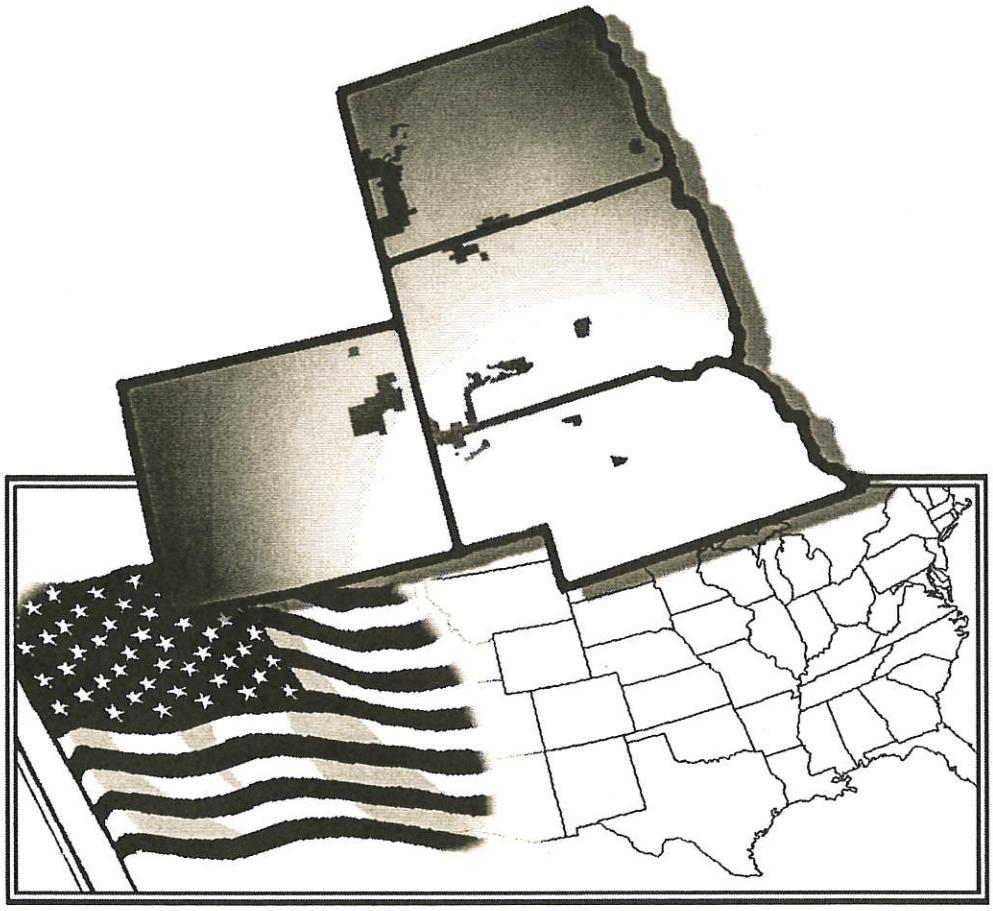
United States
Department of
Agriculture

Forest Service

Northern and
Rocky Mountain
Regions

Addendum for the Final Environmental Impact Statement and Land and Resource Management Plans 2001 Revisions



Dakota Prairie Grasslands
Nebraska National Forest Units
Thunder Basin National Grassland

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Errata

Final Environmental Impact Statement

Chapter 1, page 1-13, second paragraph

Instead of the first sentence, add the following two sentences to this paragraph: Because of extensive water development, few of the planning units now have secondary range that meets all the criteria. Although topography is still a factor, water development has converted much of the secondary range identified in the analysis to what essentially meets the definition for primary range.

Chapter 1, page 1-17, last sentence before list of indicators

Should read Key indicators for rangeland and forest health are listed below:

Chapter 1, page 1-20 *Insert the following text (Other Mgmt Directives and Initiatives through Transportation rule and policy) after the paragraph on* Other Topics:

Other Management Directives and Initiatives

The Forest Service has formulated and implemented other directives and initiatives during the time the Northern Great Plains Management plans were developed. The public has expressed concern over the interrelationship of the Northern Great Plains planning effort and FEIS and these other directives and initiatives. The following describes those events and the relationship to the Northern Great Plains planning effort.

Planning Regulations

When the Northern Great Plains revision effort began informally in 1996 and formally, with a Notice to the Federal Register in 1997, the agency's 1982 planning regulations implementing the National Forest Management Act were in effect. These regulations were codified at 36 CFR 219 (2000) et seq. New planning rules were adopted on November 9, 2000 (65FR 67514). However, the 2000 planning rules allowed the Responsible Official to elect to complete the plan revision process under the 1982 regulations, provided that the revision or amendment process had begun prior to issuance of the new rule and the notice of availability of the draft environmental impact statement or an environmental impact statement was published by May 9, 2001 in the Federal Register. The Northern Great Plains revision effort met these criteria; the revision effort began in 1996 and the draft environmental impact statement was published in July 1999. The May 9, 2001 deadline has subsequently been extended by Interim Final Rules published in the Federal Register on May 17, 2001 (66 FR 27552) and May 20, 2002 (67 FT 35431). The choice for the Northern Great Plains revision effort was to proceed under the 1982 planning regulations. As such, the 2000 planning rules are not the basis of this plan revision.

Off Highway Vehicle Decision

The Off-Highway Vehicle Record of Decision and Plan Amendment for Montana, North Dakota, and portions of South Dakota (OHV Decision) was signed in January 2001 by former Regional Forester

Dale N. Bosworth. The OHV Decision prohibits wheeled motorized cross-country travel on national forests and grasslands in Montana and North Dakota, including the Dakota Prairie Grasslands. Cross-country travel is defined as travel off existing roads and trails. The OHV Decision does not close any existing roads or trails nor does it prohibit construction of new roads and trails. It also does not apply to private and state land. The OHV Decision contains specific exemptions for wheeled cross-country motorized travel in the following situations: military, fire, search and rescue, law enforcement, official administrative business, lessees and permittees, and travel to a campsite within 300 feet of an existing road or trail.

The OHV Decision went into effect in January 2001 and is the current management direction on the Dakota Prairie Grasslands in North Dakota. **It is not current management for the other units considered in the Northern Great Plains EIS.** However, because the OHV Decision/FEIS was conducted concurrently with the analysis in the Northern Great Plains EIS, the OHV Decision is not reflected in the acres displayed for the Existing Condition or Alternatives 1 and 2 in the Northern Great Plains FEIS (see FEIS, Chapter 3, p. 3-338). However, text in the FEIS does describe that the effects of the OHV Decision on current management in terms of cross-county travel would be similar to Alternatives 3, 4 and 5 **for the Dakota Prairie units (**see FEIS, Chapter 3, pp. 3-68, 3-69, 3-71 and 3-334). The FEIS, on page 3-338, displays alternatives not reflecting the OHV Decision to prohibit cross-country travel (Alternatives 1, 2 and Existing Condition) and alternatives reflecting the OHV Decision (Alternatives 3 (DEIS and FEIS 4 and 5). The Northern Great Plains EIS incorporates the January 2001 OHV Decision and tiers to the OHV FEIS analysis regarding effects on travel management. **Specifically, the Northern Great Plains FEIS has considered the cumulative effects of the OHV Decision along with other travel management decisions; including the cumulative effects on mineral development, hunting, recreation access for fire management and noxious weed control** (see FEIS, Chapter 3, pp. 3-338, 3-341, 3-342).

