File Code: 1920-2-3
Date: August 15, 2001

Interested Party:

The Land and Resource Management Plan for the Medicine Bow National Forest and Thunder Basin National Grassland was approved on November 20, 1985. Implementation of the Plan began during 1986, and as required by 36 CFR 219.12(k), monitoring how well the Plan was being implemented was also initiated. Fiscal Year (FY) 2000 was the fifteenth year of monitoring how well we implemented the Plan. The information from this effort has been analyzed and evaluated by the interdisciplinary team and the Forest Leadership Team. The results of this analysis and evaluation are documented in the 2000 Annual and Monitoring Evaluation Report, which is available upon request.

The regulations below (36 CFR, PART 219) describe the reasons for evaluating the Forest Plan:

A. To determine the effects of National Forest management on adjacent lands, and the effects of managing adjacent lands on the Forest (219.7(f))

B. To determine if conditions or demands in the area covered by the Forest Plan have changed significantly enough to require any revision (219.10(g)).

C. To determine if budgets have significantly changed the long-term relationships between levels of multiple-use goods and services enough to create the need for a "significant amendment (219.10(e))."

D. To determine how well the stated objectives of the Forest Plan have been met (219.12(k)).

E. To determine how closely Management Standards and Guidelines in Chapter III of the Forest Plan have been followed (219.12(k)).

The annual report meets the intent of these regulations and satisfies the requirements of Chapter IV in the Forest Plan; to provide information about the progress toward achieving the stated objectives. This report provides a communication link with the public and other levels within the Forest Service, and discloses the effectiveness of implementing the Forest Plan. It identifies research that may be needed to improve the Forest Plan, and explains the reasons for any changes that will be made to improve project implementation or monitoring procedures. Section XII, Review of Previous Year Recommendations, discusses the changes recommended in the previous year (1999) Report and those actions accomplished during the following year (2000).

We are currently revising the 1985 Plan. The 1985 Forest and Grassland Plan will not be revised as a Forest and Grassland Plan. We released the Final EIS for the Northern Great Plains and the Thunder Basin National Grassland Plan in July 2001. A Record of Decision for the Grassland Plan will be issued in the spring of 2002. The Medicine Bow National Forest portion of the 1985 Plan is being revised as a stand alone Forest Plan. We have received comments from the public about our proposal to revise the Plan and will use them along with other public input to develop and analyze a range of alternative actions for a revised Forest Plan. A draft EIS and draft Forest Plan are expected to be published in Sept. 2002, and will be available for public review for 90 days. The Draft EIS

will be adjusted in response to the comments, with release of the Final EIS and Revised Forest Plan anticipated in the first six months of 2003.

The public is invited to keep abreat of Forest planning efforts by accessing the World Wide Web at: www.fs.fed.us/r2/mbr, and then click on "Resource Management" and "Forest Planning."

Another function of the Monitoring Report is to disclose the annual achievement of goods and services from the Forest, considering the amount of funding allocated to the Forest and the annual cost of monitoring. During Fiscal Year 2000, the Medicine Bow-Routt National Forests and Thunder Basin National Grassland administrative unit was allocated 15.971 million dollars to manage the Forest, including implementing the Forest Plan. The estimated cost of monitoring the Forest during the year was $ 84,200.00, which has been steadily increasing from $ 20,500.00 in 1988 when the cost of monitoring was first reported. This reflects the trend of increasing costs, while the Forest budget has remained fairly constant.

One of the key management tools available to the Forest is vegetation treatment, which is used to sustain an environment that supports all the uses of the National Forest. The condition of vegetation influences nearly all other resources and resource uses including; visual quality, wildlife habitat, recreation, insects and disease, water quality, grazing, and wood production. As shown in the table on page 18 of the report, a total of 747 acres of vegetation treatment occurred during 2000. Although the amount of vegetation treatment on the Forest is less than what was predicted in the Forest Plan, most of the other goals and objectives stated in the Plan have been achieved annually (refer to the Forest Plan Evaluation Table in Section VIII of the Report).

The Medicine Bow National Forest is managed for all the people of the United States. The annual monitoring report is one method of determining how well we are achieving the goal of "Caring for the Land and Serving People." Your opinion about how well we are doing is also important to us. Therefore, if you have any comments or suggestions, please contact Stephen Nielsen at the address shown above or phone (307) 745-2404.

To request a copy of the Annual Monitoring Evaluation Report for Fiscal Year 2000 for the Medicine Bow National Forest, please contact: Stephen Nielsen, 2468 Jackson Street, Laramie, WY 82070-6535, or call; (307) 745-2404.

Sincerely,

/s/ Mary H. Peterson
MARY H. PETERSON
Forest Supervisor

MEDICINE BOW NATIONAL FOREST
THUNDER BASIN NATIONAL GRASSLAND

LAND AND RESOURCE MANAGEMENT PLAN

ANNUAL MONITORING AND EVALUATION REPORT

FISCAL YEAR 2000

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ANNUAL MONITORING EVALUATION REPORT
FISCAL YEAR 2000

ABSTRACT

The Land and Resource Management Plan (Forest Plan) for the Medicine Bow National Forest and Thunder Basin National Grassland was approved on November 20, 1985, therefore, implementation and Monitoring of the Plan began during 1986. This fifteenth annual report evaluates the results of the monitoring activities that occurred on the Forest during Fiscal Year (FY) 2000, and makes a variety of recommendations to improve monitoring or project activities during future years.

The two primary components of Monitoring are described in Chapter III and IV of the Forest Plan. Chapter III identifies the General Direction and the Standards and Guidelines that must be followed when implementing projects on the ground. The table at the beginning of Chapter III shows the projected resource outputs, costs, and benefits of implementing the Plan. Chapter IV displays the monitoring requirements for the various resources, and also the amount of Allowable Variance that the outputs can deviate from the stated objectives for each resource.

Monitoring roles and responsibilities range from the Forest Supervisor who provides overall leadership and direction and makes Forest-wide decisions, to District Staff Specialists who implement the District schedule of projects on the ground. The Forest Interdisciplinary (ID) Team coordinates and guides the monitoring program and helps prepare the annual report for approval by the Forest Supervisor.

Forest users also have an opportunity to provide input to the Monitoring effort by reporting any unique experience or observation that they may have had while on the Forest. These reports are individually investigated and evaluated to determine whether any corrective action is necessary, and also to decide the timing and methods for implementing that action.

Forest Plans are dynamic and can be changed by means of Amendments or Revision (36 CFR 219.10(f)(g)). The intent of this flexibility is to maintain the Plan as current and accurate, in accordance with changing resource conditions and public demands.

During late 1991 the Forest made a decision to revise the Forest Plan, which the Regional Forester approved on January 23, 1992. The decision to revise was based on issues and conditions on the Forest that have changed since the original Plan was completed. The Revision was delayed for several years, but in October of 1999 the Forest formally began the revision process by publishing a Notice of Intent (NOI) to prepare an EIS in the Federal Register. The Forest is currently gathering information and preparing resource assessments for this effort. It is anticipated that a Draft EIS will be published in September 2002, with the Final EIS being released during June 2003. Refer to Section VI for a more complete discussion of this history.

An important part of Monitoring and Evaluation is to determine if the resource outputs, costs, and returns predicted in the Forest Plan were achieved. As a result of Monitoring during 2000, it was determined that the majority of the projected average annual outputs/activities shown on Table III-1 of the Plan were accomplished. The Forest Plan Evaluation Table in Section VIII of this report compares the objectives stated in the Plan with what was actually accomplished during 2000. In addition, each Monitoring Item that exceeded the Allowable Variance, as stated in Chapter IV of the Forest Plan, is discussed in detail.

Another goal of Monitoring is to determine how well the management Standards and Guidelines and General Direction in Chapter III of the Forest Plan were met. Section IX of this report provides a discussion of the results of Monitoring each of the 50 Items listed in Chapter IV, and any recommendations for changing management techniques or implementation methods in the future.

Corrective actions identified by the ID Team as a result of monitoring during 2000 are discussed in Section X, Need to Improve Monitoring or Implementation. These changes will be addressed during Fiscal Year 2001.

Section XII, Review of Previous Year Recommendations, discusses the changes recommended by the ID Team in the previous year (1999), and what was accomplished during the current year of monitoring (2000).

I. INTRODUCTION

The Record of Decision for the Forest Plan was signed by the Regional Forester on November 20, 1985. Subsequently, implementation of the Plan began during Fiscal Year 1986. The historic legislative background and evolution of National Forest System Planning is provided in the Preface to the Plan (pages i-x).

One of the requirements of the Forest planning process is to monitor and evaluate how well the Plan is implemented (36 CFR 219.12(k)). The process also includes making subsequent modifications to the Plan in response to Monitoring and Evaluation. This report documents the results of monitoring during FY 2000, discusses the evaluation of those results, and describes the rationale for any changes to the Plan that have been recommended. These changes may occur in the form of an Amendments to the Plan, or be used to help improve the methods of implementing projects on the ground.

The regulations at 36 CFR Part 219 require that implementation of the Forest Plan be evaluated annually on a sample basis as specified in the Plan. These monitoring requirements are summarized below:

** A program of monitoring and evaluation shall be conducted that includes consideration of the effects of National Forest management on land, resources, and communities adjacent to or near the National Forest being planned and the effects upon National Forest management of activities on nearby lands managed by other Federal or other government agencies or under the jurisdiction of local governments (36 CFR 219.7(f)).

** To determine if conditions or demands in the area covered by the Forest Plan have changed significantly enough to require any revision to the Plan (36 CFR 219.10(g)).

** To determine if budgets have significantly changed the long-term relationships between levels of multiple-use goods and services enough to create the need for a "significant amendment" (36 CFR 219.10(e)).

** To determine how well the stated objectives of the Forest Plan have been met (36 CFR 219.12(k)).

** To determine how closely Management Standards and Guidelines in Chapter III of the Forest Plan have been followed (36 CFR 219.12(k)).

The Annual Monitoring and Evaluation Report for Fiscal Year 2000 meets the intent of these Regulations, and satisfies the purpose of Chapter IV in the Forest Plan to provide information about the progress being made toward achieving the stated goals, objectives, and management requirements (page IV-1). It also provides an important and concise communication link with the public and with other levels within the Forest Service, in order to disclose the effectiveness of implementing the Forest Plan. In addition, it identifies any research efforts that may be needed to improve the Plan or the methods for implementing resource management activities on the ground.

II. MONITORING PROGRAM SUMMARY

Projects that implement the Forest Plan are monitored on a sample basis and annually evaluated to determine how well the goals and objectives were met, and how effectively the Management Standards and Guidelines protected the resources on the Forest. It is important to note that monitoring actions are normally planned in areas where projects will occur, in order to detect and mitigate any adverse impacts to the environment. In areas where no project activities are planned there usually is no need to monitor, except to acquire base-line data. Therefore, monitoring tends to reflect more issues than are actually occurring on the Forest as a whole. The Monitoring Program should be viewed as a method of determining how well the Forest Plan is being implemented, rather than a system that only identifies problems on the Forest.

The Monitoring Program for the Forest is comprised of two components. The first component relates to the Monitoring Requirements in Chapter IV of the Forest Plan. The Forest ID Team compares the resource output objectives that were projected and displayed in Table III-1 of the Plan to what was actually accomplished during the Fiscal Year. This output is then compared to the Maximum Allowable Variance for each item listed in Table IV-1 to ensure that the performance was within the specified limits. The Allowable Variance for each monitoring item was developed to indicate how much the measurement is expected to fluctuate. Exceeding the Variance indicates that the objectives are not being met as projected and that further examination of the item is warranted. A table is included in Section VIII of this report to display the comparison for FY 2000.

It is important to recognize that Table III-1 displays "average annual" outputs for a decade, but does not require the stated amount to be achieved each year. Therefore, the most meaningful data is the total output for a ten-year period. Data gathered during the past fifteen years has been used by the ID Team to evaluate each Monitoring Item and formulate conclusions for most Items from the output and expenditure levels that have occurred. The ID Team will continue to monitor these items, evaluate the results, and recommend minor changes until the Forest Plan Revision is completed.

The second component of Monitoring is performed on the ground. This phase of monitoring ensures that implementation of the Standards and Guidelines described in Chapter III is appropriate and effective. Forest resource specialists evaluated a variety of site-specific projects that occurred during 2000. Individual specialist reports for the monitoring items are available upon request at the Forest Supervisor's Office in Laramie, Wyoming.

The Monitoring Program for implementing the Forest Plan includes activities such as field surveys, data collection, and assembling and evaluating resource information. The total cost to the Forest for

Monitoring and Evaluation during Fiscal Year 2000 was estimated by the ID Team to be $ 84,200. This is 31 percent higher than FY 1999.

III. MONITORING ROLES AND RESPONSIBILITIES

Forest Supervisor - The role of the Forest Supervisor is to provide leadership and direction, and to also make decisions delegated to the Forest Supervisor. The Supervisor is responsible for ensuring that the annual Monitoring Program is performed according to the requirements of Chapter IV of the Forest Plan, and in compliance with current regulations, laws, and Forest Service directives. In addition, the Forest Supervisor approves the Evaluation Report and certifies that the Forest Plan is sufficient to guide management activities for the succeeding year, or identifies corrective actions necessary to keep the Plan current and valid.

Forest Staff Directors - The role of the Forest Staff Directors is to plan, develop, coordinate, and monitor Forest programs and activities for the Forest Supervisor. They are responsible for assigning specific tasks to the staff specialists, such as compiling data and evaluating and documenting the results of monitoring. The Directors also review the final monitoring report, and may recommend that changes be made to the Forest Plan or implementation procedures according to the results of the evaluation.

District Rangers - The role of the District Rangers is to provide leadership and direction, and to make decisions delegated to the District Ranger. District Rangers are responsible for project monitoring, which includes reviewing activities on the ground, in order to ensure compliance with the requirements of the Plan. Each District Ranger is also responsible for maintaining the R2RIS computer database accurately and up-to-date, in order to meet the broad spectrum of information needs for the various resources.

Forest Planning Staff - The Forest Planning Staff facilitates the planning, monitoring, and evaluation processes. The Planning Staff Specialist prepares the Annual Monitoring Evaluation Report, maintains the record of any decisions made by the Forest Supervisor due to Monitoring, and processes any subsequent amendments to the Forest Plan.

Supervisor's Office Staff Specialists - The role of the Resource Staff Specialists is to provide technical assistance and recommendations to the Forest Supervisor. Specialists may participate in ID Teams for the Forest Supervisor or assist the Staff Directors by providing information and management recommendations for Forest projects. The Specialists may also work with District ID Teams to analyze specific projects and provide recommendations to the District Rangers.

