



United States
Department of
Agriculture

Forest Service

*Rocky Mountain
Region*



Monitoring and Evaluation Report

FY 2007

Bighorn National Forest



Photo by Clarke McClung

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CERTIFICATION

I have reviewed the annual monitoring and evaluation report for the Bighorn National Forest for fiscal year 2007. The revised forest plan went into effect in December 2005, with entirely new monitoring items and protocols from those in the 1985 forest plan. The monitoring and evaluation section of the revised plan is based on findings and recommendations made in previous monitoring and evaluation reports and on the interdisciplinary team, cooperating agency, and public input. It incorporates current procedures, protocols, and the best available science.

I am especially proud of the work accomplishments reported here. Despite budget constraints and shifting priorities, we, along with our cooperators and volunteers, accomplished a great deal of project work on the ground, where it ultimately counts. I believe the monitoring and evaluation requirements of the revised forest plan have been met and the decisions in the revised forest plan are still valid.

/s/ William T. Bass

William T. Bass
Forest Supervisor

12-12-2008

Date

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INTRODUCTION

An annual monitoring and evaluation report is to be prepared for each forest plan as required by CFR 219.6(b)(2). Funds are provided for the preparation of the report based on information and data collected under agency direction. A target of one report has been assigned to each forest.

The monitoring and evaluation report documents the results of monitoring and provides the forest supervisor and the public with information on the progress being made toward achieving the goals, objectives, and management requirements in the forest plan. It also indicates how well we are fulfilling public demand for goods and services while protecting the forest resources.

The revised forest plan established management direction so all future decisions include an interdisciplinary approach to achieve integrated resource management. The plan provides direction to coordinate multiple uses on the Bighorn National Forest on a sustained basis. It also fulfills legislative requirements and address local, regional, and national issues. Chapter 4 of the plan requires monitoring and evaluation of management activities for the following purposes:

- ◆ Documenting monitoring and evaluation accomplishments.
- ◆ Providing an assessment of the current state of ecological conditions on the forest.
- ◆ Providing adaptive management feedback to responsible officials of any needed changes to the revised plan or adjustments to management actions.
- ◆ Providing the public with relevant information about the management of the forest.

Background

Monitoring is the quality control aspect of forest planning; it requires data collection and observations of activities to periodically evaluate the planning process and the forest plan. Evaluation is the analysis and interpretation of monitoring results. It addresses the goals, objectives, long-term relationships, management direction, and significant management activities occurring. There are four aspects to monitoring and evaluation:

- ◆ **Implementation Monitoring** – Forest personnel conduct monitoring as part of their routine assignments and management responsibilities. Their results are documented in project files. Monitoring is performed to determine if management activities are designed and carried out in compliance with forest plan direction and management requirements.
- ◆ **Effectiveness Monitoring** – this type of monitoring determines if management activities are effective in driving the forest toward the desired future condition described for the various management areas.
- ◆ **Validation Monitoring** – this type of monitoring determines whether the initial data, assumptions, and coefficients used in development of the forest plan were correct or if there is a better way to meet goals and objectives and achieve the desired future condition.

Monitoring and evaluation aspects, cont.

- ◆ **Evaluation and Conclusions** – the purpose of evaluation is to interpret monitoring results and reach some conclusions about what the monitoring results really mean with regard to forest plan implementation. The interdisciplinary team (ID Team) may make recommendations and identify research needs as a result of the evaluation process.

Achieving Output Objectives of the Forest Plan

Outputs often vary substantially from year to year as funding levels change. The trends in various resource areas over a three- to five-year period are a better reflection of whether the Forest Service is progressing toward accomplishment of its goals and objectives to reach the desired future condition. A more detailed discussion is contained in the narratives for individual resource areas.

The single factor that has the most influence on outputs and program effectiveness is the annual budget. Distribution of funds often reflects national direction and priorities of the administration and Congress. Traditionally, the forest has been funded at a level significantly below what was projected to implement the 1985 forest plan. Moreover, the dollars are usually not adequately distributed to meet the needs for individual program areas. While budget trends and projections were considered in revising the forest plan, the forest made the following assumptions:

- ◆ In general, funding will be flat, or at best, keep up with inflation.
- ◆ Priorities and budgets will change, so specific output levels projected in the revised forest plan may or may not be achieved.
- ◆ The revised forest plan was developed under the principles of adaptive management. As budgets and priorities change, and we learn new science and best management practices, the Bighorn National Forest outputs will change over time. The monitoring and evaluation report will be one mechanism of informing people about actual accomplishments.

For the past several years, the Bighorn National Forest has been using a system of project budgeting, often referred to as a “unified budget.” Employees plan this budget and execute projects on a forestwide basis and trade-offs are realized at the beginning of the fiscal year. Under this system, the goal is to “cap” fixed costs (permanent employees’ salaries, vehicles, rent and utilities, etc.) at 70% of the annual budget. The remaining 30% of the annual budget is to be used to provide flexibility to fund a seasonal workforce, provide training, purchase equipment, and deal with unplanned events. Currently the fixed costs are closer to 80% of the annual budget. At present, the forest has little control over budget planning and distribution at this organizational level.

Monitoring Results for 2007

The following table takes the monitoring items from chapter 4 of the revised forest plan and lists them by the resource areas to which they apply. The effectiveness, implementation, and validation monitoring items are described for each resource. In doing this, the numbering system that was derived for the forest plan is out of sequence. Only items due for reporting in 2007 are listed in the table.

