of disturbance Knapweed prolific, worry about where sling loads spread it to
Sling Site ('05)	D SLING 2	Noxious weeds and recovery	
Sling Site ('09)	D SLING 3	Noxious weeds, recovery, and look around north	No sign of weeds present.

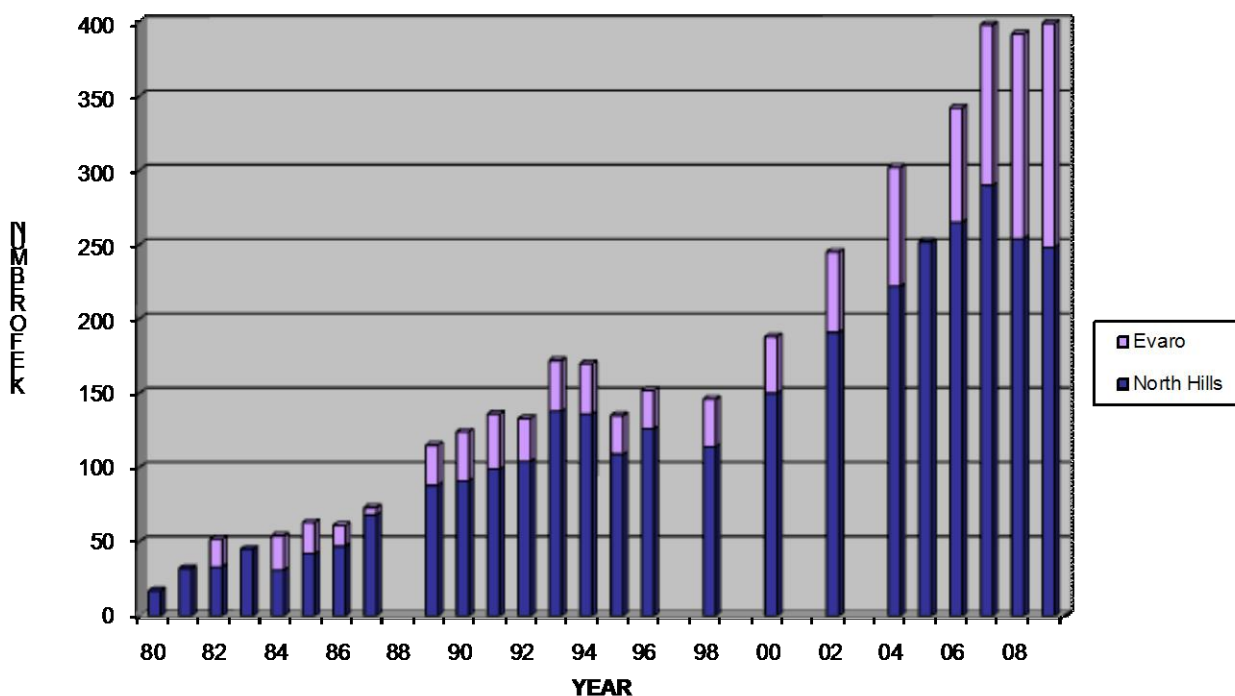
Site Description	GPS Name on Map	What to Monitor	Condition
		and south a bit where cold trail was dug for same things	
Trail ('09)	From D SLING 1 to RS TR INSP	Noxious weeds, public social trail development, erosion, and recovery	Cut trees as sign of trail, Minimal erosion, Some game use, No weeds found
Trail ('09)	From RS TR INSP to RSHANDLINE	Noxious weeds, recovery, erosion, and public social trail development	Trail intermittently apparent with game use and no weeds apparent.
Trail ('05)	From TR TO FLE to FLE2	Noxious weeds, recovery, erosion, and public social trail development	Trail still apparent, Disturbed ground (fireline), Knapweed found in eroding gully – GPS waypoint KNP 61805 approx 30 plants pulled
Trail ('06)	From D SPIKE to H2	Noxious weeds, recovery, erosion, and public social trail development	
Triangle Peak Trail ('09)		Noxious weeds and erosion.	The old trail is still present but has been left to naturalize. Hunters and few hikers use the area.
Stuart Peak Helispot ('09)		Noxious weeds and erosion.	No weeds found.