District Staff Specialists and Project Managers - The role of District Staff Specialists and Project Managers is to plan, develop, coordinate, implement, and monitor District projects on the ground. The outputs that result from implementing various projects on the Districts are then combined to form the total accomplishment for each resource program on the Forest. The quality of project implementation and the quantity of the outputs are then compared to the goals, objectives, standards and guidelines of the Forest Plan.

IV. MONITORING PROGRAM COSTS

The intent of monitoring the Forest Plan during implementation is to determine how well the stated objectives have been met, and evaluate the effectiveness of applying the Standards and Guidelines. Monitoring activities tend to focus on projects that affect major components of the environment, or in response to the issues, concerns, and opportunities that were identified during the forest planning process. The requirements for Monitoring and Evaluation are stated in Federal regulations at 36 CFR 219.12(k). The three levels of monitoring are described below.

A. Implementation Monitoring: Determines if plans, prescriptions, projects, and activities are implemented as designed, and are in compliance with the objectives, Direction, and Standards and Guidelines of the Forest Plan. The results of this level of monitoring may indicate needed adjustments to the Forest Plan Direction, prescriptions, or predicted outputs, or may require changing future project plans or scheduling.

B. Effectiveness Monitoring: Determines if plans, prescriptions, projects, or activities are effective in meeting the Management Area Direction, objectives, and the Standards and Guidelines in the Forest Plan. Evaluating the results of effectiveness monitoring may be used to adjust the objectives, predicted outputs, prescriptions, Standards and Guidelines, or mitigation measures stated in the Plan. This would be achieved by initiating a Revision or Amendment to the Forest Plan.

C. Validation Monitoring: Determines whether the initial assumptions and coefficients used during development of the Forest Plan are correct. Evaluating this level of monitoring may indicate a need to Amend the Forest Plan, or a recommendation for additional scientific research. This may subsequently lead to recommending changes in laws, regulations, policies, or application models that affect the Forest Plan or project implementation.

Monitoring and evaluation is a specific activity that provides information to determine whether programs and projects are meeting Forest Plan direction. Monitoring requires collecting information on a sample basis from the sources stated in Chapter IV of the Forest Plan. Evaluating the results of

monitoring helps to determine the effectiveness of the Forest Plan, which may generate the need for an amendment to the Plan, or adjusting the procedures for implementing projects.

Information for many of the Monitoring Items has historically been gathered and reported for individual resource program outputs, such as the Management Attainment Report (MAR). Therefore, information for items such as Timber Stand Improvement (TSI) and Grazing Use was already available for the monitoring report during the first year. When these items became a required part of the monitoring program there was no additional cost to the Forest. Other items, however, were not previously monitored and when they became required by Chapter IV of the Forest Plan an additional demand on Forest personnel and funding was created. The Forest ID Team has estimated the cost that is directly related to Forest Plan Monitoring for each item described in Chapter IV during Fiscal Year 2000. These costs are grouped by resource and are shown in the following table:

FOREST MONITORING COSTS	
Resource Program - Fiscal Year 2000	**Cost**
Recreation	19,500
Visual Resource Quality	600
Cultural Resources	5,000
Biodiversity	750
Wildlife	7,200
Fisheries	9,200
Range	31,100
Timber	9,200
Soils	2,000
Water	2,500
Transportation	1,000
Fuel Treatment	800
Forest Pest Management	800
Lands	500
Special Use Permits	500
TOTAL MONITORING COST	**$ 84,200**

V. FOREST PLAN AMENDMENTS

> The Regulations at 36 CFR 219.10(f) allow changes to be made to the Forest Plan; "The Forest Supervisor may amend the forest plan. Based on an analysis of the objectives, guidelines, and other contents of the forest plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the plan. If the change is significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a forest plan. If the change is not significant, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures."

Eighteen Amendments have been approved since the Record of Decision was signed on November 20, 1985. When the decision to revise the Forest Plan was made during 1991, it was also determined that no more changes would be made to the Plan in the form of amendments, unless considered necessary. Forest Plans, however, must be responsive to changing conditions of the land, resource uses, and the social and economic demands of the people (36 CFR 219.1(b)(14)). Therefore, five of the 18 amendments were approved after 1991.

As stated in the regulations (36 CFR 219.10(f)), the Forest Supervisor may amend the Forest Plan if needed, but a determination must be made whether the amendment is a "significant change in the plan." In addition, the amendment cannot be implemented until after appropriate public notification and satisfactory completion of the NEPA procedures. The 1985 Forest Plan will continue to be implemented until completion of a significant amendment or revision, including; "at least 30 days after publication of the notice of availability of the final environmental impact statement in the Federal Register (36 CFR 219.10(c)(1))."

No Amendments to the Forest Plan were recommended or completed by the ID Team during FY 2000.

VI. SIGNIFICANT CHANGES IN RESOURCES OR PUBLIC ISSUES AND DEMANDS

A Forest Plan is normally revised on a ten-year schedule, or at least every fifteen years. It may also be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have changed significantly, or when changes in RPA policies, goals, or objectives would have a significant effect on the output levels of Forest resource programs. During the Monitoring and Evaluation process, the Interdisciplinary Team may recommend a Revision of the Forest Plan at any time (36 CFR 219.10(g)).

During the years 1987 to 1991 the timber industry began harvesting higher amounts of timber from the Forest than the historical levels due to high market values. During 1989, however, the Forest began selling less timber than the historical level. The timber volume sold in FY 2000, again is lower than the proojected annual output in the Forest Plan. This is one of the key issues that will be addressed during the Forest Plan Revision Process. Therefore, no changes to the Plan are recommended as a direct result of Monitoring during FY 2000.

Comments received during both National and local public involvement activities indicated that several other issues continued to be controversial during 2000, including; travel management, the suitability of lands for timber harvest and production, the viability of wildlife species, water production and quality, increased competition for recreation opportunities, and roadless area allocation and management. These topics will be considered during the Forest Plan Revision process.

The Forest ID Team is responsible for Monitoring the 50 Items listed in Chapter IV of the Forest Plan on an annual basis. The results of Monitoring these Items during 2000, including any recommendations for change, are discussed in Section IX,(5) of this report. Section X includes a list of recommendations made by the ID Team for making changes to the Monitoring Program or to project implementation procedures. Some of the changes may be accomplished upon completion of a minor Amendment to the Forest Plan, while others may require a "Significant Amendment (36 CFR 219.10(f))." Section XI identifies any specific changes to the Forest Plan that have been recommended by the ID Team. These changes will be made following approval of this report, and in compliance with all the NFMA and NEPA procedures. In addition, Section XII provides a review of the recommendations that were made by the ID Team in the Evaluation Report (Section X) for the previous year (Fiscal Year 1999), and what was actually accomplished during the subsequent year (2000).

The Interdisciplinary Team provided the data for the Annual Monitoring Evaluation Report for Fiscal Year 2000, which has been reviewed by the Planning Staff and the Forest Supervisor. It has been determined that no changes related to individual resources or public issues or demands have occurred that would immediately require a Significant Amendment of the Forest Plan. The major issues that have been identified will be analyzed and addressed during the Forest Plan Revision process, which is described in the Regulations at 36 CFR, Part 219.

DECISION TO REVISE/AMEND THE FOREST PLAN:

The Medicine Bow National Forest and Thunder Basin National Grassland Land and Resource Management Plan (Forest Plan) was approved on November 20, 1985. The Forest Plan was developed to comply with the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976. The process that was used to develop the Forest Plan was in accordance with the direction in the National Environmental Policy Act of 1969.

The planning regulations at 36 CFR, Part 219.10(g) state, "Forest Plans shall ordinarily be revised on a 10 year cycle or at least every 15 years. It may also be revised whenever the Forest Supervisor determines that conditions or demands in the area...have changed significantly..." In a letter dated October 7, 1991, the Forest Supervisor informed the Regional Forester that conditions on the Forest had changed significantly, and that Forest Plan revision was warranted. The Regional Forester approved the request for revision in a letter dated January 23, 1992.

Efforts to revise the Medicine Bow National Forest Plan started during late 1992. During 1993, the Medicine Bow National Forest and Thunder Basin National Grassland was combined with the Routt National Forest. Since the Routt revision effort was closer to completion, the Routt Forest Plan revision effort continued until the Record of Decision was signed on February 17, 1998. In about 1995, the Thunder Basin National Grassland became part of the Northern Great Plains (NPG) revision effort consisting of eight National Grasslands and two National Forests within four states. This effort is currently in progress, with the NGP Planning Team stationed in Chadron, Nebraska. The Thunder Basin Grassland Plan and Final Environmental Impact Statement was released in July 2001. There is a 6 month comment period on these documents. In spring 2002, we expect to issue a Record of Decision on the Thunder Basin Grassland Plan.

In October 1999, the Medicine Bow NF formally began Revision with publication of the Notice of Intent (NOI) to Revise in the Federal Register. We received 900 written responses w/4000 comments as a result of the NOI issuance and six public meetings. We also received comments based on a review of (1) draft management area prescriptions, (2) draft Standards and Guidelines and (3) a revised Purpose and Need Statement. The comments are being used to help shape:

- Alternatives to the proposed action described in the Notice of Intent
- Standards and Guidelines
- Management Area Prescriptions
- New revision topics or issues
- Special analysis or data
- Improved information or explanation of the revision process.

The Medicine Bow National Forest planning effort is currently focused on gathering information about existing conditions and completing a variety of resource related assessments. Public meetings will be conducted in various locations throughout the planning area during the fall of 2001. Following these meetings, the ID Team will develop alternatives to the proposed action. Following that activity, the ID Team will analyze alternatives and prepare a draft Revised Plan. A Draft EIS and draft Forest Plan is expected to be published in Sept. 2002, and will be available for public review for 90 days. The Draft EIS will be adjusted in response to the comments, with release of the Final EIS and Revised Forest Plan anticipated during spring of 2003. The public is invited to keep current on the Forest planning effort by

accessing the World Wide Web at: www.fs.fed.us/r2/mbr, and then click on "Resource Management" and "Forest Planning."

VII. SPECIAL ACTIVITY MONITORING

Some activities or programs receive special attention due to their importance regarding land and resource management, and the impact on Forest personnel and funding. The Forest is currently involved in three such programs, which are described below:

LYNX AMENDMENT:

Several National Forests in Colorado and southern Wyoming are in the process of amending their Forest Plans by incorporating management recommendations to help conserve the Canada Lynx. This decision was based on a comprehensive scientific investigation conducted by nationally recognized State, Federal, and University experts. The Forest Service has published a Notice of Intent (NOI) to prepare an EIS for analyzing the Management Direction in Chapter III of the Forest Plan, in order to determine if any of that direction may adversely affect lynx. The analysis for this effort will examine and document the results of making changes to a variety of Management Directions, and the potential effect on National Forest activities.

SPECIES CONSERVATION PROJECT:

An important part of the mission of the Forest Service is to provide for the diversity and viability of plant and animal species on the National Forests and Grasslands. In order to accomplish this, the best available information needs to used for resource management planning and decision-making. Therefore, the Forest is part of the Rocky Mountain Regional effort called the Species Conservation Project. The goal of this project is to compile information about terrestrial and aquatic ecosystems and their associated plant and animal species, and then integrate that data into scientifically sound and efficient methods of managing the public lands. Ecosystem and species assessments are currently being prepared for this effort by independent scientists that are under cooperative agreements or contracts.

WYOMING ASSESSMENT PROJECT:

During 1997, Forest Supervisors within the State of Wyoming had a meeting to discuss Forest Plan Revision, which many of the Forests were facing. Two objectives for accomplishing the inventory and analysis needed to support the revision efforts were identified; 1) perform the necessary studies on a statewide basis, rather than on an individual Forest basis, 2) statewide data makes it easier for each Forest to collaborate and cooperate with the State of Wyoming.

This unified "Wyoming Assessment" approach is being used during the revision process for a variety of natural resource areas to varying degrees. Many of the resource areas, such as air and water quality and

broad-based ecological surveys are more suited to regional or statewide analysis and evaluation, rather than each Forest trying to do the job independently. This will result in reducing costs and achieving uniform methodologies for forest planning among all the Forests within the State of Wyoming. The following three resource areas have been addressed as part of the Wyoming Assessment and are important to the Forest Plan revision effort that is currently in progress.

"Wyoming Timber Market Analysis:"
This comprehensive study was published during May, 2000. It documents an analysis of the Wyoming timber industry, and makes a comparison of past, present, and anticipated future conditions. Pages 31-37 of the report focus on the Medicine Bow National Forest in particular. The information gathered for this study will help Forest planners predict and assess the effects of land management decisions on this facet of Wyoming's economy.

Minerals Inventory:
An inventory of the minerals resources on the Forest was performed with the financial and technical support of the U.S. Geological Survey. This study resulted in updating the minerals data tables and maps for the Forest due to changes that have occurred since the original Forest Plan was developed. This will help to ensure that any minerals related decisions made in the Forest Plan will be based on the most current information that is available.

Wild and Scenic Rivers Assessment:
A resource staff specialist was assigned the task of reviewing the Wild and Scenic River assessments for all National Forests within Wyoming. The purpose of this review was to help achieve consistency among all the Forests, and specifically to help ensure that the process used on the Medicine Bow National Forest is legally sound and effective.

VIII. COMPARISON OF ANNUAL PROJECTED/ACTUAL OUTPUTS AND EXPENDITURES

Monitoring data for the years 1986 to 2000 are exhibiting a supply trend for most of the outputs displayed in Chapter III of the Forest Plan. This information helps to evaluate whether the annual outputs are meeting the levels that were predicted in the Plan, or whether a change is needed. An Amendment to the Plan may be necessary in order to balance the supply with the demand for some items, or the topic may need to be addressed during the revision process.

The objectives for the Projected Average Annual Outputs displayed on the following pages are from the Forest Plan, Chapter III, Table III-1 (pages III-7 to III-11). The following table compares the predicted annual outputs for each resource during the years 1991 to 2000 to the amount that was produced during Fiscal Year 2000.