MONITORING RESULTS

Monitoring Driver	Monitoring Question	Potential Monitoring Items	General Discussion
Implementation Monitoring – Are projects being implemented according to forest plan direction?			
1. NFMA; Multiple Goals, Objectives, Strategies	Are projects being implemented according to revised forest plan direction? This includes both planned actions and actual implementation.	Select at least one NEPA project, and conduct a thorough review of all resource areas to see if revised forest plan strategies, management prescription desired conditions, standards, and guidelines were followed and if the treatment/project was effective to improve land management.	<p>Annual monitoring</p> <p>A best management practices (BMP) review of the Bald Mountain timber sale was conducted with the forest leadership team. The review was satisfactory, with minor issues related to soil disturbance (see 2006 report). BMP reviews were also conducted on the following:</p> <ul style="list-style-type: none"> 1) Cold Springs timber sale, with no concerns identified. 2) Muddy Creek grazing allotment, some localized utilization concerns identified in a holding corral. 3) Shell Creek allotment with utilization concerns across the Lower Shell pasture.
<i>Notes: Priority projects include: prescribed fire, timber harvest, travel management and dispersed recreation, and livestock grazing (these are major revision or implementation topics).</i>			
2. Objective 2a, Strategy 8 Objective 4c, Strategy 4	How well is the forest interacting and planning in cooperation with communities and local governments?	Narrative summary of grants and agreements; meetings and coordination efforts with local governments and communities. Narrative summary of pre-project collaborative planning. Narrative summary of bi-annual monitoring meetings.	<p>Annual monitoring</p> <p>The forest maintained various agreements with other federal, state, and local government agencies, as well as private interest groups and volunteers. See appendix A for a complete description of these coordination efforts.</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	General Discussion
4. Objective 3a	Is the Bighorn National Forest assisting in building the capacity of Tribal governments, rural communities and private landowners to adapt to economic, environmental, and social change related to natural resources.	1. Summary of financial and technical assistance provided to local communities and natural resource based businesses to pursue self-sufficiency and sustainability.	Annual monitoring One agreement maintained (see appendix A).
		2. Summary of Bighorn National Forest enhancement of communities' capacities to reduce wildfire risk.	Annual monitoring The forest participated in meetings, with committees, and jointly implemented fuels reduction projects (see appendix A).

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Aquatics Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
5. Objective 1a Strategy 1	Is water quality on the forest being maintained according to state water quality standards?	1. Coordinate with Wyoming Department of Environmental Quality and other stakeholders, to develop a water quality monitoring plan for streams identified in the <i>305(b) Integrated Water Quality Assessment Report and 303(d) List of Waters Requiring TMDLs</i> (305(b) report).	Annual monitoring Water quality samples were collected on the North Tongue River and Granite Creek. These are the only streams on the Forest that are identified in the 305(b) report. Water quality standards for indicator bacteria were exceeded in the North Tongue River in 2007. Bacteria samples collected in Granite Creek exceeded water quality standards.
6. Objective 1a Strategy 2	Were watershed improvement projects completed?	Summarize number and type of watershed improvement projects. For example, identify the percentage of watershed, miles of road or trail, or length of stream reach that has been treated.	Annual monitoring Seven improvements were completed. 1) Completed the Shutts Flat trail project. Improved approximately 1 mile of motorized trail. New construction included building tread, fixing 3 water

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Aquatics Discussion
Objective 1a Strategy 2, cont.			crossings, laying geo-cell material to cross a wet meadow and tree clearing. The old road was improved by repairing pot-holes, constructing rolling dips, rebuilding steep sections and installing 2 culverts. 2) In Woodrock, sections amounting to approximately 1 mile of the Graves Creek Trail were repaired by improving crossings over wet areas and building the trail up to improve drainage. Wet areas were avoided by reconfiguring the trail to avoid Graves Lake - the source of the pooling water.
8. Objective 1a Strategies 4 – 7		2. Summarize results of habitat improvement projects (acres/miles) by watershed.	Monitor annually. No specific habitat improvement projects were implemented.

Validation Monitoring – Are the desired conditions, objectives, and assumptions made in the forest plan correct?

40. Objective 1a, Strategy 1	Are best management practices (BMPs) effective in meeting water quality standards?	Conduct long-term best management practice effectiveness studies according to study plans for specific BMPs coordinated across the forest.	Monitor annually 1) BMP audits were conducted on the Bald Mountain and Cold Springs timber sales. It appears that the process was effective in protecting water quality standards. 2) BMP audits were conducted on the Muddy Creek and Shell Creek grazing allotments. There is no data to support that water quality is impaired, but localized areas within these allotment may contribute fine sediment or bacteria to stream networks. 3) BMPs for livestock grazing were implemented in the upper North Tongue River drainage but have not been effective in reducing bacterial levels below water quality standards.
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Notes: Examples include stability and effectiveness of stream buffers, road drainage structure operations and maintenance, soil disturbance and downstream aquatic habitat effects in harvested versus non-harvested areas, effectiveness of stream protection to minimize sediment delivery to fish streams. Annual status reports to be completed.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Aquatics, Riparian, Fisheries Discussion
Validation Monitoring- Are the desired conditions, objectives, and assumptions made in the forest plan correct?			
43. Objective 1a, Strategy 4	Are fisheries and riparian standards and guidelines effective in maintaining or improving fish habitat or do they need revised?	Survey a representative sample of fish bearing streams in or adjacent to management activities (e.g., transportation networks and associated stream crossings, range allotments, timber sales, or recreational sites) occurring within the last year.	Monitor annually and every five years (5-year monitoring due in 2015). There is no indication that fisheries and riparian standards and guidelines are not effective in maintaining or improving aquatic habitats.
<i>Notes: Habitat components important for fish include large woody debris, pool depth, frequency, percent pool area, and stream width-depth ratio.</i>			

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Wildlife Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
9. NFMA Species Viability Objective 1b Strategies 1 – 5	Is the Bighorn National Forest providing the ecological conditions to sustain viable populations of native and desired non-native species and to achieve objectives for management indicator species (MIS)?	1. Number of conservation strategies developed or implemented.	Annual monitoring In 2007, no conservation strategies for Yellowstone cutthroat trout or mountain sucker were developed specific to the Bighorn NF. The only <i>published</i> conservation strategy available is for Canada lynx. This was implemented through the completed forest plan revision. The Northern Rockies lynx amendment was completed in 2007 and amended the forest plan. A forest plan amendment will be published in 2008 clarifying this new management direction. Forest Service Region 2 completed numerous species conservation assessments of many sensitive and local concern species to assist forests in project and forest level assessment needs, with the forest providing input to that process.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Wildlife Discussion
9. NFMA Species Viability Objective 1b Strategies 1 – 5, cont.		2. Acres of species at risk habitat restored or improved by Forest Service management or permitted activities.	<p>Annual monitoring</p> <p>1) Approximately 5 additional acres of Mill Creek were excluded from livestock grazing in 2006 through fencing efforts. Willows were experimentally planted within the enclosure with limited success based on 2007 evaluation. Mill Creek contains a population of native Yellowstone cutthroat trout.</p> <p>2) Treatment of Dry Medicine Lodge Creek expanded the range of a population of native Yellowstone cutthroat trout by approximately 3 miles. This effort was accomplished with coordination efforts between USFS, Wyoming Game and Fish Department, and Trout Unlimited.</p> <p>Five hundred and thirty (530) acres of prescribed burning was conducted, achieving both fuels reduction and wildlife habitat improvement objectives.</p> <p>About 600 acres of aspen and meadows were treated through conifer removal by hand crews (non-merchantable) benefitting all emphasis species.</p> <p>About 500 acres of riparian and upland exclosures were maintained for wildlife and fish habitat objectives.</p>
		3. Acres of species-at-risk potential habitat inventoried.	<p>Annual monitoring</p> <p>No habitat was inventoried, specific to Yellowstone cutthroat trout or mountain sucker.</p> <p>West zone biologist conducted carnivore snow-track surveys, involving 2 days of survey time. Marten were detected but no other at-risk species. The survey represented approximately 3,500 acres.</p> <p>West and east zone biologists surveyed 100 owl boxes in potential habitat, with no at-risk species discovered. Approximately 5,000 acres covered in these efforts.</p>