Roadless Area Conservation Rule

On January 12, 2001 the Special Areas; Roadless Area Conservation Final Rule, 66 FR 3244, (Roadless Rule) was signed by former Secretary of the U.S. Department of Agriculture, Dan Glickman. The Roadless Rule is codified at 36 CFR 294 Subpart B (2001). The Roadless Rule prohibits new road construction and timber harvest in inventoried roadless areas subject to exceptions. Specific exemptions allow for roads in conjunction with the continuation, extension, or renewal of a mineral lease 36 CFR 294.12(b)(7) and for roads pursuant to reserved or outstanding rights 36 CFR 294.12(b)(3). Exceptions are also allowed for roads needed to protect public health and prevent irreparable resource damage, roads needed for road safety, and roads determined to be in the public interest. In addition, the rule specifically does not affect a state's or private landowner's right of access to their land (36 CFR 294, 12(b)(3) and 294.14 (a) and preamble at 66 FR 3251, 3253, 3256, 3259).

Subsequently, eight lawsuits involving seven states in six judicial districts of four federal circuits have been filed against the January 12, 2001 rule. On May 10, 2001, the Idaho District Court granted the preliminary injunction requested in *Kootenai Tribe of Idaho vs. Veneman* and *State of Idaho vs. U.S. Forest Service,* enjoining the Forest Service from implanting "all aspects of the Roadless Area Conservation Rule." The Idaho District Court's decision to grant a preliminary injunction has been appealed and is now pending before the Ninth Circuit Court of Appeals. The Roadless Rule currently remains enjoined. On June 7, 2001, the Chief of the Forest Service issued a letter concerning interim protection of inventoried roadless areas stating that "the Forest Service is committed to protecting and managing roadless areas as an important component of the National Forest System. The best way to achieve this objective is to ensure that we protect and sustain roadless values until they can be appropriately considered through forest planning." As part of that letter, the Chief indicated he would be issuing interim direction regarding timber harvest and road construction in inventoried roadless areas until a forest plan amendment or revision considers the long-term protection and management of unroaded portions of inventoried roadless areas. This interim direction was issued on December 20, 2001 (66 FR

65789).

The Northern Great Plains revision process began informally in 1996 and formally with a with a Notice in the Federal Register in 1997, prior to the adoption of the Roadless Rule. The Northern Great Plains FEIS was issued in July 2001, after the May 2001 decision which enjoined the Roadless Rule. As a part of the Northern Great Plains planning process, an inventory of areas essentially roadless in character was completed for each planning unit; including the Dakota Prairie Grasslands (FEIS p. C-4, and roadless evaluation project file). For each area, the FEIS contains a description of the affected environment along with a capability analysis, availability analysis, and an evidence of need for wilderness analysis (see FEIS, Chapter 3, pp. 3-359 to 3-378 and FEIS Appendix C). In addition, roadless areas were allocated to various management areas by alternatives. Roadless areas were considered for management areas that varied from Management Area 1.2 Recommended for Wilderness to Management Area 6.1 Rangeland with Broad Resource Emphasis (see FEIS, Chapter 3. p. 3-369). In so doing, this plan revision process fully met the intent and direction of the Chief to consider the protection and management of roadless areas appropriately through forest planning. For the Dakota Prairie Grasslands, Modified Alternative 3 Final would manage approximately 140,000 acres to retain their roadless character prohibiting future road construction (with exceptions for outstanding rights.) and would manage approximately 139,000 acres which would allow for potential road construction subject to subsequent project analysis (FEIS project file). If, and when, the Roadless Rule injunction is lifted and the agency implements a Roadless Rule resulting in a change in management direction, the plan will be evaluated to determine the effects and any needed changes.

Transportation Rule and Policy

The Administration of the Forest Development Transportation System; Prohibitions; Use of Motor Vehicles Off Forest Service Roads, Final Rule, 66 FR 3206 (Transportation Rule) and Forest Service Transportation, Final Administrative Policy, 66 FR 3219, (Transportation Policy) were signed on January 12, 2001 by former Chief of the Forest Service Mike Dombeck. The Transportation Rule and Policy provides only guidance for transportation analysis—it does not dictate or adopt land management decisions.

The Transportation Policy, Forest Manual 7700 et seq., requires a roads analysis process to inform road management decisions. A roads analysis process (watershed or project area scale) must be prepared prior to most road management decisions and inform those decisions to construct or reconstruct roads throughout National Forest System lands beginning on January 12, 2002. The roads analysis process, itself, does not make decisions; road management decisions are made through NEPA analysis and public participation. The Dakota Prairie Grasslands is conducting the road analysis, where required, as a routine part of project analysis. Guideline #5 in Grassland-wide Direction under Q, Infrastructure Use and Management, is consistent with the Transportation Policy stating: "Perform site-specific Roads Analysis, including public involvement, prior to making any decisions on road construction, reconstruction, and decommissioning."

Chapter 2, page 2-9, second paragraph, first sentence	*Should read …* MA 2.2 Research Natural Areas (20,030 ac).
Chapter 2, page 2-10, third paragraph, third line	The highest amount of MA 3.66 is in Alternative FEIS 3 and not in Alternative 4.

Chapter 2, page 2-15, second paragraph, first sentence

First sentence should read as follows:

For the Thunder Basin National Grassland, the preferred alternative in this EIS restricts motorized use to existing roads and trails only, and off-road motorized use will not be allowed except for administrative purposes.

Insert the following after the first sentence:

On the Dakota Prairie Grasslands, the preferred alternative limits motorized use to existing roads and trails, but with the same exemptions and exceptions as noted in the Region One OHV decision.

Chapter 2, page 2-17 Relationships:

The following text replaces that currently under **Topic: Community and Lifestyle**

Topic: Community and Lifestyle Relationships

Under existing conditions, the national forests and grasslands of the Northern Great Plains are responsible for an estimated 4,800 jobs and $102,959,000 in earned income (direct, indirect, and induced) from domestic livestock grazing, recreation, timber production, and oil and gas production, which represent 2.3% of the jobs and 1.4% of the income in the Northern Great Plains economic impact area. Excluded from these job and income estimates and the discussion below are an additional 1,900 jobs and $93,000,000 in income (direct, indirect, and induced) related to coal production from the federal mineral estate within the boundary of the Thunder Basin National Grassland. Current and future coal production related jobs and income are unaffected by the alternatives and have been excluded from the job and income discussion.