FOREST PLAN EVALUATION TABLE

Resource Activity	Unit of Measure (M = Thousand) (MM = Million)	1991 - 2000 Projected Average Annual Output	Fiscal Year 2000 Actual Output Accomplished	Percent Projected Output
RECREATION				
Public Developed	MRVD (1)	173	488	282
Downhill Skiing	MRVD	24	21	86
Dispersed (includes off-road motorized)	MRVD	628	NR	NR
Off-road Motorized	MRVD	96	NR	NR
Semi-Primitive Non-motorized	M Acres	178	172	97
Semi-Primitive Motorized	M Acres	203	165	81
Roaded Natural	M Acres	1,214	1,175	97
Rural	M Acres	65	177	272
Urban	M Acres	6	7	117
Trail	Miles	4.5	9.0	200

FOREST PLAN EVALUATION TABLE				
Resource Activity	Unit of Measure (M = Thousand) (MM = Million)	1991 - 2000 Projected Average Annual Output	Fiscal Year 2000 Actual Output Accomplished	Percent Projected Output
Const/Reconst				
WILDERNESS				
Area Managed	M Acres	79	79	100
Wilderness Use	MRVD	11.4	NR	NR
WILDLIFE & FISH				
Winter Range Carrying Capacity	M Elk M Deer	4.0 21.5	4.6 35.0	112 162
Structures	Number	44	0	0
Big Game Hunting (2)	MRVD	35.5	40.0	113
Small Game Hunting (2)	MRVD	41.0	41.0	100
Fishing (2)	MRVD	75.5	87.5	116
Nongame Use (2)	MRVD	5.0	10.0	200
RANGE				
Grazing Use	MAUM (3)	252	235.9	94
TIMBER (Commercial Sale Offerings)				
Sawtimber (4)				
(Chargeable Vol. to ASQ (5)	MMBF MMCF	29.3 6.14	2.0 0.46	7 7
Roundwood				
(Nonchargeable Vol. to ASQ)	MMBF MMCF	5.0 1.0	2.7 0.51	54 54
Reforestation				
Natural	Acres	2,394	123	5
Planting	Acres	120	0	0
Seeding	Acres	N/A	173	N/A
Timber Stand Improvement	Acres	3,076	403	13
Firewood (Pers and Commercial)	Cords	22,400	3,568	16
WATER (6)				
Water Yield Increase	Ac/Ft	Baseline	333	N/A
Water Meeting	Water Violations	0	0	N/A

FOREST PLAN EVALUATION TABLE				
Resource Activity	Unit of Measure (M = Thousand) (MM = Million)	1991 - 2000 Projected Average Annual Output	Fiscal Year 2000 Actual Output Accomplished	Percent Projected Output
Quality Goals				
MINERALS				
Review Plans	Op. Plans	924	285	31
HUMAN & COMMUNITY				
Senior Employ. Program	Enrollee Yrs	25	7.5	30
YCC Program	Enrollee Yrs	7	0.0	0
LANDS				
Purchase/ Acquisition	Acres	0	0	0
Exchange	Acres	160	640	400
R-O-W Acquisition	Cases	25	0	0
Landline Location	Miles	25	25	100
SOILS				
Resource Improvement	Acres	247	11.0	4
FACILITIES				
Construction for General Use	Miles	1.0	0.0	0
Reconstruction for General Use	Miles	22.9	0.0	0
Construction for Timber Sales	Miles	34.6	1.2	3
Reconstruction for Timber Sales	Miles	17.0	3.4	20
Construction for Minerals	Miles	40.0	0.0	0
Roads Closed	Miles	33.2	10.0	30
PROTECTION				
Fuel Treatment(7)	Acres	2,394	30	1

FOREST PLAN EVALUATION TABLE				
Resource Activity	Unit of Measure (M = Thousand) (MM = Million)	1991 - 2000 Projected Average Annual Output	Fiscal Year 2000 Actual Output Accomplished	Percent Projected Output
EXPENDITURES (8)				
Total Budget	M Dollars	31,887	17,584.8	55
Med Bow Budget	M Dollars	15,971	N/A	N/A
RETURNS TO TREASURY				
Other Than Minerals (8)	M Dollars	1,999	973	49
Minerals (9)	M Dollars	12,400	1,904	15

NOTE: NR = Not Reported

1 Thousand Recreation Visitor Days = A recreation visitor day is equal to 12 hours of recreation for one person or one hour of recreation for 12 persons or any combination of use.

2 Wildlife and fishing use figures are also included in dispersed recreation; they are not additive.

3 MAUM = Thousand Animal Unit Months = An AUM is the amount of forage consumed by one mature cow or equivalent in a one-month period.

4 Sale volumes are expressed in both cubic and board feet. The Average Annual Output may not be met during any single year, but must not exceed 293.0 MMBF for the 10-year period (1996-2005).

5 This accomplishment only includes timber volume that was actually sold.

6 The total amount of water yield from the Forest is estimated at approximately 1.026 MMAc.Ft. (Baseline), depending upon annual weather conditions (Forest Plan, page III-8). The amount of water produced above that baseline level is calculated by the HYSED model according to the amount of vegetation treatment and road construction that occurred on the Forest during the year.

7 The number of acres treated for fuel reduction only.

8 All expenditures and returns are in current year dollars. The total amount shown is for the Medicine Bow National Forest ($ 823) and the Thunder Basin National Grasslands ($ 150).

9 Current accounting procedures make it very difficult to report actual returns from minerals, because several agencies are involved in the process of recording receipts from different mineral estates. Therefore, the figure shown for Fiscal Year 2000 is only an estimate.

IX. FOREST PLAN EVALUATION

The results of the FY 2000 monitoring and evaluation program have been analyzed by the Interdisciplinary Team, in order to determine the significance and the need for adjustment. Recommendations by the ID Team have been reviewed by the Forest Supervisor. This evaluation report includes a review and discussion of the questions stated in the regulations (36 CFR PART 219).

A. To determine the effects of National Forest management on land, resources, and communities adjacent to or near the National Forest being planned and the effects upon National Forest management of activities on nearby lands managed by other Federal or other government agencies or under the jurisdiction of local government (36 CFR 219.7(f)).

This requirement is not specifically identified in Chapter IV of the Forest Plan, but it is addressed during the environmental analysis process for various projects that are implemented as part of the Plan. The National Environmental Policy Act (NEPA) requires, "initiate and utilize ecological information in the planning and development of resource-oriented projects (Section 102(H))." The implementing Regulation at 40 CFR 1500.1(c) states, "The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." Part of this process is to "Identify environmental effects and values in adequate detail so they can be compared to economic and technical analyses (1501.2(b))."

The environmental effects include, "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative (1508.8)." A cumulative impact is, "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (1508.7)."

The direction stated above is performed during the environmental analysis process prior to implementing any project on the Forest. The resulting analysis is then documented in an Environmental Assessment (EA) or Environmental Impact Statement (EIS). Reviews of these environmental documents during 2000 indicated that all the analyses and documents complied with the requirements of the NEPA, including the disclosure of cumulative effects. An evaluation of the discussions of cumulative effects in these documents revealed that there were no direct effects on adjacent lands, resources, or communities that resulted from any of the specific project proposals. In addition, these document reviews determined that there were no identifiable effects upon National Forest management due to activities on any nearby lands.

In contrast, it has been identified that resource management on the Forest as a whole has had some impact on the social and economic conditions of several local communities. Two resource programs have had the most notable effect on adjacent communities. Recreation use of the Forest has increased

during the past fifteen years. This translates into additional economic benefits realized by the adjacent communities. Although the amounts of these benefits have not yet been determined, the economic and social aspects of this trend will be analyzed and documented during the Forest Plan Revision process.

The second factor is the decline in the Timber Sale Program on the Forest since 1989. The Forest Plan predicted a total of 430.5 MMBF to be sold during the period 1986 to 2000, but only 191.4 MMBF were actually sold, which is about 44 percent of the amount predicted. The social/economic impacts to local communities due to these factors and other resource management activities on the Forest are among the major topics that will be analyzed and discussed in the Forest Plan Revision.

B. To determine if conditions or demands in the area covered by the Forest Plan have changed significantly enough to require revision (36 CFR 219.10(g)).

The Forest ID Team has evaluated the results of the Monitoring activities that occurred during 2000. The Team concluded that the conditions, or public issues and demands have not changed enough on the Forest since the Notice of Intent to revise the Forest Plan was issued in October, 1999, to recommend changing the revision schedule.

C. To determine if budgets have significantly changed the long-term relationships between levels of multiple-use goods and services enough to necessitate a significant Amendment to the Forest Plan (36 CFR 219.10 (e)).

The average annual budget estimated in the Forest Plan (Table III-1, page III-10) for the period 1991 to 2000 is shown as $ 15,971,000 (in 1989 dollars). Historically, the actual budget allocated to the Medicine Bow National Forest has been about one-half that amount, as displayed in previous Monitoring Reports.

During Fiscal Year 1996 the budget was allocated to the combined Medicine Bow-Routt National Forests, therefore the funds could not be identified by individual Forest. The total estimated budget was derived from each Forest Plan (Med. Bow EIS, pages B-100 to B-102: Routt Plan, page III-9), and then compared with the final budget that was allocated to the Forest during Fiscal Year 2000. The table below displays the predicted annual budget for each resource program on the combined Forest, and the actual amount of funding that the program was allocated during Fiscal Year 2000:

FISCAL YEAR 2000 BUDGET FOR THE MEDICINE BOW-ROUTT NATIONAL FORESTS:

Resource Program	Projected Annual Budget (M $)	Actual Annual Budget (M $)	Percent of Projected
Recreation/Wilderness	3,867	2,030.9	53
Wildlife/Fish	1,152	702.6	61
Range	2,896	1,762.6	61
Timber	9,807	2,600.8	27
Soils/Water	515	338.9	66
Minerals	2,643	551.3	21

Lands	1,216	1,001.5	82
Facilities	4,614	2,976.3	65
Protection	779	1,272.8	163
General Admin.	4,398	2,427.2	55
Blowdown	N/A	1,919.9	N/A
TOTAL:	**31,887**	**17,584.8**	**55**

Although the actual budget for some resource programs was less than what was predicted in the Forest Plan, the actual outputs may have been achieved or exceeded during 2000. While reduced funding is not the only factor that determines whether the resource outputs are achieved for some of the Programs, it is often the primary reason. In contrast, some programs may be fully funded, but still do not achieve the objective for one or more resource outputs.

A variety of reasons may cause this situation, depending upon the specific output. Due to funding levels not being commensurate with the projected outputs and other contributory factors, the output objectives were not achieved as predicted in the Forest Plan for the following individual items: Wildlife Structures, Allowable Sale Quantity, Restocking of Harvested Areas, Timber Stand Improvement, Land Exchange, Soil and Water Resource Improvement, Forest Road Development, Trail Construction and Reconstruction, and Fuel Treatment (Refer to Forest Plan Evaluation Table in Section VIII of this report).

The total budget for the Forest during FY 2000 was only 55 percent of the amount projected in the Forest Plan. Partnership projects with other public agencies or with private organizations often help to attain Plan objectives that otherwise might not be met. The Forest ID Team and Leadership Team have determined that the reduced funding for the programs has not, "significantly altered the long-term relationship between levels of multiple-use goods and services projected under planned budget proposals, as compared to those projected under actual appropriations (36 CFR 219.10(e))." Therefore, no specific changes to the Forest Plan are needed at this time.

D. To determine how well objectives have been met (36 CFR 219.12(k)).

The Forest Plan provides long-range management direction in the form of goals and objectives. Goals describe a desired future condition and are expressed in general terms. Objectives are responsive to the goals, and are measurable in both time and quantity. The goals and objectives of the Medicine Bow National Forest Plan are stated on pages III-3 thru 5 of the Plan, and page IV-9 of the EIS.

The goal of vegetation management is to sustain an environment that supports the uses that are emphasized and compatible within each Management Area Prescription. Vegetation treatment is a tool for achieving and maintaining a healthy and ecologically diverse forest for a variety of resource uses. The condition of vegetation on the Forest influences nearly all other resources and uses including; visual quality of the landscape, recreation opportunities, habitat diversity, insect and disease susceptibility, availability of wood products, water quantity and quality, amounts and quality of forage for livestock and wildlife, and providing critical habitat for wildlife including Threatened and Endangered Species.

The amount and types of vegetation treatment that was accomplished during Fiscal Year 2000 included; 123 acres of reforestation using natural regeneration, 300 acres of timber harvest by clearcutting, 44

acres of timber harvest by partial cutting, and 403 acres of Timber Stand Improvement. The table below displays this information for FY 2000. The figures that appear in the Annual Forest Plan Objective column for FY 1991-2000 were derived from Table II-5, pages II-78 to 80 in the Final EIS of the Plan.

TREATMENT (1) METHODS	ANNUAL FOREST PLAN OBJECTIVE FY 1991-2000	ACTUAL FY 2000 ACCOMPLISHMENT
Sagebrush Conversion	193	0
Aspen Regeneration	400	0
Conifer Remove from Aspen	350	0
Reforestation - Natural	2,394	123
Reforestation - Planting	120	0
Reforestation - Seeding	N/A	173
Harvest by Clearcut	2,039	300
Harvest by Partial Cutting	1,861	44
Timber Stand Improvement	3,076	403

(1) Some treatments were contracted during 2000, but may not occur until some time in the future.

Many of the objectives shown on Table III-1, Chapter III (page III-7 to 11) of the Forest Plan were met, while some were dramatically exceeded and others were less than predicted. The Forest Plan Evaluation Table in Section VIII of this report compares the Projected Average Annual Outputs with the Actual Outputs that were accomplished during 2000, and the percent difference between the two numbers. Chapter IV of the Forest Plan displays the Allowable Variance, or how much the outputs are allowed to deviate from the stated objectives. Some of the Projected Outputs shown in the Plan are an average for a ten-year period (1991-2000). Therefore, a significant variance may occur in any single year, yet meet or exceed the total predicted output, such as for Monitoring Item 45, Land Exchange.

After fifteen years of implementing the Forest Plan, most of the resource outputs now exhibit an identifiable trend of accomplishment. This information has helped to determine some of the issues that need to be addressed during the Forest Plan Revision process. It will also identify any changes that may need to be made to the Forest Plan in the form of an Amendment prior to completion of the Revision.

The following discussions describe the primary factors that caused the Allowable Variance for each Monitoring Item to be exceeded during 2000, and the course of action for any recommended changes.

Monitoring Item 21: Wildlife and Fish Habitat Improvement

Allowable Variance = +/- 10 %
Actual Variance = - 100 %

The number of wildlife and fish habitat improvement structures that are annually scheduled in the Forest Plan is 44. During 2000, no wildlife habitat structures were completed. This was primarily due to the lack of cooperatively shared projects with outside groups and organizations.

Recommendation: The Districts will again be encouraged to place more emphasis on acquiring cost-share participants in future years. No changes to the Forest Plan are recommended.