	Monitoring Driver	Monitoring Question	Potential Monitoring Items	Wildlife Discussion
9.	NFMA Species Viability Objective 1b Strategies 1 – 5, cont.		3., cont.	<p>Known breeding populations of amphibians were monitored on the Tongue Ranger District, representing approximately 1,000 acres.</p> <p>Water voles and amphibian monitoring was conducted on Medicine Wheel/Paintrock District in potential and historic habitat. Two new vole locations were observed at Wallrock and Hideout Creeks in 2007. There were no observations in Buckskin Ed, Bull Creek, or Soldier Cr.</p> <p>Known goshawk nests monitored representing 5,000 acres. In addition, another 5,000 acres were surveyed for goshawk habitat, with no new nests in project-related surveys (Spanish Pt, Little Bitmore, Battle Park, Beaver Cr, West Ten 2, Dull Knife fuels project, the Caribou/Poison timber sale, and the Babione timber sale).</p> <p>The forest coordinated bighorn sheep monitoring (the Devils Canyon herd) with Wyoming Game and Fish in 2007. Monitoring assistance included GPS collars and GIS services.</p>
			4. Acres of species-at-risk occupied habitat and/or populations discovered.	<p>Annual monitoring</p> <p>No new populations of Yellowstone cutthroat trout or mountain sucker were discovered.</p> <p>Copeman's Tomb was an active peregrine falcon nesting site in 2007. Tensleep Canyon was not active.</p>
			5. Acres of vegetation management projects and natural disturbances that occurred in lynx habitat and winter snowshoe hare habitat during the previous fiscal year. Update vegetation GIS coverage to include these acres and compare with suitable habitat thresholds.	<p>Annual monitoring</p> <p>The Bone Creek fire of 2007 regenerated up to 12,000 acres of potential lynx habitat.</p> <p>There was no comparison made of suitable habitat thresholds as the forest is unoccupied by lynx.</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Wildlife Discussion
9. NFMA Species Viability Objective 1b Strategies 1 – 5, cont.		6. Number of species or habitat monitoring programs established/implemented, including cave resource management and Research Natural Area (RNA) management plans.	Annual monitoring No new monitoring programs were established. A total of 13 (wildlife = 11, botany = 1, aquatics = 1) species/habitat monitoring programs were conducted in 2007. No cave resource management plans or research natural area management plans were developed in 2007. Two plant species at risk were monitored - <i>Cypripedium montanum</i> (mountain lady's slipper) and <i>Rubus arcticus</i> ssp. <i>acaulis</i> (dwarf raspberry).
	7. Summarize species-specific monitoring results.		Monitoring frequency varies by the monitoring protocol. 1) The Wyoming Game and Fish monitors Yellowstone cutthroat trout and rainbow trout, and the data is shared between agencies. The data resides at the Wyoming Game and Fish Department offices in Sheridan and Cody. 2) Population data for desired non-native fish species, rainbow and brook trout implies that the ecological conditions are adequate to sustain viable populations. 3) Rainbow trout may be captured at existing survey locations, however; population surveys specific to rainbow trout, for MIS monitoring were not conducted. Cave habitat for bats surveyed in 2007 included Cottonwood Canyon and Spanish Point, with no bats observed. Additional cave surveys were conducted as part of the West Ten 2, Battle Park, and Beaver Creek projects. No bat use was detected. Annual monitoring of known goshawk territories occurred, with 12 observations of goshawks.
	8. Number of acres of demand species habitat improvement, including big game winter range.		Annual monitoring As described above for species at risk, prescribed burning, aspen treatment, meadow encroachment, and exclosure maintenance similarly benefited demand species. No acres of habitat for demand plant species were improved.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Wildlife Discussion
10. NFMA Species Viability Objective 1b, Strategies 5-11	Are the habitat trends (and therefore population trends by inference) for MIS and other emphasis species being maintained or improved with respect to management activities conducted?	1. Acres and condition of habitat on the forest for each avian and the red squirrel MIS. Associate habitat trend with available population data where feasible. Participate in the interagency statewide avian population monitoring effort (Monitoring Wyoming's Birds).	Annual monitoring The forest participated in the statewide avian monitoring program in association with the Rocky Mountain Bird Observatory. See appendix A for details.
		5. Continued habitat use by goshawks in known nesting territories where active vegetation management has occurred. Verification through nest search with broadcast calls.	Annual monitoring East and west zone biologists monitored previously known goshawk nests. Predawn surveys done in Shell Canyon, with goshawks found. Goshawks were found behind Porcupine Ranger Station, near Spanish Point, Middle Paintrock trail, and SW fuels project area, with nests unconfirmed. Bucking Mule Falls trail and Cold Springs goshawk nests were unoccupied this year. Results of goshawk monitoring was shared with the Wyoming natural diversity database (WYNDD).
		7. Continued habitat use by forest carnivores in known locations using snow-track or other methods. Determine validity of any reported lynx sightings upon report.	Monitor every two years; due in 2007, 2009, 2011,2013, 2015. There were no reported lynx sightings in 2007. See monitoring driver #9, monitoring item #3 above for snow-track survey results.