Alternative 1 would rank second of the alternatives in producing 17 additional direct, indirect, and induced jobs and $.4 million more in direct, indirect, and induced income—an increase of 0.01%in the Northern Great Plains Economic Impact Areas. Range-fed livestock grazing jobs attributed to the national grassland and forest pastures would increase an estimated 1%. Jobs attributed to the federal mineral estate would not change. Alternative 1 would produce the least jobs and income linked to timber management. It would be second best (behind Alternative 2) in achieving the principal management goals for the agriculture, oil, gas, and minerals users/interest segments. It would be worst in achieving the principal management goals of the wood products user/interest segment. It would be most likely to continue current direction, emphases, and levels of natural resource opportunities, causing the least disruption to economic and social institutions and associated lifestyles.

Alternative 2 would rank first of the alternatives in producing 66 additional direct, indirect, and induced jobs and $1.2 million more in direct, indirect, and induced income, a increase of 0.03% in jobs and 0.02%in income in the Northern Great Plains Economic Impact Areas. Range-fed livestock grazing jobs attributed to the national grassland and forest pastures would increase an estimated 3%. Jobs and income attributed to the federal mineral estate would not change. Alternative 2 would produce the most jobs and income linked to timber management. It would be best in achieving the principal management goals of the agriculture, oil, gas, minerals, and wood products user/interest segments. It would be worst in achieving the principal management goals of the recreation, wildlife, conservation, and American Indian user/interest segments.

DEIS Alternative 3 would rank third of the alternatives in producing 195 fewer direct, indirect, and

induced jobs and $2.9 million less in direct, indirect, and induced income, a decrease of 0.09%in jobs and 0.04%in income in the Northern Great Plains Economic Impact Areas. Range-fed livestock grazing jobs attributed to the national grassland and forest pastures would decrease an estimated 9%. Jobs and income attributed to the federal mineral estate would decrease by an estimated 36 jobs and $1,100,000 in income. DEIS Alternative 3 would produce an increase of 5 jobs and $131,000 in income linked to timber management. This alternative would place more emphasis on diverse landscapes, plants, and animals, and recreation opportunities; however, it would not clearly favor any user/interest segment.

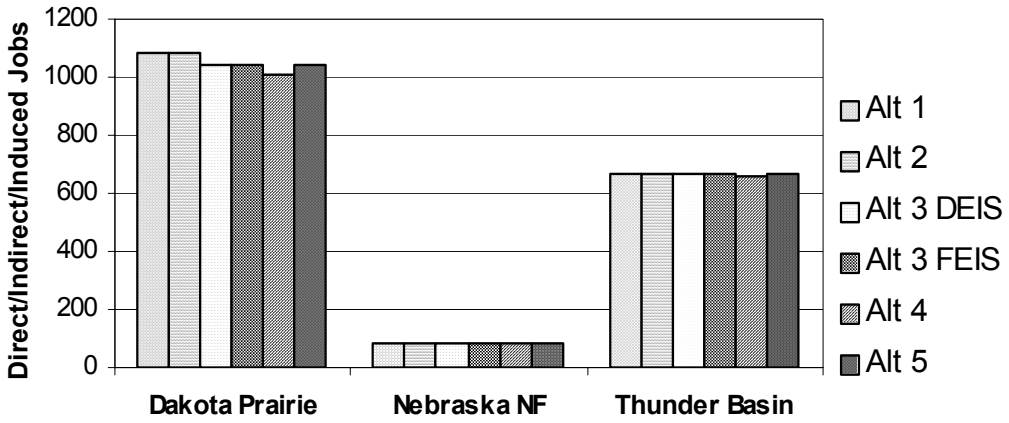
FEIS Alternative 3 would rank fourth of the alternatives in producing 200 fewer direct, indirect, and induced jobs and $3.2 million less in direct, indirect, and induced income, a decrease of 0.10% in jobs and 0.04%in income in the Northern Great Plains Economic Impact Areas. Range-fed livestock grazing jobs attributed to the national grassland and forest pastures would decrease an estimated 9%. Jobs and income attributed to the federal mineral estate would decrease by an estimated 36 jobs and $1,100,000 in income. FEIS Alternative 3 would produce an increase of 5 jobs and $131,000 in income linked to timber management. This alternative would place more emphasis on diverse landscapes, plants and animals, and recreation opportunities; however, it would not clearly favor any user/interest segment.

Alternative 4 would rank last of the alternatives in producing 614 fewer direct, indirect, and induced jobs and $9.5 million less in direct, indirect, and induced income, a decrease of 0.29% in jobs and 0.13%in income in the Northern Great Plains Economic Impact Areas. Range-fed livestock grazing jobs attributed to the national grassland and forest pastures would decrease an estimated 30%. Jobs and income attributed to the federal mineral estate would decrease by an estimated 72 jobs and $2,200,000 in income. Alternative 4 would produce an increase of 7 jobs and $178,000 in income linked to timber management. It would be best in achieving the principal management goals of the conservation, wildlife, and American Indian user/interest segments. It would be worst in achieving the principal management goals of the agriculture, and oil, gas, and minerals user/interest segments. Because of the active restoration emphasis, it would be second best in achieving the principal management goals of the wood products segment.

Alternative 5 would rank fifth of the alternatives in producing 397 fewer direct, indirect, and induced jobs and $5.7 million less in direct, indirect, and induced income, a decrease of 0.19%in jobs and 0.08% in income in the Northern Great Plains Economic Impact Areas. Range-fed livestock grazing jobs attributed to the national grassland and forest pastures would decrease an estimated 20%. Jobs and income attributed to the federal mineral estate would decrease by an estimated 55 jobs and $1,810,000 in income. Alternative 5 would produce an increase of 5 jobs and $136,000 in income linked to timber management. It would be best in achieving the principal management goals of the recreation user/interest segments; however, Alternatives DEIS 3, FEIS 3, and 4 would offer different mixes of motorized and nonmotorized recreation opportunities and favor particular recreation activities.

Chapter 2, page 2-19 *The following figure replaces* Figure 2-2. Total jobs attributable to oil/gas production on NSF lands.

Figure 2-2: Total jobs attributable to oil/gas production on NFS lands.



Chapter 2, page 2-20, bottom of page

Add statement Refer to graph for expected animal unit months.

Chapter 2, page 2-21, second paragraph

Add to second sentence However, the Dakota Prairie FEIS Alternative 3 allows pasture size to be changed, either becoming larger or smaller when deemed necessary, during analysis at the allotment level.

Chapter 2, page 2-22, second paragraph, first sentence

Should read Alternative FEIS 3 would make about 946,000 acres available.