Monitoring Item 30: Allowable Sale Quantity (ASQ)

Allowable Variance = The amount of timber volume sold cannot exceed; or must not deviate more than 5 percent under 293.0 MMBF for the 10-year period 1996-2005.
Actual Annual Variance = - 93 %

The amount of timber sold during Fiscal Year 2000, again did not approach the Annual Allowable Sale Quantity stated in the Forest Plan for the twelfth consecutive year. The reason for not achieving the desired output is due to a combination of factors: the outcome of Administrative Appeals of some decisions; litigation that prevented implementation of some decisions; project designs that had a lower volume output than what was predicted when planning the sale, on-the-ground sale layout modifications resulting in less volume in the Timber Sale Contract than the amount determined by the Environmental Analysis process.

Recommendation: The goal for this item is that the total amount of timber sold must be within the Allowable Variance for the ten-year period. The variance for a single year, however, may vary considerably because the amount of timber that is sold can be adjusted during successive years. The total volume deficit for the first 10-year period was 117.91 MMBF, or 58 percent less than the objective that was predicted in the Forest Plan. The second ten-year period began during 1996, and as shown in the Forest Plan (page III-8), the Allowable Sale Quantity increased from 28.4 to 29.3 MMBF per year. Subsequently, the total amount of timber sold from 1996 to 2000 is currently at 25.4 MMBF, or 83 percent, less than what was predicted in the Plan. An adjustment to the timber program is necessary, and is one of the major topics that will be addressed during Forest Plan Revision.

Monitoring Item 31: Restocking of Harvested Areas
Allowable Variance = +/- 5 %
Actual Variance = -28 %

A total of 1,470 acres were treated using a final harvest during 1995, thereby requiring a fifth-year survey during 2000 to determine adequate stocking (36 CFR 219.27(c)(3)). Of the area surveyed, 1,061 acres were reported as stocked, which is 72 percent of the total. Reporting for this item initially indicated that 409 acres were not adequately stocked. Upon examining the data from the R2RIS database, however, it was discovered that the majority of the sites recorded as non-stocked (335 acres) had been improperly coded into the database. All these sites were associated with a single timber sale. The remaining 74 acres that were reported as not being adequately stocked were scattered on the other two Ranger Districts. As a result of monitoring both the field conditions and the computer data, it was determined that this item did meet the Allowable Variance (1396/1470 = 95 %).

Recommendation: Direction will be given to each Ranger District to ensure that regeneration surveys will continue to be performed during 2001 as required. The Douglas District will be directed to review the database and make the necessary corrections. On the other two Districts, the sites that are not adequately stocked will be analyzed by the District Silviculturalists to determine if any corrective action is necessary to achieve proper stocking levels. Sites that are not adequately stocked will be seeded or planted to ensure that adequate regeneration is achieved. No change to the Forest Plan is required at this time.

Monitoring Item 32: Timber Stand Improvement

Allowable Variance = +/- 25 %
Actual Variance = - 87 %

The Forest goal for Timber Stand Improvement (TSI) during 2000 was 3,076 acres, however, only 403 acres were treated, which is 13 percent of the amount predicted in the Forest Plan. The Allowable Variance was exceeded by 62 percent.

Recommendation: Timber Stand Improvement includes thinning lodgepole pine stands before they reach age 30, in order to achieve stocking control and promote higher growth rates. Lodgepole pine often regenerates overly dense after clearcutting or fire, and these types of stands require thinning to prevent a severe reduction in growth. The annual amount of TSI performed on the Forest was an important factor that was used to help determine the Long-Term Sustained-Yield (LTSY) Capacity when the Forest Plan was developed. More emphasis needs to be placed on accomplishing TSI work on the Forest, or it may affect the amount of timber available in the future.

The SILVA 99 Report for 2000 showed that more than 7,000 acres of overstocked lodgepole pine stands on the Forest still need TSI treatment. Under the premise of the original Forest Plan, planning and budgeting for Timber Stand Improvement should be made a high priority, in order to achieve the output objectives stated in the Forest Plan. However, receiving only 27 percent of the projected budget for timber related activities, it is not possible to program TSI treatments. This problem is related to implementation rather than the Forest Plan, therefore, no change to the Plan is currently needed. The intent and ouput objectives for this item, however, need to be reanalyzed during Forest Plan revision.

Monitoring Item 40: Soil and Water Resource Improvements

Allowable Variance = +/- 10 %
Actual Variance = - 96 %

The Forest Plan objective for this item is 247 acres per year, but only 11 acres were accomplished. The Forest began completing fewer soil and water resource improvement projects starting in Fiscal Year 1998, because the Regional Office changed the method of allocating funds to the Forests. The result on the Forest has been a substantial reduction in funding compared to what was previously received. Subsequently, the number of projects and acres will continue to be less than predicted.

Recommendation: In the 1995 Monitoring Report it was recommended that the Ranger Districts report all projects that improve watershed conditions, even if they are intended to achieve other resource goals. This is still being accomplished. If the reduced level of funding continues to affect the outputs of this item, a change to the Forest Plan may be necessary. This will be analyzed during the Revision, but no change is needed now.

Monitoring Item 41: Forest Road Development

Allowable Variance = +/- 25 %
Actual Variance = - 70 to - 100 %

The stated objectives for this item are listed on page III-10 of the Forest Plan. The outputs from the Forest Road Development Program during 2000 are shown on the Evaluation Table (page 12) of this report. The two main reasons for not meeting the stated goals for this item include the reduced timber program and the current National effort to develop the most cost-effective transportation system considering both construction and maintenance funding.

Recommendation: The Forest is presently involved in performing a roads analysis that will result in recommendations for a final transportation system that balances the needs of resource management and the availability of personnel and funding. Site-specific proposals for any new road construction or decommissioning will be analyzed and documented in compliance with the NEPA process, including public involvement. This topic will also be discussed during the Forest Plan Revision Process, but no change to the Plan is currently needed.

Monitoring Item 42: Trail Construction and Reconstruction:

Allowable Variance = +/- 25 %
Actual Variance = + 200 %

The scheduled output for this item is 4.5 miles per year, as shown in the Forest Plan (page IV-59). During Fiscal Year 2000, the Forest accomplished 9.0 miles, which is 200 percent of the stated objective. This was the result of the availability of additional funding and personnel, which may not occur during future years.

Recommendation: The amount of funding and personnel that is available on an annual basis is not precisely known. Therefore, the output for this item varies from year to year. No changes to the Forest Plan are recommended.

Monitoring Item 43: Fuel Treatment

Allowable Variance = +/- 25 %
Actual Variance = - 99 %

The stated objective for this item in the Forest Plan is 2,394 acres annually for the period 1991-2000, but only 30 acres of activity fuels treatment were accomplished during 2000, which is only one percent of amount scheduled in the Forest Plan.

Recommendation: The Allowable Variance for this Item was exceeded by 74 percent. The primary reason for not meeting this objective is due to the reduction in the number and size of timber sales offered during previous years. The number of acres requiring fuels treatment is directly related to the level of vegetation treatment activity that occurs as a result of the timber sale program. This is a problem with implementation rather than the Forest Plan, therefore, no change is needed.

Monitoring Item 45: Land Exchanges

Allowable Variance = +/- 50 %
Actual Variance = + 400 %

The Forest Plan objective is 160 acres per year, however, 640 acres were accomplished during 2000.

Recommendation: The amount of land exchange has varied significantly on an annual basis, resulting in greatly exceeding the predicted outputs during the first planning period. One year may result in a single large land exchange, while several other years may pass without any exchanges being accomplished. This item needs to be examined during Forest Plan revision to determine the relevancy of continuing the monitoring activities. No changes to the Forest Plan are needed at this time.

E. To determine how closely management Standards and Guidelines have been followed (36 CFR 219.12(k)).

The Forest Plan was intended to be dynamic, responsive to changing conditions, and also to meet the needs of the American people. Project-level design reports and monitoring activities indicate that most of the management direction and requirements in Chapter III of the Plan were met during 2000. Each year that projects are implemented on the ground, Forest personnel acquire a better knowledge and understanding of the Standards and Guidelines in the Forest Plan. This experience, combined with monitoring and evaluation, helps to improve the quality of resource management on the Forest.

Two levels of monitoring the management activities on the Forest have been historically used, in order to meet the goals and objectives of the Forest Plan. One level is a General Management Review (GMR) by the Regional Office, which monitors and evaluates overall Forest management. The other level consists of a Forest review of management activities on the Ranger Districts. One purpose of these annual reviews is to determine if the activities being reviewed are working toward meeting the overall goals of Forest Planning. No formal reviews were performed on the Forest during 2000. Implementation and effectiveness monitoring, however, were performed on the Forest and are described in the next section.

Results of Monitoring Individual Items (Forest Plan, Chapter IV).

Each of the fifty Monitoring Items in Chapter IV of the Forest Plan are listed below. Included is a description of the monitoring activity, the results of monitoring, and a recommended course of action for correcting any deficiencies that were identified by the Resource Staff Specialist.

Monitoring Item 1: Off-Road Vehicle Damage

Monitoring off-road vehicle (ORV) damage includes field observations by District personnel and reports from the public. Damage (destruction of vegetation and creating ruts that cause erosion) generally occurs under two scenarios. The first situation is when travel occurs off Forest Service Transportation system roads, which may or may not be authorized, depending upon local area restrictions. The second

situation occurs when damage is caused by people driving around obstacles on travelways, such as snow drifts or bog-holes. The damage is greatest when the ground is wet, regardless of the situation.

The travel management crew on the Brush Creek/Hayden Ranger District has spent the past three summers inventorying and marking travel routes. This included contacting the general public about off-road vehicle travel and the potential for causing damage to the roadways. District personnel identified numerous user-created trails in the vicinity of Pennock Mountain, Green Ridge, and the East Fork Trail area of Coon Creek. While making public contacts during hunting season, District personnel also discovered damage in the Roaring Fork/Cottonwood Park/Fletcher Park areas, caused when users created new trails by blazing and clearing with chainsaws. Also during hunting season, it was discovered that the buck and pole fence at White Rock Canyon had been cut and ATV's were traveling behind the fence and into the canyon itself. The fence is scheduled to be reconstructed during the summer of 2001.

The Environmental Assessment and Decision Notice for the forest-wide Travel Management Plan was completed during October, 2000, and will be implemented during 2001. No reports were filed by the Douglas or Laramie Districts for FY 2000. No changes to the Forest Plan are needed at this time.

Monitoring Item 2: Trail Condition

Districts reported the results of their annual trail inspections. The information for these inspections is used to program maintenance work and formulate budget and capital investment proposals.

The French Creek Canyon Trail (# 298) had damage at the lower elevation due to cattle trespassing from an adjoining allotment. This damage was repaired and the area was monitored during the 2000 season. All other trails are in good condition due to annual maintenance, which will continue during future years. No reports were filed by the Douglas or Laramie Ranger Districts. No changes to the Forest Plan are presently needed.

Monitoring Item 3: Dispersed Recreation Use and Experience

Dispersed recreation use and experience is monitored and reported as the number of people-at-one-time per acre (PAOT) annually by area (Management Areas 2A and 3A) during an estimated 100-day season. Forest Plan General Direction (page III-100, 115) specifies, "low to moderate contact with other groups and individuals" in dispersed recreation management (3A and 2A) areas.

Current use in 2A and 3A areas does not exceed the ROS capacity. During the past two years, the following dispersed sites have been inventoried; Beaver Creek, Platte River/Savage Run, Encampment River, Upper Little Snake River, South Savery, Battle Creek, North Savery, and Northeast Sierra Madre. These inventories included all dispersed sites except within the Wilderness areas.

No reports were filed by the Douglas or Laramie Ranger Districts. No changes to the Forest Plan are currently needed.

Monitoring Item 4: Dispersed Campsite Condition

This Item consists of inventorying the Frissel Condition Class of dispersed (undeveloped) campsites during project analyses, or as scheduled in Chapter IV (page IV-20) of the Forest Plan. Standards and Guidelines (6023, 6197) in Chapter III (page III-22) of the Plan requires that all category 4 and 5 sites must be closed or rehabilitated.

This item was not reported by the Ranger Districts. No change to the Forest Plan is necessary.

Monitoring Item 5: Developed Site Use

During Fiscal Year 2000, all developed campgrounds on the Forest were managed according to the Recreation Fee Demonstration Program. The Concessionaire that had the contract for managing these sites chose to abandon the permit. Subsequently, the Forest solicited a new prospectus, however, no bids were received. As a result, the Forest was given permission from the Washington Office to list these developed sites as part of the Demonstration Program. The maximum use of the sites during FY 2000 was 40 percent occupancy. No changes to the Forest Plan are necessary at this time.

Monitoring Item 6: Developed Site Condition

Monitoring this item consists of examining and reporting the existing condition of developed recreation sites. The Forest Plan requires that existing facilities be maintained in Condition Class 1 or 2. Sites scheduled for rehabilitation are listed in Appendix I of the Forest Plan (pages I-5,6) and will be analyzed and evaluated prior to project development. Beginning during 1999, the Districts reported the amount of deferred maintenance on 20 percent of their facilities using a new INFRA-structure program. Deferred maintenance funding has been identified for some improvements to be made beginning in 2001. No changes to the Forest Plan are necessary at this time.

Monitoring Item 7: Downhill Skiing Use

During the 1999-2000 ski season, about 42,000 tickets were sold at the Snowy Range Ski Area. This represents approximately 21,000 Recreation Visitor Days (RVDs) which is a slight increase from 1999. No change to the Forest Plan is recommended at this time.

Monitoring Item 8: Wilderness Use

Even with limited funds, the condition of most trails and trailheads on the Forest are good to excellent. There were not enough funds, however, to monitor the use of those facilities. The overall use of the Wilderness areas on the Forest is estimated to be low to moderate. No change to the Forest Plan is recommended at this time.

Monitoring Item 9: Wilderness Campsite Condition

Monitoring of this item was performed by personnel while doing other activities, and when sites are discovered they are cleaned. The outfitter guide campsites within wilderness are checked and cleaned during hunting season, in order to meet wilderness guidelines. No changes are currently needed.

Monitoring Item 10: Adopted Visual Quality Objectives

The following District projects were reviewed for compliance with the applicable Visual Quality Objectives (VQOs) during the 2000 field season:

Brush Creek/Hayden Ranger District:
A new footbridge was constructed over North French Creek within the French Creek Canyon trail corridor (FDT 208) during Fiscal Year 2000. The 70-foot bridge can be viewed from both the French Creek Canyon trailhead and the FDR 206 corridor. The steel span structure is painted silver, which contrasts with the surrounding natural forest/riparian landscape. The spans should be painted with a flat, dark, brown color to become more subordinate and blend with the natural landscape, in order to meet the partial retention Visual Quality Objective.

Douglas Ranger District:
No projects were reviewed on the Douglas District during FY 2000.