Notes: Many items above depend on coordination with Wyoming Game and Fish Department, and reliance on their population/harvest data for big game and fish species. Surveys for forestwide distribution for several at-risk species (water vole, bats, avian, amphibians, carnivores, raptors) have not been completed and would be the goal in next planning period.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Fire and Timber Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
11. Objective 1c Strategies 1 – 7	9. Acres of fuel reduction accomplished in fire regimes I, II, and III.	<p>Annual monitoring item.</p> <p>Fuels treatments (those funded through national fire plan monies) were recorded in the FACTS database in 2007. Total of 1,600 acres were treated: 820 acres treated within wildland urban interface (WUI) areas, and 780 acres outside of these zones (55/45% split). These figures represent 540 acres of prescribed burning in broadcast burns including the Story, South Slope, Grouse Creek, Shell Canyon, Spring Creek, and Zaybrook projects.</p> <p>Other treatments included 100 acres of aspen treatment, 220 acres of meadow improvement, 300 acres of hand piling and burning piles, and 440 acres of precommercial contract thinning in areas within WUI sites (Poison Cr – Caribou Mesa).</p>	
	10. Number of wildland fire use plans completed. Number of acres treated.	<p>Annual monitoring item</p> <p>The fire management plan was updated in 2007 to reflect a draft fire use plan. This is anticipated to be completed in 2008.</p>	

Notes: The following vegetation treatments will be monitored.

A. Clearcut

B. Shelterwood – prep cut

C. Shelterwood – seed cut

D. Shelterwood – overstory removal

E. Aspen regeneration/maintenance

F. Precommercial timber stand improvement

G. Uneven-aged management, selection

H. Prescribed fire

I. Wildland fire use/wildfire*

* These are not planned actions but will be tracked through GIS vegetation database.

J. Insect and disease mortality*

K. Blowdown*

L. Commercial intermediate harvests

M. Reforestation

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Timber Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the Forest Plan being met?			
27. Objective 2c Stewardship Strategy 1	Is the Bighorn National Forest utilizing stewardship contracting appropriately? Is stewardship contracting a benefit to local communities?	Narrative summary of stewardship contracts utilized compared to the opportunities and other tools used. Estimate benefits to communities.	Monitor annually No new stewardship contracts were prepared or awarded in 2007. Work continued on the existing contracts sold in 2005 and 2006. Stewardship projects identified in these contracts would have been difficult to accomplish without this tool. Working circle mills operating on the existing contracts continued their use of local and area sub-contractors.
29. Objective 2c Timber Strategies 1, 2, 3	Is the Bighorn National Forest providing the desired level of uses, values, products and services of wood products?	Forest product outputs in CCF and approximate MMBF, including: sawtimber (7" +), roundwood (5-6.9"), personal use fuelwood, other vegetation management, allowable sale quantity, christmas trees and special forest products	Monitor annually Forest product outputs compared with forest plan projections are shown in table 1 below. Given only three years of data, the forest is close to the projected program quantities. Some items will be scrutinized closely in the future. 1) Only 24% of the projected products other than logs (POL) material was sold, while 51% of the sawtimber was sold. This ratio indicates a trend that the amount of POL sold is not keeping up with sawtimber sales, however, we hope this ratio will equal out with anticipated increased utilization and demand from industry. 2) Other vegetaion management (OVM) is at 222% of projections, a result of one large project (Bench stewardship). There are no future projects of that scale on the planning schedule.
<i>Notes: The revised forest plan projected the following outputs annually:</i>			
<i>Sawtimber (7" +): 10,688 CCF, (3.9 MMBF)</i>		<i>Allowable sale quantity: 27,183 CCF, (9.8 MMBF)</i>	
<i>Roundwood (5-6.9"): 1,693 CCF, (0.6 MMBF)</i>		<i>Christmas trees (number sold): 2,100 trees</i>	
<i>Personal use fuelwood: 3,000 CCF, (1.5 MMBF)</i>		<i>Special forest products: 3,000 permits</i>	
<i>Other vegetation management: 3,550, (1.3 MMBF)</i>			

Table 1. Forest timber product output compared to revised forest plan projections to date.

Activity	Total volume equivalent MBF	Total Volume Offered	Sawtimber Vol. (7"+)	Sawtimber Vol. (7"+)	POL (Live 5"-6.5")	Mortality Volume (dead)	OVM Volume	Christmas Trees	Special Forest Product Permits
Unit of Measure	est. MBF	CCF	est. MBF	CCF	CCF	CCF	CCF	Each	Each
ASQ 2005 Forest Plan Projection	9,800	27,183	9,800	23,467	3,716	No projected output in Forest Plan.			
TSPQ 2005 Forest Plan Projection	4,500	24,031	3,900	10,688	1,693	3,000	3,550	2,100	3,000
2005	9,255	19,687	0	0	400	2,200	17,087	1,819	2,778
2006	8,786	18,715	7,524	16,102	442	2,171	0	1,696	2,722
2007	8,786	9,335	136	279	353	2,105	6598	1,696	2,136
Total Actual Output	26,827	47,737	7,660	16,381	1,195	6,476	23,685	5,211	7,636
Total Projected ASQ Output	29,400	81,549	29,400	70,401	11,148	No projected output in Forest Plan.			
Total Projected TSPQ Output	13,500	56,793	11,700	32,064	5,079	9,000	10,650	6,300	9,000
% of Projected ASQ Output	91%	59%	26%	23%	11%	No projected output in Forest Plan.			
% of Projected TSPQ Output	199%	84%	65%	51%	24%	72%	222%	83%	85%