Chapter 2, page 2-26 second paragraph, last statement; page 2-27, first paragraph, last statement; and page 2-28, third paragraph, last statement

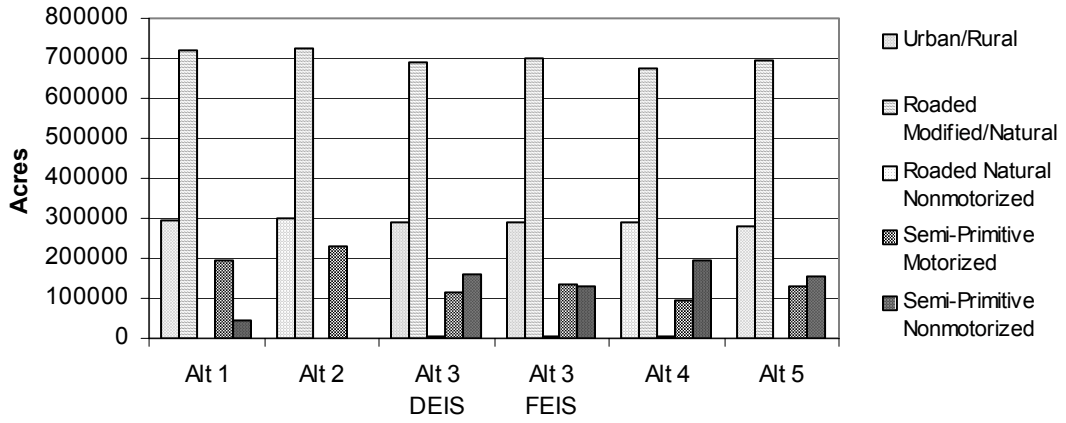
Delete the statements Additional conservation measures that have been recently identified for these plant species will be considered for inclusion in the final management plans.

Chapter 2, page 2-29, Topic: Recreation and Travel Management, fourth paragraph, sixth line

Should read … followed by Alternatives DEIS 3, 5, FEIS 3, 1, and 2.

Addendum

Chapter 2, page 2-30 *The following figure replaces* Figure 2-11: Dakota Prairie ROS by alternative:



Chapter 2, page 2-31, second paragraph

Should read A few areas under Alternatives DEIS 3, FEIS 3, 4, and 5 would allow off-road travel opportunities with the exception of the Dakota Prairie Grasslands, which restricts travel to existing roads and trails.

Chapter 2, page 2-42, Dakota Prairie Grasslands, Table 2-7

Asterisk Alternative 1, MA 1.31 Backcountry Recreation Nonmotorized. *Explanation for asterisk*: Alternative 1 shows 42,990 acres of 1.31, which is normally nonmotorized. The 42,990 acres represent most of the Management Area J under the Custer National Forest Plan, which is a minimal development scenario. However, Management Area J does contain roads open to public travel.

Chapter 2, page 2-43 *The following information replaces* the oil and gas portion of Community/Lifestyle Relationships in Table 2-8. Comparison of Alternatives by Major Revision Topic for Dakota Prairie Grasslands.

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Community/Lifestyle Relationships							
Oil/gas activities on NFS lands (Change from Existing Condition)	0%	0%	0%	-3%	-3%	-7%	-3%
direct and indirect jobs (number)	1,081	1081	1081	1045	1,045	1,009	1,045
direct and indirect income (millions of 1997 $)	32.9	32.9	32.9	31.8	31.8	30.7	31.8

Chapter 2, page 2-43 *The following information replaces* the numbers under Oil and Gas in Table 2-8. Comparison of Alternatives by Major Revision Topic for Dakota Prairie Grasslands. Note that the entire Paleontological CSU line has been removed because the Forest Service is now using a Lease Notice on the Dakota Prairies.

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Oil and Gas							
Acres with existing leasing decisions	992,870	992,870	992,870	992,870	992,870	992,870	992,870
Not Available	24,940	24,940	24,940	24,940	46,590	24,940	24,940
Not currently authorized for leasing	16,230	16,230	0	0	26,200	0	0
Acres available for leasing	967,930	967,930	967,930	967,930	946,280	967,930	967,930
No Surface Occupancy (NSO)	209,520	209,520	185,600	281,860	204,380	298,610	237,960
Controlled Surface Use (CSU)	77,920	77,920	45,230	129,110	159,230	220,650	317,490
Timing Limitation (TL)	133,630	133,630	185,650	170,720	202,990	176,040	176,610
Standard Lease Terms Only	589,840	589,840	569,800	412,590	407,430	389,050	306,320

Chapter 2, page 2-44 *The following information replaces* the desired grass/shrub structure numbers in Table 2-8. Comparison of Alternatives by Major Revision Topic for Dakota Prairie Grasslands.

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Desired grass/shrub structure (midpoint),							
percent area low	Unknown	15	15	15	14	14	14
percent area moderate	Unknown	70	70	49	60	45	51
percent area high	Unknown	15	15	36	26	41	35

Chapter 2, page 2-45 *The following information replaces* the numbers for Recreation Opportunity Spectrum Classes in Table 2-8. Comparison of Alternatives by Major Revision Topic for Dakota Prairie Grasslands.

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt3	Alt4	Alt 5
Recreation Opportunity Spectrum Classes							
Urban acres	760	760	760	440	450	760	440
Rural acres	301,580	294,860	301,570	289,510	291,960	290,050	279,620
Roaded modified acres	116,720	116,620	116,620	112,900	112,920	114,080	114,350
Roaded natural acres	610,750	605,690	609,730	577,050	586,690	559,670	578,960
Roaded natural nonmotorized acres	0	920	1,130	3,010	3,370	3,050	1,080

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt3	Alt4	Alt 5
Semi-primitive motorized acres	228,320	196,290	228,320	113,770	135,120	93,430	129,510
Semi-primitive nonmotorized acres	0	43,000	0	161,460	127,610	197,100	154,160

Chapter 2, page 2-45 *The following information replaces* part of the Dispersed Recreation portion of FEIS Table 2-8. Comparison of Alternatives by Major Revision Topic for Dakota Prairie Grasslands.

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt3	FEIS Alt 3	Alt 4	Alt 5
Acres allowing off-road motorized travel	1,257,360	1,257,360	1,257,360	0	0	0	2,800
Acres where no motorize use is allowed (except administrative use) motorized	1,500	1,500	1,500	164,170	130,690	199,660	155,230
Acres with seasonal travel etc.	**DELETE THIS ROW FROM TABLE**						
Acres with Designated Routes for motorized travel	0	0	0	1,093,930	1,128,420	1,058,860	1,102,890

Chapter 2, page 2-51, Table 2-10. Comparison of Alternatives by Major Revision Topic for Nebraska National Forest Units

Under Recommended for Wilderness, it *should read* FEIS Alt3 Areas = 2; Alt 4 Areas = 5

Chapter 3, page 3-35 *The following information replaces* the numbers for the Little Missouri National Grassland in Table 3-10. Employment and Income Impacts from Oil and Gas Drilling and Production.

	Direct Jobs		Total Jobs		Direct Labor Income (millions of 1997$)		Total Labor Income (millions of 1997$)	
	#	% Change	#	% Change	$	% Change	$	% Change
Little Missouri NG*								
Existing Condition/ Alternative 1	575		1,081		22.6		32.9	
Alternative 2	575	0%	1,081	0%	22.6	0%	32.9	0%
Alternative 3	556	-3%	1,045	-3%	21.8	-4%	31.8	-3%
Alternative 3-D	556	-3%	1,045	-3%	21.8	-4%	31.8	-3%
Alternative 4	537	-7%	1,009	-7%	21.0	-7%	30.7	-7%
Alternative 5	556	-3%	1,045	-3%	21.8	-4%	31.8	-3%

Chapter 3, page 3-35, last paragraph

Delete the first sentence and *replace with:* The Little Missouri RFD predicts a relatively small variation in the number of new wells and in production levels between the alternatives.