Laramie Ranger District:
Two CXT precast single-vault toilets were installed in the Libby Creek Recreation Area last summer. The new toilets replaced old toilets that were leaky and inaccessible to people with disabilities. The two "Gunnison Model" toilets are accessible, and also provide a positive image for the Forest Service due to the tan-colored, barn-wood walls and cedar-roof textures. This model toilet is appropriate for the Libby Creek area, which is within a Roaded Natural ROS class setting. The color of walls and roof should be darker (preferably brown), to harmonize and blend better with the surrounding forest landscape, and to meet the Visual Quality Objective of Modification.

No changes to the Forest Plan are necessary at this time.

Monitoring Item 11: Compliance with Cultural Resource Regulations

During Fiscal Year 2000, a total of 127 projects were submitted to the Heritage team for cultural resource input into National Environmental Policy Act analysis documents or for compliance with Section 106 of the National Historic Preservation Act. These projects resulted in field inventories and compliance reports being sent to the State Historic Preservation Officer (SHPO). Two Memorandum of Agreements (MOA) were negotiated with SHPO. These MOA's were negotiated to mitigate potential adverse effects to the Wyoming Trail and the Laramie Rail Road from project activities. The Forest is in compliance with the National Range PA and Region 2's Memorandum of Understanding regarding the effects of range allotment management plans.

Changes made to projects after the NEPA decision is approved continues to be a characteristic problem on the Forest, consisting of modifications related to road construction and recreation. These occur when unexpected, site-specific ground features are encountered resulting in changes to the original proposal.

Some of these types of modifications are implemented prior to clearance by the Cultural Resource Staff, therefore, they are not in compliance with Section 106. Among the 127 projects that were reviewed by the Cultural Resource Staff, 124 of the 127 projects were completed in compliance with Section 106 of the NHPA. This is a problem with implementation and not the Forest Plan, therefore, no changes are needed at this time.

Monitoring Item 12: Protection of Historic Sites

As stated above in Item 11, Class I inventories were conducted for 127 projects on the Forest to determine the level of compliance with Section 106 of the National Historic Preservation Act. Although three of the projects were not in compliance, no adverse impacts to any historic sites were identified. Monitoring for this item validates that the integrity of historic sites on the Forest is being maintained. It is recommended that Line Officers in charge of compliance with the NEPA and Section 106 of the NHP Act need to emphasize that all projects on the Forest be completed in accordance with these Federal laws and Forest Plan requirements. No change to the Forest Plan is needed at this time.

Monitoring Item 13: Horizontal Diversity

The monitoring report for Fiscal Year 1992 provided an analysis of the level of horizontal diversity by Ranger District and Diversity Unit on the Forest. A review of reports from 1986 to 1991 was also included. There was no significant change in the amount of horizontal diversity between 1992 and 2000. The problems inherent in reporting this item (data quality and completeness, and the large number of acres that must change category in order to cause a change in percent) are the same as for previous years. The utility of this monitoring item will be evaluated during the Forest Plan Revision process. No change is currently needed.

Monitoring Item 14: Vertical Diversity

The monitoring report for Fiscal Year 1992 provided an analysis of the level of vertical diversity by Ranger District and Diversity Unit on the Forest. A review of reports from 1986 to 1991 was also included. There was no significant change in the amount of vertical diversity between 1992 and 2000. The problems inherent in reporting this item (data quality and completeness, and the large number of acres that must change category in order to cause a change in percent) are the same as for previous years. The utility of this monitoring item will be evaluated during the Forest Plan Revision process. No change is currently needed.

Monitoring Item 15: Aspen Retention

Site, location, and size-class information for aspen is stored in each Ranger District R2RIS database. The number of acres of aspen in Management Areas 4D (emphasis on aspen management), and the amount of aspen included within other Management Areas comprises the total amount of aspen on the Forest. As the amount of aspen changes due to natural succession or project activities, the information is updated in the District databases for monitoring and evaluating compliance with the Forest Plan.

The Forest Plan requires the continuous retention of 77,770 acres of aspen on the Forest (page III-87). This amount may vary by plus or minus 10 percent within the 4D Management Area, as stated on page IV-31 of the Plan. The data for FY 2000 revealed that 84,042 acres of aspen are on the Forest, with 73,825 acres in 4D areas. This is less than a five percent deviation from the amount specified in the Forest Plan. This item should be evaluated during the Forest Plan Revision process to ensure that it is valid and relevant to the Forest Plan Standards and Guidelines in Chapter III. No change to the Forest Plan is needed at this time.

Monitoring Item 16: Old Growth Retention

Information for this item is stored in each Ranger District R2RIS database. During FY 2000 the Districts reported 116,287 acres of old-growth designated on the Forest, which is 241 acres more than the previous year. This total includes timber stands in Wilderness Areas, stands with an Old-Growth Score Card rating less than 38, and areas designated as corridors that connect old-growth stands. Although the data indicates that the amount of old growth in 4B Management areas does not comply with the direction stated for this item in Chapter IV of the Forest Plan (page IV-32), the Districts are making progress toward meeting the stated goal. The requirement is being met, however, in 3A and 9A Management Areas, and also on a forestwide basis (page III-14,c). The Districts need to complete the task of designating an adequate number of acres of old growth within 4B Management Areas in order to comply with this Monitoring Item. Old growth will be addressed during the Forest Plan Revision process to ensure accuracy and usefullness. No changes to the Forest Plan are necessary at this time.

Monitoring Item 17: Diversity of Coniferous Tree Species

The information for this item was derived from the District R2RIS databases for 2000, and showed no significant change from the 1992 data. This item should be evaluated during the Forest Plan Revision process to ensure that it is valid and relevant to the Forest Plan Standards and Guidelines in Chapter III. No change is required at this time, however.

Monitoring Item 18: Winter Range Carrying Capacity

Each Ranger District reported varying percentages of field review for the creditable acres of winter range. Approximately ten percent (or more) of the big game winter ranges were examined by: ocular estimate, shrub measurement transects, range conservation plots, and field inspection trips. Collectively, the estimate for winter range carrying capacity (winter of 2000 – 2001) totaled: 4,600 elk and 35,000 mule deer/white-tailed deer. This carrying capacity (expressed as numbers of animals) should not be construed as the actual numbers of animals that may or may not utilize these ranges. Carrying capacity is a measure of the productivity and capability of the range; and is not the number of animals that may be present at any given time.

The snow-pack for the winter of 1999 – 2000 was below average on practically all snow courses for the Medicine Bow Mountains and Laramie Range Mountains, except for the northern part of the Laramie Mountain Range (Laramie Peak). Several snowstorms also delivered precipitation to the Thunder Basin National Grassland area north of Douglas, Wyoming. The winter ranges entered the summer season in a

very dry condition. The summer was also very dry in the area, with the exception of periodic localized precipitation on the Thunder Basin National Grassland. The summer of FY 2000 experienced a drought and the fire season for FY 2000 was a landmark year. Across the western states, thousands of acres were burned by wildfires.

Winter range shubbery growth, as measured on transects, was reported as being less than previous years (bitterbrush < 5 inches; serviceberry, 5- 6 inches; grasses, 6 to 8 inches). The encouraging element of the inspections was the fact that big game definitely were utilizing the more succulent forage produced by the prescribed burns accomplished during 1997 and 1998. The prescribed burning treatment proved very beneficial during the dry year. In addition, bighorn sheep with lambs were noticeably using the areas burned during 1999.

Although the past year was very dry, the data gathered during 2000 is continuing to show a trend of achieving the desired results for winter range management, as stated in the Forest Plan. This monitoring item does not appear to require any immediate new research needs. In addition, no changes to the Forest Plan are needed in relation to this item. Two concerns should be addressed at the time of Forest Plan revision: (1) creditable winter range for both mule deer and white-tailed deer on the Thunder Basin National Grassland should be identified, which may influence some evaluation table numbers, (2) the monitoring item should explicitly include or separate mule deer numbers and white-tailed deer numbers

Monitoring Item 19: Snag Retention

One of the Ranger Districts reported the results of monitoring inspections for the retention of snags in completed vegetative treatment areas. Vegetative treatment described by the District included; standard commercial timber sales, campground salvage timber sales, and precommercial thinning. Monitoring was done by timber sale administrators in cooperation with the District Wildlife Biologist. The reported results were that, "snags are left at or above the level required in the Forest Plan." One District reported that due to the lack of funding, no snag monitoring occurred during FY 2000. The other District reported that snag retention was not a problem due to the continued effects of a Mountain pine beetle epidemic, which has provided the landscape with large numbers of snags. The Douglas Ranger District also reported that the effect of the pandemic Mountain pine beetle outbreak around Laramie Peak is still supplying adequate numbers of snags. After numerous years of beetle activity, many snags are now on the ground, but large numbers are still standing. Primary cavity excavators, and secondary nesting birds are still doing well in this habitat.

One District reported continued success in implementing the Forest Plan interpretation memo (File Code 1920, December 14, 1988), which describes the methodology for snag farms. This methodology, based upon discrete silviculturally managed stands, provides for snag succession.

This monitoring item does not indicate a need for new research. Additionally, there is no need for amendment prior to Forest Plan revision. During revision, this item should incorporate elements of the 1988 interpretation memo. Prescribed silvicultural management of individual timber stands is the basis for ensuring the perpetuity of snag presence in the ecosystem. Silviculturists should also be involved to review and describe appropriate stand size-classes during the Forest Plan revision process.

Monitoring Item 20: Threatened and Endangered Species

Due to lack of funding during 2000, the Douglas District did not conduct formalized surveys for the known bald eagle winter roosting galleries. However, field personnel were able to report some information for numerous sightings, while volunteers also reported the occurrence of some sightings. No new roosting sites were located. The limited information indicates that there is no identified increase or decrease in the use of wintering habitat in the Cheyenne River and Powder River drainages.

Two known bald eagle nests on the Brush Creek/Hayden Ranger District were monitored. One nest is known to have produced at least one young eagle during 2000. The other known nest was not active, and it is believed that the adult pair from this nest may have relocated in Colorado. A third nest that was discovered in 1997 and was partially blown down, was inactive during both 1998 and 1999. This nest showed no sign of rebuilding activity in 2000.

Peregrine falcon monitoring has been minimal since de-listing of the species. No empirical surveys were performed during 2000. The Medicine Bow Forest has no known nest sites, while the Routt National Forest has one active eyrie.

Surveys for the presence/absence of Preble's Meadow Jumping mouse were conducted by one Ranger District. Approximately twenty acres of suitable habitat were inspected, but no mice were successfully live-trapped. Range condition surveys in Preble's mouse habitat were done by another District, in order to assess residual forage stubble heights. It was determined that the drought produced minimal heights. Several specimens of the mouse were acquired for evaluation during 1999, but subsequent genetic testing in 2000 to separate the Western Jumping mouse from Preble's Meadow Jumping mouse is still not finalized or available.

The lynx, a threatened species, was surveyed by performing hair-snag transects. Twenty-five of the transects produced four hair samples that could not be identified. These samples have been submitted to the Forest Sciences laboratory in Missoula, Montana, but the results have not been returned. The USFS (Region 2) and the USFWS (Region 6) memorandum of agreement for streamlining Section 7 procedures for projects that may affect lynx or lynx habitat was implemented during 2000.

Mountain plover, a species proposed for listing, was monitored again during 2000 on the Thunder Basin National Grassland. In 1995, prairie dog colonies numbered 299-2, 3, and 5, were designated as an annual monitoring area for tracking Mountain plover use. A total of 1,745 acres were surveyed within the area, and birds were found on two towns out of the three that were surveyed. The results of the survey revealed six adults and one nest with three eggs, but no young chicks.

Boreal toad, a candidate species for listing, were surveyed during the spring and early summer. Three adult boreal toads were found, but no boreal toad egg masses or tadpoles were located. Two females were collected under permit and transported to the Wyoming Game and Fish Department, Sybille Wildlife Research and Conservation Unit, for the captive breeding program. There apparently are large acreages of suitable, vacant, boreal toad habitat. The scientific community is still attempting to ascertain if pathologic elements such as red-leg disease or chytrid disease are a major causal factor in the decline of this species.

The Black-tailed prairie dog was determined by the U. S. Fish & Wildlife Service to be, "warranted for listing, but precluded by higher priority species workloads," on February 4, 2000. This means that the species is now "candidate" for listing as threatened. The Douglas Ranger District continues to work

with the USFWS Ecological Services Office, Wyoming (Cheyenne) to provide data about this species.

The Regional Forester's list of sensitive species, including goshawk, boreal owl, and Columbian sharp-tailed grouse were also surveyed during 2000. The botanical sensitive species, Clustered lady's-slipper, was monitored at the Bottle Creek Campground, Brush Creek/Hayden District, for the sixth consecutive year. The inventory results showed no change in the plant population since the 1999 inspection.

The Forest continues to meet the provisions of the Threatened and Endangered Species Act of 1973, and also General Direction 0600 (page III-30) of the Forest Plan. No new research needs are presently identified as being needed to perform this monitoring item. In the eventuality the USFWS designates more threatened or endangered species, research needs will be reviewed. No amendment to the Forest Plan is immediately needed. During the Forest Plan revision process, this item should be considered for expansion to include some monitoring for the Regional Forester's sensitive species, as an identified part of the monitoring item. During 2000, there were no observed significant changes to threatened and endangered species resources or the public's demand for these resources.

Monitoring Item 21: Wildlife and Fish Habitat Improvement

During the spring and early summer of 2000, prescribed burning for big game habitat was accomplished in cooperation with the Challenge Cost Share partners, the Rocky Mountain Elk Foundation and the Wyoming Game & Fish Department. These projects and other enhancements, such as bighorn sheep habitat improvement to manipulate Ponderosa pine timber sites in the Laramie Peak area, accomplished the objective stated in the Forest Plan. However, the goal for habitat improvement or enhancement using Knutsen-Vandenberg funds (KV) was not met. Crews ordinarily assigned to perform these tasks were called away by the severe wildfire season of 2000 which developed by mid-summer. These aspen regeneration and snag enhancement projects will be continued into the year 2001.

The wildfire season also resulted in natural burn events that will benefit many wildlife species, and the successional change in habitat is viewed as being positive. In the Sierra Madre Mountains near Encampment, Wyoming, the Blackhall I, Blackhall II, and Hell's Canyon wildlifes burned a total of 2,000 acres of Forest Service, Bureau of Land Management (BLM), and private lands. These burns, aided by restoration activities during the fall of 2000, will especially benefit big game species.