ASQ – allowable sale quantity

TSPQ – total sale program quantity

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Invasive Species Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
12. Objective 1.c, Invasive Species Strategy 2	How many acres of priority noxious weeds have been treated this year by what means?		Monitor annually Approximately 18 acres were treated for the priority weed species listed above. Methods included both mechanical and chemical treatments.
	How many total acres of noxious weeds have been treated this year?	Acres of noxious weeds	Monitor annually Approximately 174 acres were treated for noxious weeds.
	What prevention activities and cooperative efforts have been implemented during the past year?	Narrative description	Monitor annually The primary method of treatment is through cooperative agreements with Big Horn, Johnson, and Washakie counties. Other prevention activities include educational programs for seasonal crews, including weed prevention and control in NEPA analyses, the weed-seed-free feed program implementation and monitoring, and surveys with volunteers. See appendix A for a complete discussion.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Recreation Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
17. Objective 2a, Strategies 5, 6, 9, 10, and 12 Objective 4a, Strategy 1, cont.		2. Number of travel management plans completed.	Annual monitoring One major trail, #117, remains to be constructed to complete the Clear/Crazy decision. This trail requires two costly bridges over South Fork Clear Creek and Sourdough Creek; forest engineering staff continues to work on their design and construction. Wyoming State Trails has indicated they will build the trail, about 4 miles in length, when the bridges are constructed. The Hunt Mountain travel management planning EA and decision was issued and signed in May of 2007. Implementation will begin in 2008. Constraints include inadequate funding to maintain the existing trail system even without the additional trails designated in the decision. Deferred maintenance will be reduced on roads closed by the decision.
<i>Notes: Studying use and projected demand should assist in future project planning to provide multiple benefits to multiple people. Vegetation within developed facilities (e.g., campgrounds) contributes substantially to the recreation setting. Attaining desired conditions and monitoring results will protect these values over the life of the facility.</i>			
39. Objective 2c, Tourism and Recreation Strategy 1 Objective 3b, Strategy 3	Are research, education, and interpretation activities being conducted and in conjunction with partners?	Number of educational presentations, research projects, agreements, or activities conducted with and for others. Identify by resource function.	Monitor annually The aquatics program provided one aquatic ecology presentation for the SMARTY bus effort for Woodland Park Elementary School.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Recreation Discussion																												
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?																															
39. Objective 2c, Tourism and Recreation Strategy 1 Objective 3b, Strategy 3, cont.			<p>The forest recorded conservation and education outreach activities as follows:</p> <table border="1" data-bbox="1291 354 1858 581"> <thead> <tr> <th>Presentation Type</th> <th>#</th> <th>Adult</th> <th>Youth</th> </tr> </thead> <tbody> <tr> <td>on forest to youth</td> <td>4</td> <td>29</td> <td>196</td> </tr> <tr> <td>off forest to youth</td> <td>20</td> <td>70</td> <td>484</td> </tr> <tr> <td>on forest other groups</td> <td>2</td> <td>100</td> <td>0</td> </tr> <tr> <td>off forest other groups</td> <td>6</td> <td>210</td> <td>150</td> </tr> <tr> <td>special events</td> <td>9</td> <td>1,875</td> <td>2043</td> </tr> <tr> <td>Total</td> <td>41</td> <td>2284</td> <td>2873</td> </tr> </tbody> </table> <p>Resource functions involved included fire prevention, recreation, fish and wildlife, and vegetation management. In addition, Forest Service seasonal employees presented interpretive programs to 4,840 people at Shell Falls visitor center and to 916 people at Burgess Junction visitor center.</p> <p>Approximately 100 people attended presentations on Native American ethnobotany and leather tooling at the opening event for the Smithsonian traveling exhibit at Burgess Junction.</p>	Presentation Type	#	Adult	Youth	on forest to youth	4	29	196	off forest to youth	20	70	484	on forest other groups	2	100	0	off forest other groups	6	210	150	special events	9	1,875	2043	Total	41	2284	2873
Presentation Type	#	Adult	Youth																												
on forest to youth	4	29	196																												
off forest to youth	20	70	484																												
on forest other groups	2	100	0																												
off forest other groups	6	210	150																												
special events	9	1,875	2043																												
Total	41	2284	2873																												

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Wilderness Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the Forest Plan being met?			
18. Objective 2b, Wilderness Strategies 2 – 5	What level of crowding occurs on trails? Does the wilderness provide opportunities for solitude?	Report number and type of users by trailhead, law enforcement contacts, and educational presentations.	<p>Monitor annually</p> <p>Law enforcement contacts: 23 violations were issued. Warning notices issued to 25 individuals. See appendix A for details.</p> <p>There were were 213 incidents for various infractions of the Cloud Peak Wilderness regulations. The most incidents tallied was 163 for campfires above the 9,200' elevation limit.</p> <p>Educational presentations - No scheduled sessions conducted. Cloud Peak Wilderness rangers made nearly 700 field contacts during the summer of 2007</p>
	Are special exceptions affecting the wilderness resource?	Report the number and type of special exceptions to limited activities	<p>Monitor annually</p> <p>No special exceptions for motorized uses were authorized.</p> <p>The forest completed search and rescue agreements with the four counties covered by the forest.</p> <p>See appendix A for a complete discussion.</p>

Notes: Monitoring may indicate if a limited permit system or other restrictions is/are necessary.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Wilderness Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the Forest Plan being met?			
19. Objective 2b Wilderness Strategy 1	Are air and water quality being improved, maintained or degraded in the Cloud Peak Wilderness and on the forest as a whole?	1. Number of burning permits requested compared with number of permits approved.	<p>Monitor annually</p> <p>All prescribed burns (approximately 20) were conducted in compliance with state regulations. There were no incidences of smoke-related impairments to the Sheridan non-attainment zone.</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Wilderness Discussion
		2. Collect and analyze alpine lake water samples for information on air and water quality. Apply quality assurance protocol.	<p>Monitor annually</p> <p>1) Air quality data is collected in Florence Lake and Emerald Lake, for long-term regional air quality assessments. Data was analyzed in 2006 and indicated that sulfite (SO₄) and nitrate (NO₄) were increasing. Based on similar analyses across the west it was determined that this was an effect of extended drought and deposition from increased dust in the atmosphere. See 2007 aquatics program accomplishment report for more detail.</p> <p>2) In a cooperative effort with the forest, Wilderness Watch continued to collect baseline data for streams that flow from the Cloud Peak Wilderness.</p>
		3. Review state air quality data for incidences of impairment in relation to forest activities.	<p>Monitor annually</p> <p>Wyoming Department of Environmental Quality did not identify any air quality standards exceedences from Forest Service activities.</p>
		4. Prepare summary of annual compliance and identify needed improvements.	<p>Monitor annually</p> <p>2007 – This did not occur.</p>