Chapter 3, page 3-36 *Insert the following* after the ninth paragraph:

A major concern of the counties is that they will not immediately receive royalties from development. County officials understand they will only receive their 6.25 % royalty payments if the mineral acreage they are associated with is developed. They want to see all acreage leased. The operator who purchases the federal mineral lease, not the county, controls the development of that lease. Some acreage in the western North Dakota portion of the Williston Basin (Billings, Golden Valley, and McKenzie Counties) has already been evaluated/condemned from previous seismic work or exploratory wells. These areas may contain parcels associated with county royalty interest that may never be leased because of the lack of hydrocarbon potential. The Williston Basin is a mature basin with a low potential of discovering large geologic structures or stratigraphic features. Activity within the basin will most likely be limited by oil and gas prices and new technology.

Forest Service data indicates the total area affected by the counties 6.25 % mineral royalty interest is 52,100 acres. This is based on data received from files in the Region 1 office. A quarter/quarter section analysis was performed on the data to evaluate total acres per county, acres per management area, and acres not available for leasing (refer to Appendix B for total analysis). McKenzie County has the majority of affected acres at 38,180; Billings County has 10,838 affected acres and Golden Valley has 3,082 acres. To summarize the analysis, of the 52,100 acres affected by the 6.25 % county mineral royalty, 44,610 acres have standard lease terms or can be accessed from one-half mile outside the MA boundary. Two management areas with county mineral royalty interest are affected by Not Administratively Available for leasing or would be leased with NSO stipulations: MA 1.2A (Suitable for Wilderness) with 4,930 acres and MA 3.63 (Black Footed Ferret Reintroduction Habitat) at 5,267 acres. The quarter/quarter section analysis showed no large blocks of contiguous acres associated with county mineral royalty interest. MA 1.2A (Suitable for Wilderness) would be an area to be considered for a mineral exchange for other properties. The Forest Service has recognized this problem and has stated a willingness to exchange county royalty interests to areas where development can occur, if requested to do so by the county.

County officials have expressed their concerns with the total amount of acres involved in the 6.25 % county mineral royalty interest. From the Forest Service analysis, the number is 52,100 acres. The counties are stating it is in excess of 100,000 acres (Memo from Dennis Edward Johnson, McKenzie County State's Attorney, to David M. Pieper, Grasslands Supervisor, May 08, 2002). There are approximately 200 sections that have a portion or all of the acres with the county mineral royalty attached. This can vary from 40 acres to 640 acres depending on the section involved. If the complete section is in their analysis, then the acreage would be in excess of 100,000 acres. The Forest Service quarter/quarter section analysis shows that number to be 52,100, not 100,000 acres. The Forest Service requested copies of the counties information to verify the discrepancies in number of acres with 6.25 % county mineral royalties. That request was denied.

As in all ownerships, valid existing rights will be honored.

Chapter 3, page 3-39, under Cumulative Effects, third paragraph, second sentence

Should read … oil and gas related jobs in Alternatives 4 and 5.

Chapter 3, page 3-62 *The following information replaces* the numbers for All Planning Units, Dakota Prairie Grasslands, and the Little Missouri National Grassland in Table 3-25.

	Area Total Jobs and Income (Thousands 1997 $)	Existing Condition	Alt 1 Change From Area Total	Alt 2 Change From Area Total	DEIS Alt 3 Change From Area Total	FEIS Alt 3 Change From Area Total	Alt 4 Change From Area Total	Alt 5 Change From Area Total
All Planning Units Total								
Jobs*	208,691	4,839	17	66	-195	-200	-614	-397
Income*	$7,128,268	$102,959	$395	$1,215	-$2,857	-$3,179	-$9,468	-$5,689
Area Total % Change – Jobs+		2.32%	0.01%	0.03%	-0.09%	-0.10%	-0.29%	-0.19%
Area Total % Change - Income+		1.44%	0.01%	0.02%	-0.04%	-0.04%	-0.13%	-0.08%
Dakota Prairie Grasslands Total								
Jobs*	72,956	2,542	58	59	-185	-135	-458	-303
Income*	$2,230,419	$51,553	$752	$755	-$2,877	-$2,314	-$7,002	-$4,435
% Difference Jobs+		3.48%	0.08%	0.08%	-0.25%	-0.19%	-0.63%	-0.42%
% Difference Income+		2.31%	0.03%	0.03%	-0.13%	-0.10%	-0.31%	-0.20%
Little Missouri National Grassland								
Jobs*	49,588	2,236	40	39	-121	-115	-376	-267
Income*	$1,544,470	$47,648	$495	$492	-$2,167	-$2,093	-$6,009	-$3,988
% Difference Jobs+		4.51%	0.08%	0.08%	-0.24%	-0.23%	-0.76%	-0.54%
% Difference Income+		3.09%	0.03%	0.03%	-0.14%	-0.14%	-0.39%	-0.26%

Chapter 3, page 3-65

Replace the second paragraph with the following:

> The Little Missouri EIA effects from FEIS Alternative 3 would result in a loss of 115 jobs, a -0.23% change in total jobs. Alternative 4 would have the greatest impact with an estimated loss of 376 jobs, a -0.76% change in total employment followed by Alternatives 5 with an estimated -0.54% change in total employment. Alternatives 1 and 2 would provide an estimated increase of 40 and 39 jobs, a 0.08% change in employment. DEIS Alternative 3 would provide 6 fewer jobs than FEIS Alternative 3.

Chapter 3, page 3-66, under Healthy Grass and Rangelands, first paragraph, last sentence

Should read For all units, the alternatives have various levels of moderate structure.

Chapter 3, page 3-69, first two sentences

Should read Alternatives 1 and 2 are expected to have the most designated motorized travelways, followed by Alternatives 3, 4, and 5. Alternatives 4 and 3 DEIS would restrict motorized use on the most acres.

Chapter 3, page 3-69, Nonconsumptive Recreation Group Management preferences, second paragraph, third line

Should read The difference is primarily in the amount of area allocated to nonmotorized use.

Chapter 3, page 3-69, Nonconsumptive Recreation Group Management preferences, second paragraph, eighth line

Should read (followed by Alternatives 3, 5, 1, and 2).

Chapter 3, page 3-71, Access to the Lands Already Discussed, eighth line

Should read Alternatives 1 and 2 are expected to have the most designated motorized travelways, followed by Alternatives 3, 5, and 4. However, Alternative 4 and 3 DEIS would have the most acres where no motorized use is allowed ….

Chapter 3, page 3-74

This table represents the summary of discussion on the Effects on the Management Preferences of Major Public User/Interest Groups starting on page 3-66.

Chapter 3, page 3-83, Table 3-29

Table title should read "Current Grazing Use" instead of Current Grazing Use on the Dakota Prairie Grasslands.