There are no identifiable research needs related to this monitoring item. In addition, no amendment is needed. The Forest Plan revision will likely continue with this item. There is a concern that shrub decadence will increase if a sustained habitat improvement program by prescribed burning is not continued. A cooperative, interagency effort among: Bureau of Land Management, Wyoming Game & Fish Department, U. S. Forest Service is addressing this concern.

The program for habitat improvements did not experience any significant changes relative to the previous year. In addition, the public has not indicated any increased demand for this resource.

Monitoring Item 22: Elk Habitat Effectiveness

All three ranger districts reported monitoring information for meeting Standard and Guideline 7031MB (Forest Plan, page III 76). This guideline pertains to the maximum road density within fourth-order watersheds. During 2000, all fourth-order watersheds were reported as meeting this requirement.

The more restrictive Standard and Guideline, 7063MB (Forest Plan page III-128), pertains to the 4B management prescription areas, which are wildlife emphasis areas. During 2000, the ranger districts collectively reported that only one 4B management area exceeded the road density guideline, which was on the Douglas Ranger District. However, once the Knutsen-Vandenberg sale area improvement projects are completed, the roads will be closed and this area will also meet the road density guideline. Approximately two thousand acres (one 4B area) out of a total of approximately 1.8 million acres, is a positive sign that the standard is being met.

Although not a specific part of this monitoring item, one district reported implementation of the forest-wide travel management decision that was approved on October 16, 2000. This will result in a better inventory of roads, and help to analyze off-road travel use during Forest Plan revision.

The best measure of elk habitat effectiveness is the production of elk. The Wyoming Game and Fish Department still estimates the elk populations for the Snowy Range, Sierra Madre, Laramie Peak, and Pole Mountain data analysis units (DAUs), as being at or above the stated objective levels. During 1998, the Department made upward adjustments for most of the herd units. These adjustments were made after recent years' sampling/counts brought the Department to the conslusion that the numbers of elk on the ranges had been underreported. Consequently, if the summer ranges (principally on Federal lands) were producing a higher number of elk, and these elk (wintering principally on private holdings) were acceptable to the ranchers, an adjustment in stated objective numbers was appropriate. Therefore, the habitat evidently was being effective. Subsequently, the Department established very liberal harvest limit for the 1998, 1999, and 2000 elk seasons, and anticipates the same for 2001. Hunters are being encouraged to hunt and harvest elk. The prognosis is that these liberal hunting seasons will not bring the herds down to objective levels until probably the year 2003 or 2004.

The data and methodology for determining habitat capability and habitat effectiveness has been changing and evolving as newer research has been completed. The Pacific Northwest Research Lab (USFS) at LaGrande, Oregon, will be publishing more data associated with the Starkey Unit elk studies. During Forest Plan revision, these newer approaches should be evaluated to include more factors for elk habitat effectiveness monitoring than the road density approach presently used. An immediate amendment for this item is not presently needed due to the Forest Plan revision schedule. There is no significant change in the resource, and public demand for effective elk habitat and viewable or huntable populations of elk is apparently being satisfied.

Monitoring Item 23: Riparian Condition Rating

During FY 2000, range staff specialists evaluated riparian vegetation on the Forest to determine compliance with the Forest Plan Standards and Guidelines. Riparian areas are considered as inclusions in larger vegetation stands and are displayed as a percentage of that stand, rather than a separate site. Riparian area estimates are normally derived from the Resource Information System (R2RIS) database for each Ranger District. More specific information is obtained from the riparian condition rating data in INFRA. This database is used to support a variety of resource programs, and also contains information related to riparian condition. The Forest, including Thunder Basin National Grassland, contains approximately 56,125 acres of riparian vegetation sites, or habitat type.

Due to the conversion and transfer of all inventory and monitoring data from the FSRAMIS database into the INFRA database, no site-specific data or reports were available for FY 2000 for this item. Therefore, this item was not reported for Fiscal Year 2000. It will again be reported for FY 2001, and no changes to the Plan are recommended at this time.

Monitoring Item 24: Habitat Capability Trends of Management Indicator Species

The ranger districts annually update their R2RIS databases to reflect the changes to vegetation conditions that have occurred during the previous year. The R2RIS database is used to analyze habitat capability using HABCAP, a predictive computer model, and is designed to support the analysis for over twenty vertebrate species. The results of these analyses are then evaluated for consistency with Forest Plan, Standard and Guidleline 6289 (Forest Plan, page III-30).

During this reporting period, the software was adjusted and the data was reformatted, which allowed a better usage of the HABCAP model. The analysis of the current vegetative status indicates that all vertebrate species on the Forest are being provided habitat with at least forty percent or more of potential capability. At the time the Forest Plan was developed, forty percent capability level was considered adequate to provide habitat to sustain viable populations of individual species.

The Douglas Ranger District, which administers Thunder Basin National Grassland, submitted customized reports for many of the management indicator species for the grassland ecosystem. Most of these species are not modeled in HABCAP, as the model concentrates on forested habitats. These narratives indicate a year of improved habitat capability for most species. As an example, surveys indicated that for the year 2000, approximately 19,100 acres of Black-tailed prairie dog towns exist on the unit, compared with 18,500 acres identified in 1997. This species was determined to be, "warranted for listing, but precluded by higher priorities," on February 4, 2000 by the USFWS, which makes the species a candidate for listing as threatened. The Douglas Ranger District also reports that grassland species, such as sage grouse, Ferruginous hawk, mule deer, white-tail deer, the plains Rochelle Hills elk herd, and pronghorn antelope are experiencing stable habitat capability.

In summary, the Medicine Bow National Forest and Thunder Basin National Grassland are providing managed wildlife habitat at the ecosystem level. This habitat is believed to be sufficient to maintain viable populations of existing native and desired non-native vertebrate species in the planning area.

The methodology of measuring habitat capability is a previously identified, national level, research need. Given the schedule for Forest Plan revision, no amendment to this monitoring item is immediately needed. This monitoring item should be reviewed for utility, and validated or modified completely at time of revision. During this monitoring period, there apparently has been no significant change to the resource, or in public demand for the resource.

Monitoring Item 25: Colorado River Cutthroat Trout (CRCT).

During Fiscal Year (FY) 2000, the North Zone fisheries crew assisted the Wyoming Game and Fish Department (WG&F) in monitoring (by electrofishing) approximately twelve miles of the upper and lower Little Snake River drainage (includes Mill Creek, Belvedere Ditch, West Branch, North Fork

Little Snake, and roaring Fork). These surveys were done to address several concerns, including the time of spawning of CRCT in Belvedere Ditch, and the presence of CRCT in any of the other streams.

The fisheries crew and WG&F personnel electrofished Mill Creek (approx. 1.5 miles) which revealed that there were several adult brook trout trapped in a beaver pond complex upstream from the FDR 822 bridge crossing. After draining each pond (and then refilling) to a minimum pool, the crew electrofished the ponds to remove brook trout and to examine the CRCT population. After draining five ponds, more than twenty adult brook trout were removed. The Mill Creek beaver pond complex is essentially devoid of brook trout due to the lack of suitable spawning habitat in the ponds to support a population.

During FY 2000, the fisheries crew electrofished the West Branch of the North Fork Little Snake River following a chemical treatment, in order to determine the effectiveness of the treatment in each area. About 2.5 miles were treated and monitored, and only one brook trout was found in each stream segment that was treated. This strongly suggests that the treatments were successful.

The North Fork Little Snake River was electrofished to determine the effectiveness of past treatments for eradicating brook trout. Approximately three miles of the river were surveyed upstream from the confluence with Rose Creek. Only three adults and several young brook trout were removed, indicating that past eradication efforts were incrementally successful.

Electrofishing was performed in about two miles of the Roaring Fork, Little Snake River to determine the success of the treatment during the previous year. Only two adult brook trout were removed, indicating that past treatments were very successful in eradicating the presence of that species.

Belvedere Ditch was tested to monitor the time of spawning for CRCT in that waterway. The WG&F Spawning Supervisor was able to estimate the typical time of spawning at early to mid May.

Essentially, all the CRCT monitoring was accomplished in cooperation with personnel from the WG&F Department. During FY 2001, cooperative efforts at monitoring CRCT populations and habitats with the State will continue. No change to the Forest Plan in relation to CRCT monitoring protocol is recommended at this time.

Monitoring Item 26: Common trout Species

Brush Creek/Hayden Ranger District: During 2000, brook trout (common trout) were monitored in the Sierra Madre as part of the CRCT restoration program. The only common trout (brown trout, rainbow trout, and brook trout) that were monitored on the District were in the Sierra Madre, west of the Continental Divide. Amphibian populations were monitored (about 50 acres) to determine the presence of several Region 2 "sensitive" species; boreal toad, wood frog, northern leopard frog, and tiger salamander. The U.S. Fish and Wildlife Service amphibian survey protocol was used to monitor several wetland/riparian areas that had previously been examined for amphibians (Long Lake area). No boreal toads, northern leopard frogs, or tiger salamanders were found during the monitoring, but wood frogs and boreal chorus frogs (not "sensitive") were located and appeared to be doing well.

Laramie Ranger District: Boreal toad surveys were conducted in Rock Creek Park and the North Fork Little Laramie River watershed by the Forest Service, Wyoming Game and Fish Department, and the

U.S. Fish and Wildlife Service. Only one live toad was found during the survey, which is fewer than were found during 1999.

Douglas Ranger District: The District wildlife biologist continues to cooperate with the WG&FD to monitor warm water impoundments to determine their utility as sport fisheries and wetland habitats. Although a few of the impoundments (Turner Reservoir and East Iron Reservoir) receive relatively heavy fishing pressure and experience slow fish growth, these impoundments are stocked by the WG&FD and continue to be popular with the local anglers. No change to the Forest Plan is recommended in relation to this item.

Monitoring Item 27: Grazing Use

The Forest converted the FSRAMIS database program to a new one called INFRA during 1999 to monitor permitted and actual grazing use on National Forest System lands. Actual grazing use is evaluated to ensure that Forest Plan Direction is followed. Livestock grazing use must not deviate more than 10 percent from the Forest Plan objective of 252,000 AUMs annually between the years 1991 and 2000. The table below shows the results of monitoring actual use during 2000.

Total AUM's Forest Plan	Total AUM's F.Y. 2000	Percent Deviation From Forest Plan
252,000	235,900	- 6

Actual grazing use for 2000 was somewhat higher than the previous year, but there continues to be a slow overall trend of declining use for a variety of reasons. Some of the reasons include: non-use for personal convenience, waived livestock numbers, cancellation of partial and total permitted use because of permit violations, and reduction of numbers due to overstocked conditions. The Allowable Variance for this Item is within the limit permitted by the Forest Plan, therefore, no change is required at this time. This item may be addressed during the Forest Plan Revision process.

Monitoring Item 28: Forage Utilization

This Monitoring Item requires examining 20 percent of the range allotments on the Forest annually. Measurements are normally made in areas of heaviest use. Utilization levels must not exceed 10 percent of the allowable use guides for the grazing systems and range types shown in the Forest Plan (Chapter III, pages III-37 to 41). The results of monitoring forage utilization during 2000 are shown below.

Total allotments on the Medicine Bow NF.....300
Allotments monitored 94
Percent of total allotments monitored.....31

NOTE: The total number of allotments includes only those with grazing permits and allotments that are currently vacant. It does not include special use pastures or other use areas.

Ranger District	Total Allotments on the District	Number Allotments Monitored FY 2000	Allotments Not Meeting Plan

Brush Creek/Hayden	41	16	0
Laramie	21	9	0
Douglas	238	69	0
Forest Total	300	94	0

The data reveals that all 94 allotments that were monitored met the Forest Plan requirements for utilization, which continues the improvement shown during previous years. An analysis of the data for these allotments indicates that most of the upland areas were utilized properly, or under-utilized. Several Districts required removal of livestock when proper use was reached in the riparian areas. The data suggests that improved management (better distribution, salting, water development) are resulting in proper utilization of riparian areas. The Forest Plan Standards and Guidelines for utilization need to be reviewed during the Revision process to determine if they are still appropriate. No changes are required at this time.

Monitoring Item 29: Range Condition and Trend

This Monitoring Item requires that 10 percent of the range allotments on the Forest be examined to determine the trend in range condition on an annual basis. The objective is to identify the condition trend in relation to the Desired Future Condition or Desired Plant Community. The techniques for monitoring are described in the Range Ecosystem Analysis Guide and involve the use of benchmarks. Benchmarks are small areas where long-term trend studies are established and maintained so that the manager can assess the resource impacts due to various activities. They are used as reference points that are sensitive to management changes, and may consist of permanent transects, paced-transects, or range-trend sampling by photographs. Benchmarks are placed in primary range areas, or those areas which produce or are capable of producing desirable forage, and are predicted to improve as a result of proper management. The table below shows the results of monitoring range condition trend during FY 2000.

Total allotments on the Medicine Bow NF.....300
Allotments where trend was measured 18
Percent of total allotments monitored.....6
Number of allotments with declining trend……..0 Reported

The Forest did not meet the requirement for monitoring 10 percent of the range allotments for condition and trend. This was mostly due to personnel being away from the Forest during the catastrophic and record-setting fire season during the summer of 2000. Range personnel that did stay on Forest focused on Monitoring Item 29, because of the concern about drought conditions and the goal of avoiding excessive forage use on some allotments. None of the measured allotments were in a declining trend, which meets the Allowable Variance for this item. The Ranger Districts need to monitor ten percent of their allotments during 2001, which will be coordinated between the Range Specialist and the Districts.

New methods have been developed to represent vegetation management, because it often takes decades to measure any appreciable change in range condition. A range examiner expected to interpret range trend must be highly trained and able to examine and compare years of previously collected data. Annual fluctuations in climatological events further complicate determining any trend on an annual basis. Trend studies every 3-5 years would be sufficient to monitor changes in range condition. These

studies should be focused on allotments that have had declining range condition where improved management has been initiated to verify that range condition is improving. This subject may be addressed in the Forest Plan Revision process, however no change is presently required.

Monitoring Item 30: Allowable Sale Quantity (ASQ)

The goal for this item is that the total amount of timber sold must be within the Allowable Variance for a ten-year period. The variance for a single year, however, may vary considerably because the amount of timber that is sold can be adjusted during successive years. The Allowable Variance for this item is the amount of timber sold cannot exceed, or must not deviate more than 5 percent under 284.0 MMBF for the ten-year period 1986 – 1995 (Forest Plan, page IV-46). The total volume that was sold during the first planning period was 166.1 MMBF, which is 58 percent of the total output predicted in the Forest Plan (page II-12, page III-8).