20. This Monitoring Driver was a duplicate of #18. The number has been retained to avoid renumbering all subsequent monitoring drivers.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Heritage Resources Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
21. Objective 2b Heritage Strategy 1	Have programmatic agreements for heritage resources been negotiated and implemented for forest programs?	1. Number and types of agreements in place.	<p>Monitor every two years; due in 2007, 2009, 2011, 2013, 2015</p> <p>Two programmatic agreements are in place: 1) fire and 2) Medicine Wheel National Historic Landmark (NHL) (also see #2 below).</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Heritage Resources Discussion
		2. Identify other program needs and reduce backlog. 3. Summarize if terms of agreements are being met.	Monitor every two years; due in 2007, 2009, 2011, 2013, 2015 Other needs are being address in an inclusive programmatic agreement under development Monitor annually The programmtic agreement for the Medicine Wheel NHL requires completion of a survey report which has not been done.
22. Objective 2b Heritage Strategy 2	Is the Bighorn National Forest preparing and implementing historic preservation plans?	Number of plans completed and implemented.	Monitor annually Three plans have been completed (Medicine Wheel, Hunt Mt., and Woodrock), and two are currently being prepared.
23. Objective 2b Heritage Strategy 3	What progress has the forest made for inventorying areas having a high probability for heritage resources?	1. Acres inventoried. 2. Number of new sites evaluated. 3. Number of backlogged unevaluated sites that have been evaluated. 4. Number of sites evaluated sent to the state national register of historic places.	Monitor annually Total acres inventoried at end of FY 2007 = 1,612 Cumulative acres inventoried since 2005 = 12,002. Monitor annually Fifty-six (56) new sites evaluated in FY 2007. Monitor annually Five sites Monitor annually None
<i>Notes: Related to Section 110 of the National Historic Preservation Act.</i>			
24. Objective 2b Heritage Strategy 4	Is the forest meeting its consultation responsibilities for American Indian traditional cultural properties?	1. Number of sites identified.	Monitor annually One site, Medicine Wheel NHL.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Heritage Resources Discussion
24. Objective 2b Heritage Strategy 4, cont.		2. Number of sites consulted on.	Monitor annually The forest is meeting its consultation responsibilities, primarily by letters to tribes and face-to-face during consultation meetings in association with the Medicine Wheel NHL.

Notes: Includes responsibilities under Sections 110 and 106 of the National Historic Preservation Act.

25. Objective 2b, Heritage Strategy 5 Objective 2c, Tourism and Recreation Strategy 2	What actions has the forest taken to increase public awareness and education of heritage resources?	1. Number of projects conducted.	Monitor annually Two “Windows on the Past” projects were completed.
		2. Number of heritage programs delivered.	Monitor annually Daily programs at Medicine Wheel NHL and Burgess Junction visitor center(both open ca. 100 days a year), one college lecture, tour of sites by students, and three flintnapping demonstrations have been delivered in the surrounding communities.
		3. Number of interpretive signs or brochures constructed or maintained.	Monitor annually Forty-three interpretive signs were maintained.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Livestock Grazing Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the Forest Plan being met?			
26. Objective 2c Livestock Grazing Strategies 1 and 2	How many pastures were monitored this year to determine whether allowable use standards were met?	Pastures monitored	Monitor annually Data not available

	Monitoring Driver	Monitoring Question	Potential Monitoring Items	Livestock Grazing Discussion
26.	Objective 2c Livestock Grazing Strategies 1 and 2, cont.	How many pastures that were monitored did meet allowable use standards?	Pastures meeting allowable use standards	Monitor annually Data not available
In pastures that were monitored, how many key areas were inspected for compliance with allowable use standards using the various protocols?		Number of key areas monitored by specific protocol	Monitor annually Data not available.	
What percent met standards?		Percent that met standards	Monitor annually Data not available.	
How many allotments exceeded forage utilization standards to the point of discussing/implementing actions to resolve the situation?		Number of allotments	Monitor annually 8 allotments	
How many suitable acres are meeting or moving toward desired conditions?		Acres meeting/moving toward desired condition	Monitor annually 120,705 acres	
		Acres not meeting or moving toward desired conditions	Monitor annually 33,457 acres	
		Acres undetermined	Monitor annually 158,691 acres	