Wildlife/Special Elk Hunt:

In the spring of 2005, MTFWP did an aerial survey of the north side of Missoula, recording 252 elk in the Grant Creek Herd. MTFWP predicts a detection rate of 75%, therefore, the Grant Creek herd is comprised of approximately 336 head. Portions of this herd summer in the RNRAW. The numbers in the Grant Creek herd continued in an upward trend for 2006 and 2007. With this upward trend has come an increasing wildlife conflict with Grant Creek land owners. Many of these elk are believed to summer in the Rattlesnake Wilderness.

To mitigate residential conflicts from this rapidly expanding elk population, FWP initiated an early elk rifle-hunting season (beginning September 15th and ending the last day of the general rifle season) in portions of the RNRAW in 2006 and the hunt has continued through 2009. In 2006 and 2007, FWP offered hunters 105 permits, while in 2008 and 2009 the Agency decreased the number of permits to 80 (75 antlerless elk and 5 either-sex). FWP created the hunt, in cooperation with the Lolo NF, in response to increasing numbers of wintering elk on private lands in the Grant and Butler Creek drainages, and subsequent game damage issues on those lands. In addition, over the last several years, the elk have migrated earlier to their winter range from their summer range in the RW&NRA, and remained on the winter range later in the spring. Opportunity to harvest those elk during the general rifle season is difficult because of limited access on private lands. Without an effective harvest, the North Hills herd was projected in 2006 and 2007 to double within five years. Because of the implementation and success of the Rattlesnake hunt, as well as a late season game damage hunt on private lands in the North Hills, the doubling rate for the population has lengthened to approximately seven years. Based upon trend data collected during aerial surveys, the population also appears to have stabilized (See below).

Figure 1: HD 283 (West) - North Hills and Evaro Elk Observed During Fixed-wing Aircraft Surveys (1980 - 2009)



From an elk management perspective, the early elk Rattlesnake hunt has been an integral component in allowing MFWP to better manage the North Hills/Evaro elk. FWP hopes to continue coordination with the Lolo NF and offer this hunting opportunity again in 2010.

Data collected annually from a questionnaire sent to permit holders reflects an increase in the number of hunters taking advantage of this unique hunting opportunity (See Table 44 below). Harvest during 2007 and 2008 increased 9% from 2006. Fewer people camped in 2008 compared with 2006 and 2007, with a decline of 18%. More hunters reported utilizing a bike in 2008 than in any other year. Also, more people hunted exclusively on foot in 2008 than in 2006 and 2007. These data may reflect an increase in day-use hunting versus over-night camping trips.

Table 44 Early Rattlesnake Elk Hunt Results from Questionnaire Respondents

Survey Element	2006	2007	2008	2009
# hunters responding to survey	52	55	53	2009 data is unavailable at the time of this report.
# respondents that did not hunt	13 (25%)	13 (24%)	5 (9%)	
# people who hunted	39 (75%)	42 (76%)	48 (91%)	
# people who camped at any time during his/her hunt	38 (73%)	40 (73%)	29 (55%)	
# people who used bikes to hunt	15 (29%)	10 (18%)	29 (55%)	
# people who used horses to hunt	12 (23%)	2 (0.04%)	7 (13%)	
# people who hunted exclusively on foot	13 (24%)	21 (40%)	32 (60%)	
# people who harvested an elk	9 (17%)	14 (26%)	14 (26%)	
# of known bowhunters who harvested an elk before the special hunt	0	0	0	

The Lolo NF supported this special rifle hunt contingent on managing and mitigating its impacts to the wilderness resource. The special hunt is becoming more popular, and after the fourth year, impacts to the wilderness are stabilizing and the hunt is having less of an adverse impact. Future hunts will require extra on the ground presence, pre-hunt hunter education and mitigation to meet the standards in the Rattlesnake LAC Direction (which is part of the Lolo NF Plan). While bow hunting and some rifle hunting occurred in the wilderness prior to the special hunt, the special early elk rifle hunt has attracted more hunters and a higher impact group of hunters to the wilderness. Impacts to the wilderness from this hunt to date have included:

- chainsaw use in the wilderness (firewood cutting)
- re-establishment and increased impact on non-system user trails
- bear food storage order violations
- improper human waste disposal
- tree cutting
- high impact horse holding practices (damage to soil, vegetation and trees)
- horse drawn heavy wagon use (large volume camp impacts, improper horse holding, off trail travel at Elk Meadows)
- litter increase (more than during summer backpacker season)

In December 2007 and January 2008 the Lolo NF met with FWP to discuss and develop mitigation measures to reduce the impact of this hunt on the wilderness resource. The Lolo NF and FWP increased patrolling efforts and communicated patrolling dates to extensively cover more area. Special low impact messages were included in FWP posters, web postings and hunter correspondence. The Lolo NF developed two new low impact posters that were posted at hunt access points and presented at the pre-hunt hunter meeting in September 2008. These were posted again in 2009.

Impacts from the 2009 early elk hunt have seemed to decrease. Wilderness rangers found no chainsaw use in the wilderness area, nor the establishment or re-establishment of non-system trails. However, horse use continues to have the greatest impact from the early elk hunt due to lack of space, feed, and water for stock.

Fish Study

FWP initiated a survey of the Rattlesnake Wilderness lakes in 2006. The study includes fisheries assessments, amphibian surveys, lake bathymetric mapping, water quality measurements, and notes on levels of recreational use (camp sites, fire rings, trails, refuse, etc). From 2006-2009, a total of 40 mountain lakes greater than 1 acre in size in the wilderness were surveyed by MFWP. Forty percent (16) of these waters were fish-bearing, with the majority supporting self-sustaining (wild) trout populations. The exceptions are three lakes in the upper Gold Creek drainage which are stocked periodically with westslope cutthroat trout to sustain these fisheries. Fish-bearing lakes predominantly supported westslope cutthroat trout, with rainbow trout or Yellowstone cutthroat trout also present in four lakes. Twenty-four fishless lakes greater than 1 acre in size and numerous ponds/wetlands were also surveyed. The remaining seven un-surveyed lakes are scheduled for in 2010-2011.

Table 45 2009 Wilderness Ranger’s Wildlife Observations and Penology Notes

Observation	Date	Number Sighted	Location
Heartleaf arnica-full bloom	6/6/09	Lots	Rd. 99/corridor
Arrowleaf balsamroot	6/6/09	Lots	Rd. 99/corridor
Wild Rose	6/6/09	Few	6 miles up on Rd. 99
Indian Paintbrush	6/6/09	Few	Rd. 99/Tr. 504
Noticing patches of dying/dead trees	6/6/09-6/7/09	Lots	Rd. 99/corridor
Coyote	6/6/09	1	Franklin Bridge
Glacier Lily	6/19/09-6/22/09	Everywhere	All along Boulder Trail 333.

Observation	Date	Number Sighted	Location
Bear Grass in bloom	6/19/09- 6/22/09	All over	West Fork Gold Creek Drainage.
Badger	7/10/09	1	Gold Creek Road 126 just before junction of West Fork Gold Creek
Lots of bear scat	7/10/09	4+	Trail 518
Bear Tracks	7/11/09	1 adult set and 1 cub set	Trail 518
Coyote	7/11/09	1	Road 4224
Bear grass bloom	7/18/09- 7/20/09	Awesome summer for bear grass bloom-more than I've seen in the last two summers.	Gold Creek
Moose-cow	7/26/09	1	Primm Lake
Fox	8/8/09	1	Gold Creek Road
Bear tracks and foraging in dead logs	8/7/09	1 set	Trail 518
Grouse	8/7/09- 8/10/09	Many	Gold Creek Drainage/Boulder Lake area.
Coyote	9/11/09	1	1 mile from Main Rattlesnake Trailhead on Rd.99
Wolf tracks	10/16/09	Two separate tracks	Main Gold Creek Trailhead-the tracks came up the trail and stopped where the trail meets the old road.