The totals for the following should read:

Dakota Prairie Grasslands:
1996 Permitted AUMs = 497,426
20-year Average Authorized AUMs = 434,450

Nebraska National Forest Units:
1996 Permitted AUMs = 372,650
20-year Average Authorized AUMs = 363,885

Chapter 3, page 3-84, first paragraph

Add the following sentence after grazing use: For further clarification on cow size, reference a May 20, 2002 memorandum in the Administrative Record, subject: "Clarification of the Analysis of Grasslands Plan S&Gs Relating to Livestock Grazing on the Dakota Prairie Grasslands."

Chapter 3, page 3-87

Add the following statement after Table 3-33:

The Forest Service is in the process of updating the inventory for water developments which may account for the lower numbers used in the DEIS and the lower side of the range would not consider natural water impoundments and water sources along streams. The FEIS considered some of the natural water and developed water sources and reflects the concern that there may be more developments than had been inventoried prior to the development of the DEIS.

Chapter 3, page 3-91, Table 3-37, Thunder Basin National Grassland, (Acres/AUM)

Change: Alt 1, 4.4 to 4.1
Alt 2, 4.3 to 4.2
DEIS Alt 3, 4.5 to 4.4
FEIS Alt 3, 4.9 to 4.6
Alt 4, 5.5 to 5.2
Alt 5, 4.7 to 4.5

Chapter 3, page 3-91, Table 3-37, Nebraska National Forest, Bessey Ranger District, (Acres/AUM)

Change: Alt 1, 3.3 to 3.1
Alt 2, 2.8 to 2.7
FEIS Alt 3, 3.2 to 3.1
Alt 4, 4.5 to 4.2
Alt 5, 4.1 to 3.8

Chapter 3, page 3-91, Table 3-37, Nebraska National Forest, Samuel R. McKelvie NF, (Acres/AUM)	*Change:* Alt 1, 3.0 to 2.8 Alt 2, 2.6 to 2.5 DEIS Alt 3, 2.8 to 2.7 FEIS Alt 3, 3.2 to 2.8 Alt 4, 4.1 to 3.8 Alt 5, 3.7 to 3.5
Chapter 3, page 3-91, Table 3-37, Nebraska National Forest, Fall River Ranger District, (Acres/AUM)	*Change:* Alt 1, 3.8 to 3.7 Alt 2, 3.6 to 3.4 FEIS Alt 3, 3.8 to 3.7 Alt 4, 4.6 to 4.4 Alt 5, 4.1 to 4.0
Chapter 3, page 3-91, Table 3-37, Nebraska National Forest, Wall Ranger District, (Acres/AUM)	*Change:* Existing Condition, 2.9 to 3.0 Alt 1, 3.8 to 3.7 Alt 2, 3.6 to 3.5 FEIS Alt 3, 3.6 to 3.7 Alt 4, 4.5 to 4.2 Alt 5, 4.1 to 4.0
Chapter 3, page 3-92, Table 3-37, Nebraska National Forest, Ft. Pierre National Grassland, (Acres/AUM)	*Change:* Alt 1, 2.4 to 2.3 FEIS Alt 3, 2.5 to 2.3 Alt 4, 2.8 to 2.7 Alt 5, 2.8 to 2.7
Chapter 3, page 3-92, Table 3-37, Nebraska National Forest, Pine Ridge Ranger District, (Acres/AUM)	*Change:* Alt 1, 3.7 to 3.5 Alt 2, 3.9 to 3.4 FEIS Alt 3, 3.6 to 3.5 Alt 4, 4.0 to 3.9 Alt 5, 4.1 to 3.9
Chapter 3, page 3-92, Table 3-37, Nebraska National Forest, Oglala National Grassland, (Acres/AUM)	*Change:* Alt 1, 3.1 to 3.0 FEIS Alt 3, 3.1 to 3.0 Alt 4, 3.3 to 3.7 Alt 5, 3.5 to 3.4
Chapter 3, page 3-92, Table 3-37, Total Nebraska National Forest Units, (Acres/AUM)	*Change:* Existing Condition, 2.6 to 2.7 Alt 5, 3.6 to 3.7
Chapter 3, page 3-93, Table 3-38, Thunder Basin National Grassland, FEIS Alt 3	*Change* 53,206 to 26,605 and (10) to (5).

Chapter 3, page 3-94, Range Developments-Water, Existing Condition

Change 1.89 to 1.70 for Bessey Ranger District.

Change 1.57 to 1.32 for Samuel R. McKelvie National Forest.

Chapter 3, page 3-98, Effects from Threatened, Endangered and Sensitive Species Management,

Add the following footnote after the third sentence: See May 20, 2002 memorandum in the Administrative Record, subject: "Clarification of the Analysis of Grasslands Plan S&Gs Relating to Livestock Grazing on the Dakota Prairie Grasslands."

Chapter 3, page 3-102, Laws, Policy, and Direction

Add the following bullet: **Energy Policy (EO 13212) –** On May 18, 2001, President Bush issued Executive Order 13212 (EO 13212) to "take additional steps to expedite the increased supply and availability of energy to our Nation." On July 13, 2001, the Secretary of Agriculture approved the Forest Service Energy Implementation Plan. This plan was implemented in accordance with the Presidents EO 13212 and with the belief that the Forest Service can develop energy resources and effectively protect the environment.

Chapter 3, page 3-121 *The following information replaces* the numbers for the Buffalo Gap National Grasslands under Alternative 1 in Table 3-51. Acres Stipulated by Alternative.

Nebraska National Forest Buffalo Gap National Grassland	**Alt 1 (acres)**
Acres open for leasing	156,330
No Surface Occupancy (NSO)	11,200
Controlled Surface Use (CSU)	9,210
Paleontology CSU	19,880
Timing Limitation (TL)	1,170
Standard Lease Terms only	116,040

Chapter 3, page 3-126

Change Cellars to Cellers.

Chapter 3, page 3-131, Table 3-58

DEIS Alt 3 should read 103,420 acres instead of 57,269 acres.

Add in parentheses after 3.51 This is also managed concurrently with management areas 1.31, 2.1, 2.2, 4.22, and 4.32

Chapter 3, page 3-132, footnote 26

Should read Of the total of 28,800 acres of federal mineral estate allocated to Management Area 3.63, 5,510 acres lie within an area of no new road construction and carry an NSO stipulation. Because this analysis is on the mineral estate, the acres are different than the surface estate acreage on the Alternative map.

Chapter 3, page 3-133, Table 3-60

DEIS Alt 3 should read 103,420 acres instead of 57,270 acres.

Add in parentheses after 3.51 This is also managed concurrently with management areas 1.31, 2.1, 2.2, 4.22, and 4.32

Chapter 3, page 3-134, footnote 28

Should read Of the total of 28,800 acres of federal mineral estate allocated to Management Area 3.63, 5,510 acres lie within an area of no new road construction and carry an NSO stipulation. Because this analysis is on the mineral estate, the acres are different than the surface estate acreage on the Alternative map.

Chapter 3, page 3-136, Table 3-62, DEIS Alt 3

Should read 103,420 acres instead of 57,269 acres.