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Livestock Grazing Discussion
26. Objective 2c Livestock Grazing Strategies 1 and 2, cont.	How was information sharing and cooperation with livestock permittees, state and private agriculture organizations, universities, and research partners demonstrated?	Narrative discussion	<p>Monitor annually</p> <p>The forest range staff worked with Dan Uresk (Forest Service Research) and University of Wyoming extension in implementation of the Robel pole monitoring method on sedimentary soil types on the north end of the Forest. The forest range staff trained the permittees on the methodologies of Robel pole monitoring. They also read transects in cooperation with permittees and Guardians of the Range.</p> <p>The forest range staff assisted Uresk in locating areas to clip and run plots on granitic soil types on the south end of the forest so a Robel pole monitoring method can be established for these soils.</p> <p>Tongue Ranger District Range Specialist David Beard has participated in coordinating and putting on range schools through the Wyoming section of the Society for Range Management (SRM).</p>
	How many allotments were covered by new NEPA decisions this fiscal year?	Number of allotment decisions this year	<p>Monitor annually</p> <p>0</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Paleontology, Minerals Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
28A. Objective 2c Geologic and Paleontological Resources Strategy 1	Have impacts to paleontological resources resulted in a need to revise/amend the plan for additional direction?	New paleontological sites identified during cultural or other inventories and associated impacts from land management activities.	<p>Monitor annually</p> <p>No new paleontological sites were identified.</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Paleontology, Minerals Discussion
28B. Objective 2c Mineral and Energy Resources Strategy 1	Are the effects of mining activities on surface resources consistent with revised forest plan expectations, as allowed in approved plans of operations?	Summarize monitoring efforts, results and findings under project-specific plan of operations.	<p>Monitor annually</p> <p>The Pascalite mining operation continued under their approved plan of operations near the headwaters of South Paintrock Creek on the Medicine Wheel Paintrock District. The effects of the mining activities are consistent with the revised forest plan.</p> <p>Efforts continue to resolve the unauthorized occupancy at the Duncan/Labbe site, also on South Paintrock Creek, near the junction of FR 24 and 408. In 2007, a final letter was issued to the Duncan/Labbe claim representative requesting their abandonment of the claim, structures, and any personal property on site. Resolution of this issue is expected in spring 2008.</p> <p>The lode claim in the Poison Cr. drainage operated according to the filed and approved plan of operations.</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Scenery Resources Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
31. Objective 2c Scenery Strategy 2	Are resource activities and forest uses consistent with the landscape character goals and scenic integrity objectives?	1. Review a sample of management activities, and compare forest plan direction with actual outcomes.	<p>Monitor annually</p> <p>An evaluation of short and long term effects on scenery of the Bench healthy forest initiative project and recommendations for mitigation (slash, etc.) will be prepared as the project nears completion.</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Facilities/Infrastructure Discussion
Effectiveness Monitoring – Are desired conditions and outcomes of the forest plan being met?			
33. Objective 4a, Strategies 3 – 5	Are all system roads being maintained as desired on the Bighorn National Forest?	Percent of roads maintained to standard via force account crew, contract, cooperators, or other means (See annual roads accomplishment report).	<p>Monitor annually</p> <p>92% of all maintenance level 3, 4, and 5 roads received full maintenance to standard in 2007 (233 miles). 40 miles of maintenance level 2 roads received maintenance in 2007, which is below average for a normal year. This was due directly to equipment breakdowns, fire support on forest, and the need to do heavier maintenance (spend more time) on projects that were undertaken this season.</p> <p>36 miles of maintenance level 1 roads were maintained (monitored) in 2007. This was below the average for a normal year. Lack of level 1 road maintenance was due to help needed on other force account projects.</p>
34. Objective 4a Strategy 6	Are unclassified roads and trails being decommissioned?	Report road decommissioning accomplishments and trail decommissioning accomplishments performed via force account, contract, cooperators, or other means (See annual roads accomplishment report).	<p>Monitor annually</p> <p>No road decommissioning was reported for 2007. Approximately 1.5 miles of Shutts Flat trail, 1.5 miles of Bald Ridge trail, and 2 miles of Graves Creek trail were decommissioned after reroutes were constructed.</p>
35. Objective 4a Strategies 7, 8	Are new construction and maintenance projects being done to reduce maintenance backlogs and are they being done consistent with the current master plan, and meeting the current image guide?	Report all new facility and transportation construction, reconstruction, decommissioning, and maintenance projects and state how they are reducing maintenance backlogs, or how they are meeting the current facilities master plan (FMP) or the built environment image guide (BEIG).	<p>Monitor annually</p> <p>Approximately 4.5 miles of motorized trail was relocated and reconstructed. This was done to reduce deferred maintenance by reducing stream crossings, removing trail locations from riparian areas, and areas where illegal travel can occur. Trails were relocated to higher, drier locations with natural pinch points.</p> <p>Four new toilet buildings were installed reducing a backlog of deferred maintenance (CIP funded).</p>

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Facilities/Infrastructure Discussion
37. Objective 4a Strategy 11	How many miles of system or non-system road were decommissioned?	Review annual engineering work accomplishment reporting	Monitor annually No road decommissioning was reported for 2007.

Notes: Providing access to public lands is critical for meeting resource management and multiple-use objectives.

Monitoring Driver	Monitoring Question	Potential Monitoring Items	Soil Discussion
Validation Monitoring – Are the desired conditions, objectives, and assumptions made in the forest plan correct?			
42. Objective 1a	Are the standards and guidelines effective in meeting regional soil quality standards?	1. Conduct surveys on a representative sample of areas with management activities and uses.	Monitor annually 1) BMP assessments of soil impacts were conducted for the Bald Mountain and Cold Springs timber sales. Negligible soil impacts were identified in the Cold Springs sale and some soil impacts were identified in the Bald Mountain sale, related to wet soil conditions. 2) BMP reviews of two grazing allotment pastures were conducted. Some pedestaling was observed in the Shell Creek allotment, Lower Shell pasture. This may indicate a need for more ground cover, but overall, regional soil quality standards are being met.
		2. Measure the amount of severely impacted areas and compare with regional standards.	Monitor annually See discussion above; the amount of soil disturbance is estimated at less than 15% for these areas.

REFERENCES

- Bartos, D. 2003. Field notes from an interagency aspen field tour on the Bighorn NF USDA Forest Service, Rocky Mountain Research Station, Ogden, UT. On file at Sheridan USFS office.
- Beck, Jeff and D. M. Staley. 2005. USDA Forest Service Region 2 Monitoring protocol for American beaver. USDA Forest Service. Lakewood, CO. On file at Sheridan USFS office.
- Connelley, J.W. et al. 2000. Guidelines to manage sage grouse populations and their habitats. *Wildlife Society Bulletin* 28(4):967-985.
- Emme, T. and B. Jellison. 2004. Managing for beaver on the Bighorn National Forest. Wyoming Game and Fish Department, Sheridan Region. Unpublished Report.
- Faulkner, D. 2004. Monitoring Wyoming's Birds: 2004 year end report. Rocky Mountain bird Observatory. Brighton, CO.
- Girard, M., D. B. Wheeler, and S. B. Mills. 1997. Classification of riparian communities on the Bighorn National Forest. USDA Forest Service, Rocky Mountain Region.
- Hoover, R. L., and D. Wills. 1987. Managing forested lands for wildlife. R. Hoover and D. Willis, eds. Colorado Division of Wildlife and USDA Forest Service, Rocky Mountain Region. Denver, CO.
- Mehl, M. 1992. Old-growth descriptions for the major forest cover types in the Rocky Mountain Region. *In: Proceedings of a workshop: Old-growth forests in the Southwest and Rocky Mountain Regions.* USDA Forest Service, Rocky Mountain Forest and Range Experiment Station. Fort Collins, CO.
- Regan, C. et al. 2003. Draft Terrestrial ecosystem assessment for the Bighorn National Forest. USDA Forest Service. Lakewood, CO.
- Sauer, J. R., J. E. Hines, and J. Fallon. 2005. *The North American breeding bird survey, results and analysis 1966 - 2004. Version 2005.2.* [USGS Patuxent Wildlife Research Center](#), Laurel, MD
- White, C. and R. Sparks. 2008. Monitoring Wyoming's birds: 2007 field season report. Tech report #M-MWB07-01. Rocky Mountain Bird Observatory. Brighton, CO. 214pp.
- Wyoming Game and Fish Department. 2003. Big game herd unit job completion reports. Cheyenne, WY.