Fiscal Year 1996 initiated the second ten-year period of implementing the Plan, and the predicted output increased to 293.0 MMBF for the period 1996 – 2005 (page III-8). The amount of timber sold during Fiscal Year 2000, again did not approach the Annual Allowable Sale Quantity stated in the Forest Plan. Subsequently, the total amount of timber sold from 1996 to 2000 is currently at 25.4 MMBF, or 83 percent, less than what was predicted in the Plan. Both the Allowable Sale Quantity and the Long-Term Sustained-Yield will be examined during the Forest Plan Revision process to determine if any change is needed. No immediate adjustments are necessary, however.

Monitoring Item 31: Restocking of Harvested Areas

The R2RIS database for each Ranger District was used to determine how many acres were harvested during 1995. The total amount of area treated for this item includes the clearcut, seed-tree, removal, and selection harvest methods. The District databases were then used to determine how many acres were surveyed during 2000 and disclose how many acres were certified as satisfactorily restocked, as required by the NFMA (36 CFR 219.27(c)(3)). The table below summarizes the information obtained from the R2RIS databases.

Reforestation Survey Data:	Acres Harvested During 1995	Total Acres Surveyed	Acres Certified as Stocked	Acres Not Adequately Stocked
Forest Total:	1,470	1,470	1,061	409 *

* 335 acres were determined to be coded incorrectly in the database. They are actually adequately stocked.

A total of 1,470 acres were final-harvested during 1995, thereby requiring a fifth-year survey during 2000 to determine stocking levels. Of the area surveyed, 1,061 acres were reported as stocked, which is 72 percent of the total. Reporting for this item also indicated that 409 acres were not adequately stocked, which is 28 percent of the inspected sites, therefore exceeding the Allowable Variance.

Upon examining the data from the R2RIS database, however, it was discovered that the majority of the sites listed as non-stocked (335 acres) had been improperly recorded in the database. All these sites were associated with the Albany Salvage Sale on the Douglas Ranger District. The remaining 74 acres

that were reported as not being adequately stocked were scattered in small units on the other two Ranger Districts. The list below identifies the major reasons for 74 acress being reported as not adequately stocked during Fiscal Year 2000:

1) Inadequate seed sources due to non-serotinous cones and low seed production.
2) Unsuccessful scarification resulting in less exposed mineral soil for adequate seed germination.
3) Low seedling survival due to: a) trampling by livestock, b) severe weather conditions, c) competition with other plants on dry, low-elevation sites.
4) The lack of germination, or a high rate of seedling mortality due to high temperatures and dry site conditions on southern aspect slopes.

Forest Plan monitoring involves all aspects of reviewing a resource program, such as reforestation. In the case of this Monitoring Item, reviewing both the field conditions and the computer data determined that this item did meet the Allowable Variance (95 %). Therefore, no change to the Forest Plan is required at this time.

Monitoring Item 32: Timber Stand Improvement

Timber Stand Improvement includes thinning lodgepole pine stands before they reach age 30, in order to achieve stocking control and promote higher growth rates. The Forest goal for Timber Stand Improvement (TSI) during 2000 was 3,076 acres, however, only 403 acres were treated, which is 13 percent of the amount predicted in the Forest Plan. This exceeds the Allowable Variance by 62 percent. The SILVA 99 REPORT for FY 2000 showed that more than 7,200 acres of thinning and release treatment is still needed on the Forest.

The annual amount of TSI performed on the Forest was an important factor that was used to help determine the Long-Term Sustained-Yield (LTSY) Capacity when the Forest Plan was developed. More emphasis needs to be placed on accomplishing TSI work on the Forest.

Under the premise of the original Forest Plan, planning and budgeting for Timber Stand Improvement should be made a high priority by the Districts or it may affect the amount of timber available in the future. Receiving only 27 percent of the projected budget for timber related activities, however, makes it impossible to program adequate TSI treatments under the current Forest Plan. This problem is related to implementation rather than the Plan itself, therefore, no changes to the Plan are currently needed. The intent and ouput objectives for this item, however, need to be reanalyzed during Forest Plan revision.

Monitoring Item 33: Clearcut Unit Size

During 2000, the Districts entered data into their R2RIS databases showing that 300 acres were clearcut on the Forest. The smallest clearcut unit was two acres and the largest unit was 122 acres. The majority of the units were ten acres or less in size. The result of monitoring indicates that all the proposed and actual clearcuts on the Forest were within the Allowable Variance, or were approved by the Regional Forester, as required by the NFMA regulations [36 CFR, Part 219, Section 219.27(d)(2)(ii)] and Chapter III of the Forest Plan (page III-46, General Direction 5). No adjustment to the Plan is needed.

Monitoring Item 34: Created Openings

During 2000, all proposed vegetation treatments that would create openings were reviewed for compliance with Management Prescription 07E, General Direction 1066MB, and Standard and Guideline 6014 and 6316 in Chapter III of the Forest Plan (pages III-193 to 196). All openings created during 2000 met this management direction, and no change to the Forest Plan is necessary at this time.

Monitoring Item 35: Lands not Suited for Timber Production

This item is annually monitored and reported, as required in Chapter IV of the Forest Plan (page IV-51). This also meets the intent of the regulation at 36 CFR 219.27(c)(1), "No timber harvesting shall occur on lands classified as not suited for timber production pursuant to S. 219.14 except for salvage sales necessary to protect other multiple-use values or activities that meet other objectives on such lands if the forest plan establishes that such actions are appropriate."

No timber was harvested from lands classified as unsuitable for timber production during 2000. All the timber harvest activities were in compliance with Chapter III of the Forest Plan, and the direction stated above. No changes to the Plan are deemed necessary at this time.

Monitoring Item 36: Water Yield

The Forest annually monitors the amount of increased water yield that occurs as a result of timber harvesting and other vegetation treatments. Timber harvest data was extracted from each Ranger District R2RIS database to determine the total amount of water yield during Fiscal Year 2000. Using the HYSED II hydrologic computer model, the amount of increase above the baseline level for the Forest was calculated to be only 333 acre-feet, which is less than during 1999.

Compared to the baseline water yield of 1.017 million acre-feet produced from the Forest each year, the increase in the volume that is reported for a single year is insignificant. Monitoring the amount of water yield increase for this Item may need to be adjusted or eliminated for the following reasons:

The magnitude of the units involved (millions of acre-feet).
The large range of acceptable variation (+ or - 25 percent).
The small proportion of the Forest vegetation treated annually.

The issue of timber harvest will be addressed during the Forest Plan Revision process, and will include a discussion of the relationship of water yield to the level of harvest during future years. No adjustment to the Forest Plan is necessary at this time.

Monitoring Item 37: Sediment Threshold Limits

Stream channel stability may be altered at some locations as a result of water yield increases. Hydrologic modeling (HYSED) was used to predict sediment levels for each project that was implemented on the Forest during Fiscal Year 2000. It was determined that no watershed exceeded the geomorphic threshold limit for sediment due to timber harvest or road construction. Timber harvest, however, did result in some increases in the amount of sediment at isolated locations for short time

periods. However, the levels did not exceed the Standards and Guidelines stated in Chapter III of the Forest Plan. Therefore, no change to the Plan is needed at this time.

Monitoring Item 38: Water Quality

No water quality violations were recorded on the Forest during 2000. The historic violation at the old Ferris-Haggerty copper mine has been corrected by a Federal reclamation project. Both Forest and District Hydrologists will continue to analyze each proposed project to ensure water quality protection. Soil and water mitigation measures within project areas will be monitored during and after implementation to determine the effectiveness for protecting water quality. No changes to the Plan are needed at this time.

Monitoring Item 39: Soil Erosion

Several projects were monitored during 2000. The Forest Soil Scientist and Hydrologist visually inspected the effects of grazing on soils, and several timber sales for erosion control effectiveness. Also, the Blackhall wildlife site was inspected and some erosion control work was performed. The same area will be inspected again during 2001 to determine the long-term effectiveness of the control measures. The following projects were individually monitored during Fiscal Year 2000:

Fiddleback Grazing Allotment
Pole Mountain road
McAnulty Creek Timber Sale
Snowy Range Grazing Allotment
North Laramie River Grazing Allotment

The effectiveness of several soil and water projects were inspected during 2000. In addition, several range allotments were visited and some future soil and water improvement projects were analyzed. In general, the Forest is meeting the requirements for soil protection, as stated in the Forest Plan. Therefore, no change to the Plan is necessary at this time.

Monitoring Item 40: Soil and Water Resource Improvements

The Forest accomplished a total of 11 acres of soil/water improvements during 2000, which is only four percent of the Forest Plan objective of 247 acres annually. This continues to be due to the Regional Office changing the method of allocating funds to the individual Forests, which resulted in the Forest receiving significantly less funding for this program than previous years. This trend is expected to continue, and may need to be addressed in the Forest Plan Revision, but no change is currently needed.

Monitoring Item 41: Forest Road Development

The stated objectives for this item are listed on page III-10 of the Forest Plan. The outputs from the Forest Road Development Program during 2000 are shown on the Evaluation Table (page 12) of this report. The two main reasons for not meeting the stated goals for this item include the reduced timber

program and the current National effort to develop the most cost-effective transportation system considering both construction and maintenance funding.

Road construction and reconstrucction accomplishments during 2000 consisted of 1.2 miles of new road construction and 3.4 miles of road reconstruction for the year. No miles of construction or reconstruction were reported for general use or for minerals access. Ten miles of system roads were decommissioned during Fiscal Year 2000 for permanent rehabilitation purposes.

The Forest is presently involved in performing a roads analysis that will result in recommendations for a final transportation system that balances the needs of resource management and the availability of personnel and funding. Site-specific proposals for any new road construction or closures will be analyzed and documented in compliance with the NEPA process, including public involvement. This topic will also be discussed during the Forest Plan Revision Process, but no change to the Plan is currently needed.

Monitoring Item 42: Trail Construction and Reconstruction

This item consists of annually reporting the total number of miles of trails constructed or reconstructed on the Forest. The Brush Creek/Hayden Ranger District reconstructed a bog crossing on the East Fork Trail # 472 with the assistance of the Region 2 mule pack string, however, no other trail work was accomplished during 2000. The Douglas and Laramie Ranger performed a total of 9.0 miles of trail reconstruction. No change to the Plan is needed.

Monitoring Item 43: Fuel Treatment

During 2000, the Districts treated the debris that was left as a result of various vegetation management activities. Accomplishments were recorded in the R2RIS database and the annual SILVA 99 REPORT. The total amount reported was 30 acres, which is significantly less than the amount required by the Forest Plan (page III-10). This level of accomplishment was 99 percent less than the scheduled objective and exceeded the Allowable Variance by 74 percent, which is a significant decline from previous years. This item depends on the amount of timber harvest, and is not related to the Forest Plan, therefore, no change to the Plan is currently needed.

Monitoring Item 44: Forest Insects and Diseases

This monitoring item is partially dependent upon aerial surveys and ground investigations by Regional Office personnel, including entomologists. No aerial survey was conducted on the Forest during the FY 1999 field season. On-the-ground investigations are annually conducted on the Douglas, Brush Creek/Hayden, and Laramie Districts, in association with routine field activities.

<u>Spruce bark beetle (Dendroctonus rufipennis)</u>
Spruce bark beetles are currently at endemic (normal but low) populations on the Forest. During October, 1997, a significant number of trees were blown down in the Mt. Zirkel Wilderness and in an area of the Routt National Forest just south of the Colorado/Wyoming State line. Blowdown also occurred on the Wyoming side of the state line in the Sierra Madre Mountain Range.

Entomologists expect spruce beetle populations to build to epidemic proportions in the windthrown trees, and when this material is no longer available, move to live spruce trees. Beetle-related mortality in live, standing trees, however, is not expected to become noticeable until the year 2002. This epidemic is expected to move northward and attack live spruce trees on the southwestern portion of the Medicine Bow National Forest during the next several years.

Mountain Pine Beetle (Dendroctonus ponderosae Hopkins)
Mountain pine beetle activity is still prevalent in the Laramie Peaks area of the Douglas Ranger District. Surveys and control activities were implemented during the summer of 1993, but no other treatments except salvage operations have been performed since 1994. The other Districts are experiencing normal, endemic beetle activity, but many tree stands are highly susceptible to attack. This is due to the large diameter of the trees (8"+), and low elevations where the climate supports beetle populations.

Lodgepole Pine Dwarf Mistletoe (Arceuthobium americanum, Nutt.ex Engel.)
Dwarf mistletoe is widespread throughout the lodgepole pine type on the Forest. This disease agent causes mortality, a reduction in growth and quality, and reduced seed production.

Western balsam bark beetle (Dryocoetes confusus), and fir engraver beetle (Scolytus ventralis).
Areas of mortality in mixed stands of subalpine fir, Engelmann spruce, and lodgepole pine appears to be continuing in the vicinity of Centennial, Wyoming. Several species of bark beetles, including western balsam bark beetles and fir engraver beetles, in association with Armillaria root rot, may be responsible for this mortality. Mild winter weather during the past several years seems to have supported this trend.

White pine blister rust (Cronartium ribicola)
Areas of limber pine in the Pole Mountain/Vedauwoo area of the Laramie District continue to be infected with white pine blister rust. Signs of the disease have appeared on many new trees, indicating that the disease is increasing. The host plant, Ribes spp. is widespread, and often growing around and under the pine trees. Lightly infected trees can be found among heavily infected individuals, indicating some resistance among the population. It is recommended that dead or dying trees be removed for public safety, while the healthier trees be left to provide a natural seed source for reforestation.

Plant pathologists from the Forest Health Management Group in the Regional Office have established permanent plots to monitor the incidence and severity of infections in the Pole Mountain area. The initial survey, summarized in a report issued last year, indicated a moderate level of the disease with 50 percent of the limber pine being infected.

Monitoring the incidence of insects and diseases on the Forest will continue. No change to the Forest Plan is presently needed in relation to this Monitoring Item.

Monitoring Item 45: Land Exchanges

Monitoring for this Item consists of reporting the number of acres that are exchanged with other land owners near or adjacent to the Forest. Land exchanges may be proposed by the Forest Service or by a private party, business, or organization. Land exchanges occur when a proposal is advantageous to both parties, and also meets all legal requirements. A single land exchange was consummated during 2000,

which involved 640 acres. The Forest Plan prediction of completing 160 acres annually (Table III-1, page III-10) is an average goal that was expected to vary greatly from year to year. No changes to the Forest Plan are needed at this time.

Monitoring Item 46: Right-of-Way Acquisition

Monitoring for this item consists of reporting the actual number of rights-of-ways that are acquired on an annual basis. During Fiscal Year 2000, the Forest reported no acquired rights-of-ways, which is a dramatic reduction from the 20 cases that were processed during the previous year. No changes to the Plan are needed at this time.