Chapter 3, page 3-144 Table 3-65 *should read* as follows:

Dakota Prairie Grasslands Unit
Little Missouri National Grasslands

Stipulation	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
CSU – High Scenic Integrity	51,950	2,280	126,940	134,130	168,290	86,450
CSU – Moderate Scenic Integrity	0	51,470	145,880	182,450	170,760	394,480
NSO	42,140	0	0	0	0	0
TL 5/15 – 9/15	22,260	0	0	0	0	0

Cedar River National Grasslands

Stipulation	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
CSU - High Scenic Integrity	0	0	0	0	0	0
CSU - Moderate Scenic Integrity	0	0	0	0	0	800

Medicine Bow-Routt National Forest
Thunder Basin National Grassland

Stipulation	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
CSU - High Scenic Integrity	0	7,460	33,360	33,390	73,710	73,710

CSU - Moderate Scenic Integrity	0	76,620	124,410	123,760	47,390	47,390

Nebraska National Forest
Buffalo Gap National Grasslands

Stipulation	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
CSU - High Scenic Integrity	0	0	1,840	1,840	1,840	1,840
CSU - Moderate Scenic Integrity	3,460	6,610	44,720	44,720	4,420	4,420
NSO	860	0	0	0	0	0

Oglala National Grasslands

Stipulation	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
CSU - High Scenic Integrity	0	990	1,890	990	14,460	14,460
CSU - Moderate Scenic Integrity	0	1,250	2,000	2,000	2,000	2,000

Chapter 3, page 3-155, bottom of the page

Add the following **Energy Policy (EO 13212) –** Executive Order 13212 (EO 13212), Section 2 - Actions to Expedite Energy-Related Projects says "agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health and environmental protections. The agencies shall take such actions to the extent permitted by law and regulation, and where appropriate." The Forest Service has reviewed stipulations/regulations associated with oil and gas development projects and has concluded that minimum restrictions are being applied to allow development within the extent permitted by law.

Chapter 3, page 3-163, paragraph 2, under Effects from Travel Management and Motorized Use, 5th sentence

Should read … there are restrictions limiting motorized use to designated travelways except for administrative use.

Chapter 3, page 3-169, Grasshopper Damage Control, first sentence

Should read "… and adjoining landowners occasionally request …"

Chapter 3, page 3-169, second paragraph

Replace the first two sentences with the following: A 2002 Memorandum of Understanding between the Forest Service and APHIS identifies each agencies responsibilities regarding grasshopper damage control. APHIS is the lead agency for completion of environmental analyses in accordance with NEPA.

Chapter 3, page 3-182, first paragraph

Add a last sentence as follows: Vegetative types for the Little Missouri National Grassland include typical mixed-grass prairie and badland types. The dominant herbaceous vegetative types for the mixed-grass prairie include wheatgrass-bluestem-needlegrass and wheatgrass-needlegrass associations.

Chapter 3, page 3-184

Add the following sentence above Table 3-94: Tables 3-94 and 3-95 were modeled based on the six vegetation cover classes as described in Appendix B.

Chapter 3, page 3-207, Badlands Geographic Area

Change (Society for Range Mangement 1994) to (Shiflet 1994).

Chapter 3, page 3-228, Table 3-120

The Early and Mid Existing Seral Stage are reversed for Grand River/Cedar GA. Early = 12% and Mid = 86%

Chapter 3, page 3-232 *The following information replaces* the numbers for the Little Missouri, Grand River/Cedar River, Sheyenne, and Buffalo Gap National Grasslands in Table 3-121. Grassland Structure Objectives for the Planning Units.

Planning Unit	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Little Missouri National Grassland						
Low Structure						
Acres (1000s)	132.7	132.7	123.6	132.7	132.7	132.7
Percent Area	(15%)	(15%)	(15%)	(15%)	(15%)	(15%)
Moderate Structure						
Acres (1000s)	619.2	619.1	394.0	530.7	398.0	442.3
Percent Area	(70%)	(70%)	(48%)	(60%)	(45%)	(50%)
High Structure						
Acres (1000s)	132.7	132.7	306.1	221.1	353.8	309.6
Percent Area	(15%)	(15%)	(37%)	(25%)	(40%)	(35%)
Grand River/Cedar River National Grasslands						
Low Structure						
Acres (1000s)	23.8	23.9	23.9	23.9	23.9	23.9
Percent Area	(15%)	(15%)	(15%)	(15%)	(15%)	(15%)

Planning Unit	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Moderate Structure						
Acres (1000s)	111.5	111.5	99.3	95.4	71.6	79.5
Percent Area	(70%)	(70%)	(62%)	(60%)	(45%)	(50%)
High Structure						
Acres (1000s)	23.8	23.8	35.9	39.8	63.6	55.7
Percent Area	(15%)	(15%)	(23%)	(25%)	(40%)	(35%)
Sheyenne National Grassland						
Low Structure						
Acres (1000s)	10.4	10.4	6.8	5.2	5.1	5.2
Percent Area	(15%)	(15%)	(10%)	(7.5%)	(7.5%)	(7.5%)
Moderate Structure						
Acres (1000s)	48.4	48.7	20.4	40.0	22.0	40.0
Percent Area	(70%)	(70%)	(30%)	(57.5%)	(32.5%)	(57.5%)
High Structure						
Acres (1000s)	10.4	10.4	40.7	24.3	40.7	24.3
Percent Area	(15%)	(15%)	(60%)	(35%)	(60%)	(35%)
Buffalo Gap National Grassland						
Low Structure						
Acres (1000s)	77.7	124.3	75.8	118.5	51.9	77.9
Percent Area	(15%)	(24%)	(17%)	(22%)	(10%)	(15%)
Moderate Structure						
Acres (1000s)	300.3	310.8	246.2	265.0	212.8	259.7
Percent Area	(58%)	(60%)	(54%)	(49%)	(41%)	(50%)
High Structure						
Acres (1000s)	139.8	82.9	132.6	161.5	254.3	187.0
Percent Area	(27%)	(16%)	(29%)	(30%)	(49%)	(36%)

Chapter 3, page 3-242, Effects from Fire and Fuels Management, last paragraph

Delete reference to Table 3-199 and Table 3-200, and *insert* Table 3-144.

Chapter 3, page 3-263, Table 3-129, Current Habitat Suitability

Change Buffalo Gap National Grassland (FRRD) from 1-10% to 5-15%; Nebraska National Forest (BRD) from 45-55% to 40-50%; and Samuel R. McKelvie National Forest from 25-35% to 20-30%.

Chapter 3, page 3-264, Table 3-132

Change Grand River/Cedar River from 148,000 acres to 146,000 acres; Fort Pierre from 96,000 acres to 106,000 acres; and Buffalo Gap from 455,000 acres to 529,000 acres.

Chapter 3, page 3-269, Table 3-136

Under Sage Grouse, LMNG, Alt 1 *should read* LRLV instead of MAII.

Under Upland Sandpiper, *change* "All Planning Units" to FPNG, BGNG, ONG, TBNG, NNF (BRD), NNF (PRRD), SRMNF.