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APPENDIX A – NARRATIVE DESCRIPTION OF COOPERATIVE AGREEMENTS / ACTIVITIES

Monitoring Driver	Monitoring Question
2. Objective 2a, Strategy 8 Objective 4c, Strategy 4	How well is the forest interacting and planning in cooperation with communities and local governments?
Aquatics program staff assisted with the funding of stream gauging stations in Coney Creek. This is a coordinated effort with USGS and Sheridan Area Water Supply Joint Powers Board.	
Aquatics program staff provided input into the Washakie Watershed Steering Committee.	
Aquatics program staff held a coordination meeting with Wyoming Department of Environmental Quality and Wyoming Game and Fish Department.	
Aquatics program staff conducted SMARTY bus educational outreach at Woodland Park school showing differences in macroinvertebrate communities based on water quality.	
Cloud Peak Backcountry Horsemen contributed nearly 200 hours to trail maintenance and facility upkeep at Elgin Park trailhead.	
Cloud Peak Chapter Wilderness Watch volunteered over 500+ hours to trail maintenance projects and completion of the stream water quality reports.	
Powder Pass Nordic Ski and Snowshoe completed its second winter of volunteer efforts on nordic ski areas. The volunteers donated over 400+ hours to trail marking, clearing and packing projects.	
Volunteers provided over 4,000 hours to the management of the Powder River Ranger District efforts in 2007.	
Three coordination meetings held with Wyoming Game and Fish Department with aquatics/wildlife focus.	
Forest continued annual meetings with each county regarding wildfire preparedness planning and response, including Cody Dispatch Zone operating procedures.	
Johnson County Hazardous Fuels Mitigation Commission continued in 2007 with the forest as a partner to address concerns with residential development adjacent to the forest.	
4. Objective 3a Potential Monitoring Item #1	Is the Bighorn National Forest assisting in building the capacity of Tribal governments, rural communities and private landowners to adapt to economic, environmental, and social change related to natural resources.
The forest continued to support Ft. Washakie interagency helicopter program through an agreement for fire suppression.	

Monitoring Driver	Monitoring Question
<p>4. Objective 3a Potential Monitoring Item #2</p>	<p>See potential monitoring item #1 above.</p>
<p>Fuels/fire coordination meetings with all 4 counties for fire suppression coordination. Johnson County Fuels Mitigation Committee formed to address private and forest (WUI) hazardous fuels concerns.</p> <p>Continued joint implementation of the Story fuels project with county, state, and forest programs combined, achieving 100 acres of prescribed burning on forest, with county completing other private land activities through USFS grant.</p> <p>Continued Bench project implementation has reduced Shell Canyon summer home owners risk of wildfire potential.</p> <p>Continued coordination with Canyon Creek estates in developing the Southwest fuels project to treat hazardous fuels, with private land treated through USFS grant. Southwest fuels project decision was signed in 2007.</p>	
<p>10. NFMA Species Viability Objective 1b, Strategies 5-11</p>	<p>Are the habitat trends (and therefore population trends by inference) for MIS and other emphasis species being maintained or improved with respect to management activities conducted?</p>
<p>The forest participated in the statewide avian monitoring program (in association with the Rocky Mountain Bird Observatory). This was the sixth year of this program. The annual report is available (White and Sparks 2008).</p>	
<p>12. Objective 1.c, Invasive Species Strategy 2, cont.</p>	<p>What prevention activities and cooperative efforts have been implemented during the past year?</p>
<p>The Bighorn National Forest continues to have a relatively small amount of noxious weeds. Our primary method of treatment is through cooperative agreements with Big Horn, Johnson, and Washakie counties. Interface money was also used to do treatment and inventory on lands adjacent to the forest.</p> <p>An increased level of weed awareness on the forest through educational programs presented to seasonal crews has led to identification of new populations of noxious weeds on the forest and follow-up treatment has occurred or is planned. Noxious weed prevention and control is considered in NEPA projects on the forest, including timber harvest, grazing activities, and dispersed and developed recreation.</p> <p>A growing concern is the dispersal of noxious weeds through ATVs and 4x4 pickups coming from other areas. Surveys have begun to pick up Russian knapweed in and along some roads, and it is suspected that the weed seed is dropping off undercarriages.</p> <p>Weed seed free feed program continues to be monitored and compliance by forest users in general is very good. Treatment and monitoring in Johnson County included work by wilderness rangers with help from volunteers in addressing ox-eye daisy near the Cloud Peak Wilderness in the Circle Park Trailhead area.</p>	

Monitoring Driver	Monitoring Question
18. Objective 2b, Wilderness Strategies 2 – 5	What level of crowding occurs on trails? Does the wilderness provide opportunities for solitude?
<p>Twenty-three violations were issued.</p> <ul style="list-style-type: none"> 2 – unattended campfire. 1 – damaging natural features. 1 – litter. 7 – campfire above 9,200 feet in elevation. 2 – campfire less than 100 feet from trail or water. 6 – failure to have required registrations while in the Cloud Peak Wilderness. 3 – camping less than 100 feet from water. 1 – over group size of 10. <p>Twenty-five individuals received warning notices.</p> <ul style="list-style-type: none"> 1 – false information to Forest Officer. 3 – campfire above 9200 feet. 19 – failing to complete a required registration. 1 – camping less than 100 feet from water. 1 – tethering livestock less than 100 feet from water. 	
18. Objective 2b, Wilderness Strategies 2 – 5	Are special exceptions affecting the wilderness resource?
<p>No special exceptions for motorized uses were authorized by the forest supervisor during the summer of 2007. This includes search and rescue operations conducted by the local sheriffs' offices and the Forest Service for resource actions.</p> <p>During the winter of 2006-07, the forest completed search and rescue agreements with the four counties covered by the forest. These agreements allow the sheriffs and their search and rescue groups to conduct motorized searches and rescues with off-road vehicles (ORVs) or helicopters without obtaining pre-approval from the forest supervisor. The sheriffs are required to submit complete written reports to the wilderness coordinator within 48 hours after the incident. More extensive motorized operations by the sheriffs or search and rescue operations still need forest supervisor approval.</p>	