Summary

Summary Table 1 Rattlesnake Recreation Area

Standards Met	Standards Not Met
Group size/ trail encounters: All encounters not within standard	Group size/ trail encounters: On 7/3/09 wilderness rangers encountered 8 groups on Road 99 in an Opportunity Class 4 which allows for 5 groups per day.
Group size/ camp encounters: All encounters not within standard	Group size/ camp encounters: On 9/18/09 wilderness rangers encountered a group of 11 on Road 99 at Elk Meadows. This area is an Opportunity Class 4 which has a group limit of 10 people. (The 11 th person was a baby and the party asked if babies count as a whole person. Answer is each heartbeat is a person)
Campsite density: Not monitored in 2009	Campsite density: Not monitored in 2009, however campsites at Poe and Elk Meadows are still out of campsite because of inadequate audio and visual separation.
Campsite condition: 12 camps in standard	Campsite condition: 24 campsites not within campsite condition standards.

Summary Table 2 Rattlesnake Wilderness Area

Standards Met	Standards Not Met
Trail encounters: All encounters met standards	Trail encounters: None
Campsite encounters: All encounters within standards	Campsite encounters: None
Campsite density (Refer to Table 38) All campsites withing density standard	Campsite density (Refer to Table 38) None
Campsite condition (Refer to Table 39) Fifty-four campsites within condition standard	Campsite condition (Refer to Table 39) Forty-one campsites out of condition standard

Rattlesnake NRA Summary of Observations For 2009

- There was a noticeable decrease in the number of people with dogs off leash.
- Mutt Mitts seem to have reduced the amount of dog feces in the first 200 yards of the trailhead.
- User decreased slightly in 2009 from 2008, and in 2008 from 2007 most likely due to wet weather conditions and fewer user numbers counted by the NRA Guard. Wilderness rangers, however, noticed a slight increase in user numbers in 2009 from 2008 presumably because more time was spent in the NRA by wilderness rangers.
- The Challenge Cost Share Agreement with the Missoula Nordic Ski Club will require close monitoring to ensure that trail grooming doesn't cause winter time group size and encounter standards to be exceeded.

The biggest current threats to the NRA are: **1) weeds, 2) non system trail development, 3) transient camps in the south zone and 4) large mountain bike groups.** Wilderness impacts from early elk hunt decreased in 2009. All four threats are actively being managed.

Rattlesnake Wilderness Summary of Observations For 2009

- Porcupine User Trail (up West Fork Gold Creek) continues to recover after heavy rehabilitation was conducted in the spring of 2008. The trail is still being used like a game trail, but not cut out. This user trail will require continued monitoring and additional rehab work every year for at least a few more years.
- Boulder Lake Trail #333 reroute at the lake continues to help restore the closed campsite and sensitive marshy areas by the lake inlet. More work will need to be done in 2010 to deter visitors from using the rehabbed trail.
- 15 campsites were naturalized.

- A decrease in impacts to the Wilderness resource from the Rattlesnake early elk hunt was noted in FY2009. This is attributed to increased presence, education and there appears to be less overnight and horse use during the hunt. In FY2007 and FY2008, some impacts to Wilderness resource occurred such as: chainsaws use, user developed and maintained trails, bear food storage order violations, hunter caused fire(s), beginning of horse drawn cart use, increase in litter, and improper human waste disposal. Although the Porcupine User Trail continues to get use, it is not being maintained by users to the level it was in 2007.
- Low flying aircraft and associated noise is increasing and needs continued monitoring. Notices were posted at trailheads informing visitors where to report low flying aircrafts. Only one incident was reported in 2009.

The current biggest threats to this wilderness are **1) weeds, 2) early elk hunter impacts (impacts decreased in 2009) and 3) low flying aircraft and associated noise**. Active mitigation programs are in place on all three of these threats.