Monitoring Item 47: Landline Location

During Fiscal Year 2000, a total of 25 miles of landlines (property boundaries) were located and marked on the Forest. The Forest Plan Average Annual Output is projected at 25 miles, therefore, no change to the Forest Plan is recommended at this time.

Monitoring Item 48: Compliance with Terms of Land Use Authorizations and Consistency with the Forest Plan

Monitoring this Item includes reviewing initial or renewal applications for special use permits to ensure that they are consistent with the Forest Plan. The application may need to be revised, or it may be denied if it is not consistent with the requirements of the Plan. Monitoring also includes inspection of existing uses for compliance with the terms of the authorization.

During Fiscal Year 2000, the Ranger Districts inspected 235 uses, or about 25 percent of the total permitted uses on the Forest. The inspections verified that the uses were either in compliance, or the permittees were advised regarding the work necessary to achieve compliance. No changes to the Forest Plan are needed at this time.

Monitoring Item 49: Compliance with the Terms of Operating Plans (Minerals)

Monitoring this item consists of reviewing operating plans for minerals extraction to ensure compliance with the requirements of the Forest Plan. This includes inspecting the work performed on the ground, and comparing the activities to the stipulations of the operating plan. During Fiscal Year 2000, a total of 285 mineral operations were examined, and all were in compliance with the operating plans. No change to the Forest Plan is currently needed.

Monitoring Item 50: Demand for Live Green Sawtimber

During Fiscal Year 2000, a total of 4.89 MMBF of live-green sawtimber was harvested from the Forest. On October 1, 2000, approximately 12.5 MMBF were still under contract, which is 2.6 years of volume

scheduled for harvest based on the the 2000 annual harvest. When the total volume under contract provides less than 2.5 years of operations for the purchaser, the Forest Supervisor can modify the Forest Plan to ensure that 2.5 years is maintained. Although the Allowable Variance for this item is within the stated limit, the entire timber program needs to be analyzed during Forest Plan Revision. Therefore, no changes to the Forest Plan are needed at this time.

X. NEED TO IMPROVE MONITORING OR IMPLEMENTATION

The first year of Monitoring the Forest Plan occurred during 1986. It was determined that the management Standards and Guidelines in the Forest Plan were being followed, and most of the Average Annual Projected Outputs listed on Table III-1 were being achieved. No changes to the Plan were recommended by the ID Team at that time.

Various problems with some of the methods used for monitoring were discovered, however. The major concern was the inconsistency of data collection and reporting among Ranger Districts. The other concern was that some items were not suitable for Monitoring, or the information collected did not achieve the desired results. These Monitoring Items were adjusted by Amendment Number 4 to the Forest Plan, approved July 14, 1987. This amendment improved Chapter IV of the Plan to make the direction more clear and easier to implement.

Fiscal Year 2000 was the fifteenth year of Monitoring how well the Forest Plan was being implemented. The Forest ID Team has identified a few concerns that need to be addressed as a result of the annual monitoring effort. Some of the items can be corrected by improving Monitoring procedures or implementation methods, while others may require a change to the Forest Plan. In a few cases, the problem may need to be corrected as an outcome of additional scientific research. Most of the complex or controversial changes will be addressed during the analysis process for the Forest Plan Revision.

Section IX,(5) of this report contains a complete description of each of the 50 Items that were monitored during 2000, and the results of that monitoring. The following recommendations were made in order to correct some of the deficiencies that were identified by the Responsible Person for each Item. All the recommended changes consist of adjusting implementation or monitoring procedures, and will not directly affect the Forest Plan . The actual accomplishment of these recommendations will depend upon the availability of personnel and funding during Fiscal Year 2001 to perform the necessary analysis, documentation, and coordination of the proposed changes.

Monitoring Item 1: Off-Road Vehicle Damage

Each Ranger District needs to monitor and report any observed vehicle damage for this Item during Fiscal Year 2001, as required in Chapter IV of the Forest Plan. This work will be coordinated between the Ranger Districts and the Forest Recreation Staff Specialist.

Monitoring Item 2: Trail Condition

Each Ranger District needs to inspect and monitor the condition of trails for this Item during Fiscal Year 2001, as required in Chapter IV of the Forest Plan. This work will be coordinated between the Ranger Districts and the Forest Recreation Staff Specialist.

Monitoring Item 3: Dispersed Recreation Use and Experience

Each Ranger District needs to monitor and report on the amount of dispersed recreation use for this Item during Fiscal Year 2001, as required in Chapter IV of the Forest Plan. This work will be coordinated between the Ranger Districts and the Forest Recreation Staff Specialist.

Monitoring Item 4: Dispersed Campsite Condition

Each Ranger District needs to inspect and report the condition of dispersed campsites for this Item during Fiscal Year 2001, as required in Chapter IV of the Forest Plan. Any site that is found to be in Frissel Condition Class 4 or 5 needs to be scheduled for closure or rehabilitation. This work will be coordinated between the Ranger Districts and the Forest Recreation Staff Specialist.

Monitoring Item 16: Old Growth Retention

Each Ranger District needs to complete the task of designating an adequate number of acres of old growth within 4B Management Areas in order to comply with this Monitoring Item. This needs to be accomplished during site-specific project planning, and will be coordinated between the District Rangers and the Forest Timber Staff Specialist.

Monitoring Item 29: Range Condition and Trend

Each Ranger District needs to monitor and report range condition and trend for this Item during Fiscal Year 2001, as required in Chapter IV of the Forest Plan (page IV-45). This work will be coordinated between the Ranger Districts and the Forest Range Staff Specialist.

Monitoring Item 31: Restocking of Harvested Areas

Each Ranger District needs to ensure that this item is monitored and reported for Fiscal Year 2001. A treatment prescription shall be prepared by a certified silviculturist for each harvest unit that is not adequately stocked within the five-year period. In addition, each District Silviculturist will ensure that any data related to this item will be properly entered into the District R2RIS Database. The information derived from this Monitoring Item will help provide data and support for the Forest Plan Revision. This effort will be coordinated between each District Silviculturist and the Forest Timber Staff Specialist.

RESEARCH NEEDS

An important function of the monitoring process is referred to as Validation Monitoring (see Section IV of this report). This phase of monitoring is used to determine whether the original assumptions and coefficients used to develop the Forest Plan are still accurate and valid. Research activities provide the Forest Resource Specialists with the information necessary to decide whether to retain or to adjust specific Management Direction or Standards and Guidelines in the Plan.

XI. NEED TO CHANGE, REVISE, OR AMEND THE FOREST PLAN

The results of monitoring implementation of the Medicine Bow National Forest Land and Resource Management Plan for Fiscal Year 2000 have been analyzed by the Forest Interdisciplinary Team and Staff Specialists. Based on this review, it was determined that the intent of the Forest Plan is being met by most resource programs during implementation of site-specific project activities.

Implementation and monitoring of project activities needs to be as effective as possible, in order to protect the resources and resource uses of the land. The results of the fifteenth year of monitoring and evaluating implementation of the Forest Plan revealed minor deficiencies in relation to several of the Monitoring Items. Subsequently, recommendations have been made to improve either Forest Plan monitoring, or implementation of some project activities, which are described in Section X of this report. Any major changes to the Forest Plan will require a comprehensive analysis and evaluation, and will be addressed during the Forest Plan Revision Process (refer to Section VI of this report).

XII. REVIEW OF PREVIOUS YEAR RECOMMENDATIONS

The following list of recommendations was developed by the ID Team and recorded in the 1999 Annual Monitoring Report (pages 42 and 43). Under each recommendation is a description of what was accomplished for that item during FY 2000.

Monitoring Item 9: Wilderness Campsite Condition

Each Ranger District needs to report the Frissell Condition Class of the sites inventoried for this Item during Fiscal Year 2000, as required in Chapter IV of the Forest Plan. This work will be coordinated between the Ranger Districts and the Forest Recreation Staff Specialist.

Accomplishment: This item was accomplished, but is a continuing need on the Forest.

Monitoring Item 11: Compliance with Cultural Resource Regulations

Each Ranger District needs to ensure that all projects on the Forest are completed according to Section 106 of the Historic Preservation Act and associated Forest Plan requirements during Fiscal Year 2000. This work will be coordinated between the Line Officers responsible for both NEPA and Section 106 compliance, and the Cultural Resource Staff Specialist.

Accomplishment: Improvement occurred in this item. Only three projects implemented on the Forest during FY 2000 were deemed to be out of compliance with Section 106 of the NHPA.

Monitoring Item 12: Protection of Historic Sites

Each Ranger District needs to ensure that all projects on the Forest are completed according to Section 106 of the Historic Preservation Act and associated Forest Plan requirements during Fiscal Year 2000. This includes allowing Forest Cultural Resource Staff the necessary amount of time to complete reports prior to project implementation. This work will be coordinated between the Line Officers responsible for both NEPA and Section 106 compliance, and the Cultural Resource Staff Specialist.

Accomplishment: This item was accomplished. There were no recorded adverse impacts to any listed Historic Site on the Forest during Fiscal Year 2000.

Monitoring Item 16: Old Growth Retention

The Districts need to complete the task of designating an adequate number of acres of old growth within 4B Management Areas in order to comply with this Monitoring Item.

Accomplishment: This item is being accomplished as a result of the Ranger Districts designating and recording additional acres of Old Growth during project implementation.

Monitoring Item 31: Restocking of Harvested Areas

Each Ranger District needs to ensure that this item is monitored and reported for Fiscal Year 2000. In addition, a treatment prescription shall be prepared by a certified silviculturist for each harvest unit that is not adequately stocked within the five-year period. Each District Silviculturist will accomplish this item, as necessary.

Accomplishment: This item was accomplished. The majority of the acres originally declared as inadequately stocked for FY 2000 were the result of improper data entry. Subsequently, this problem has already been corrected and the Allowable Variance was met. This monitoring is an important and continuing need on the Forest.

Monitoring Item 32: Timber Stand Improvement

Increased emphasis still needs to be placed on the TSI Program to treat the increasing number of acres of overstocked stands, in order to achieve a balance between the annual accomplishment and the annual needs on the Forest. This item has a direct impact on the Long-Term Sustained-Yield Capacity, which may affect the amount of timber available in the future. The topic of TSI will be addressed during the Forest Plan Revision process. The Forest Silviculture Staff Specialist will coordinate with the District Staff to improve the TSI Program on the Forest.

Accomplishment: This item was not accomplished, and continues to be an important need on the Forest.

Monitoring Item 39: Soil Erosion

Hydrology and Fisheries personnel need to continue to monitor the effects of the diversion ditch failure above Billie Creek in the Sierra Madre portion of the Brush Creek/Hayden District. Discretionary Soil and Water Rehabilitation funding was applied for in order to stabilize the gully banks and revegetate the site, however, this funding has not yet been received. The ditch permittees also need to continue providing maintenance measures such as removing woody debris and improving the ditch berm to prevent a recurrence. The District needs to continue to search for funds, in order to correct the problem or to provide at least a temporary fix to minimize possible future erosion at the failure site.

Accomplishment: This item was accomplished.

SUMMARY: Most of the changes recommended in Section X of the 1999 Evaluation Report were accomplished during 2000. Proper implementation of these items is deemed necessary to, "protect, restore, or enhance the environment (40 CFR 1500.1(c))." The reasons for accomplishing or not accomplishing the recommended actions are discussed by the individual Forest Resource Staff Specialists in Section IX(E) of this Report. In general, the accomplishment of any recommended items in future years will depend upon overall Forest priorities and the availablity of personnel and funding to perform the required activities.

XIII. LIST OF PREPARERS

The Annual Monitoring Evaluation Report for Fiscal Year 2000 was compiled by Stephen Nielsen, Forest Planner and NEPA/FOIA Coordinator for the Medicine Bow-Routt National Forests. The following list displays the name and resource program of the Forest Leadership Team, and also the Forest ID Team members that contributed the information and evaluation for the Monitoring Items.

NAME	FUNCTIONAL RESOURCE AREA
FOREST LEADERSHIP TEAM	
Mary H. Peterson	FOREST SUPERVISOR
John Ayer	Director - Business Management Group
Lynn Jackson	Director - Planning, NEPA/FOIA/Appeals
Lee Kramer	Director - Renewable Resources
Mike Murphy	Director - Program Support Group/Recreation
STAFF SPECIALISTS	
Tom Cartwright	Wildlife Biologist
Steve Coupal	Engineering Program Manager
Greg Eaglin	Fisheries Biologist
Tom Florich	Lands - Special Uses
Tommy John	Soil Scientist
Susan Kay	Budget Analyst
Barbara McKown	Accounting
Bob Mountain	Range Management
Gary Roper	Forester, Timber
Mary Sanderson	Recreation
Edward Snook	Hydrologist
Sue Struthers	Archeologist
Carl Sumpter	Land Surveyer
Jeff Tupala	Landscape Architect
Kenna Van	Personnel
Kirk Wolff	Hydrologist

CERTIFICATION

I have reviewed the Annual Evaluation Report for the Medicine Bow National Forest and Thunder Basin National Grassland that was prepared by the Forest Interdisciplinary Team for Fiscal Year 2000. I believe that the results of Monitoring and Evaluation, as documented in this Annual Report, meet the intent of both, Chapter IV of the Forest Plan, and current Regulations (36 CFR 219.12(k).

The Forest ID Team and Leadership Team have not identified any significant changes in conditions or demands of the public that would change the goals, objectives, or outputs of the Forest Plan (36 CFR 219.10(g)) prior to completion of the scheduled Revision. Therefore, I have determined that an Amendment to correct any identified deficiencies of the Plan is not immediately necessary nor practical in light of the ongoing Forest Plan Revision Process.

I have also considered the recommendations made by the ID Team in Section X of this report. I concur that additional emphasis needs to be placed on the Forest Monitoring Program, in order to meet the intent of Chapter IV of the Forest Plan and the implementing regulations of NFMA at 36 CFR, Part 219, Section 219.12(k). This will be communicated to the Ranger Districts and the Forest Staff Specialists.

In conclusion, I concur with the findings of the 2000 Annual Monitoring Evaluation Report for the Medicine Bow National Forest and Thunder Basin National Grassland. This is not an appealable decision, according to 36 CFR 215.7, "Decisions Subject to Appeal." Contact Stephen Nielsen at the Medicine Bow-Routt National Forests, 2468 Jackson Street, Laramie, Wyoming, 82070, or call (307) 745-2404, if you have any specific concerns, questions, or comments about this report.

/s/Mary H. Peterson — August 15, 2001

MARY H. PETERSON — Date
Forest Supervisor