Under American Bittern, *change* "All Planning Units" to BGNG, FPNG, ONG, SRMNF.

Under Long-billed Curlew, *change* "All Planning Units" to TBNG, BGNG, FPNG, ONG, NNF (BRD), SRMNF.

Delete American Peregrine Falcon and associated rows.

Under Pygmy Nuthatch, delete ONG.

Chapter 3, page 3-269, Table 3-136 *Insert the information* in bold italics below the existing text in the American bittern row, as shown. *Add the Least tern row* to the table.

Species	Planning Unit	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
American bittern	BGNG, FPNG, ONG, SRMNF	MAII	MAII	BI	MAII	MAII	MAII
	NNF(BRD)	***NI***	***NI***	***NI***	***NI***	***NI***	***NI***
Least tern	BGNG, FPNG, SRMNF	MAII	MAII	BI	BI	BI	BI

Chapter 3, page 270, Table 3-136

Under Black-backed woodpecker, *delete* NNF (PRRD) and ONG, and *insert* TBNG.

Under Lewis' woodpecker-TBNG, *should read* MAII for Alt 1, 2, FEIS 3, 4 and 5.

Chapter 3, page 3-272, last paragraph, first sentence

Add Dakota skipper.

Chapter 3, page 3-275, Table 3-137, Existing Condition

Change Buffalo Gap National Grassland (FRRD) from 1-10% to 5-15%; Nebraska National Forest (BRD) from 45-55% to 40-50%; Samuel R. McKelvie National Forest from 25-35% to 20-30%.

Chapter 3, page 3-277, Effects from Fire and Fuels Management, last paragraph

The tables should read Tables 3-215 and 3-216.

Chapter 3, page 3-279, last paragraph

Change Knowles 1988 to Knowles 1987.

Change Vosburgh 1996 to Vosburgh and Irby 1998.

Chapter 3, page 3-282, first paragraph

Change (Bureau of Land Management 1995) to (Bureau of Land Management 1993).

Chapter 3, page 3-284, third paragraph

Delete (Curtis 1959).

Chapter 3, page 3-285, first paragraph

Delete (Preliminary Report: Vegetative Conditions of Ash Draws on the Little Missouri National Grassland, North Dakota Game and Fish Department).

Replace with (Jensen 1997).

Chapter 3, page 3-303

The Maah Daah Hey Trail is approximately 96 miles long.

Chapter 3, page 3-312, Table 3-157, Dakota Prairie Grasslands

Delete Special Interest Areas MA 2.1.

Delete American Indian Traditional Use Areas MA 2.4.

Chapter 3, page 3-318, under Prairie Dog Shooting, first paragraph, second sentence

Should read While Alternative 4 would have the greatest number of active prairie dog colonies, all colonies *may* have year-long prairie dog shooting restrictions. Alternatives FEIS 3 and DEIS 3 would have the next highest amount of prairie dog colonies but *may* also have …

Chapter 3, page 3-334 Travel Management Affected Environment, *replace the second paragraph* with the following:

On the Dakota Prairie Grasslands a travel management analysis (*Off-Highway Vehicle Environmental Impact Statement and Proposed Plan Amendment for Montana, North Dakota and Portions of South Dakota*) and decision were completed in January of 2001. That decision amended the Custer National Forest (including the Dakota Prairie Grasslands) plan to restrict wheeled motorized cross-country traffic. The OHV Decision went into effect in January 2001 and is the current management direction on the Dakota Prairie Grasslands in North Dakota. Because the OHV Decision and FEIS was conducted concurrently with the analysis in the Northern Great Plain EIS, the OHV Decision is not reflected in the acres displayed for the Existing Condition or Alternatives 1 and 2 in the Northern Great Plains FEIS. See e.g. FEIS 3-338. However, the FEIS does describe that the effects of the OHV Decision on current management in terms of cross country travel would be similar to Alternatives 3,4, and 5 for the DPG. See e.g. FEIS at 3-68,69 and 71. Table 3-174 displays alternatives as both not reflecting the OHV Decision to prohibit cross-country travel (Alternative1, 2, and existing condition) and alternatives reflecting the OHV Decision (Alternative 3 DEIS and FEIS, 4, 5). The Northern Great Plains FEIS incorporates the January 2001 OHV Decision.

The OHV Decision prohibits wheeled motorized cross-country travel on the Dakota Prairie Grasslands in North Dakota. This decision does not close any existing roads or trails, nor prohibits construction of new roads and trails. It also does not apply to private or state land. The OHV Decision contains specific exemptions for wheeled cross-country motorized travel in the following situations: military, fire, search and rescue, law enforcement, official administrative business, lessees and permittees in the administration of a valid federal lease or permit, travel to a campsite within 300 ft of an existing road or trail (OHV Record of Decision, January 2001 p. 4).

Chapter 3, page 3-335

The Maah Daah Hey Trail is approximately 96 miles long.

Chapter 3, page 3-337, General Effects, first bullet statement

First bullet statement *should read* 120 acres on Sheyenne National Grassland.

Second bullet statement *should read* 1,380 acres on Little Missouri National Grassland/Medora District.

Chapter 3, page 3-338 *Change* the following in Table 3-174 Travel Management Acres by Alternative for Dakota Prairie Grasslands.

Planning Unit	Existing Condition	Alt 1	Alt 2	Alt 3 DEIS	Alt 3 FEIS	Alt 4	Alt 5
Cedar/Grand River							
Seasonal Motorized	DELETE ROW FROM TABLE						
Little Missouri National Grassland: McKenzie Ranger District							
Off- Road	500,840	500,840	500,840	0	0	0	0
No motorized use allowed	0	0	0	56,120	50,060	64,600	35,120
Seasonal Motorized	DELETE ROW FROM TABLE						
Existing Routes	0	0	0	444,720	450,780	436,240	465,720
Little Missouri National Grassland: Medora Ranger District							
Off- Road	525,470	525,470	525,470	0	0	0	0
No motorized use allowed	1,380	1,380	1,380	103,180	75,360	134,320	73,260
Seasonal Motorized	DELETE ROW FROM TABLE						
Existing Routes	0	0	0	422,880	450,710	391,750	452,810
Sheyenne National Grassland							
Off- Road	70,200	70,200	70,200	0	0	0	2,800
No motorized use allowed	120	120	120	4,880	5,270	740	46,860
Seasonal Motorized	DELETE ROW FROM TABLE						
Existing Routes	0	0	0	65,320	64,930	69,460	20,540

Chapter 3, page 338 *Insert the following discussion* after the second paragraph:

Travel Management Effects

The FEIS considers a range of alternatives and travel management direction. The following summarizes the analysis of direct, indirect effects that were disclosed in the FEIS.

Recreation

The alternatives strive to provide for a wide variety for recreation opportunities and a diversity of recreational settings and experiences. This includes motorized and nonmotorized uses. Most (90%) of the Dakota Prairies Grasslands (1,128,420 acres) will continue to be managed for motorized use under Alternative 3 (FEIS). However to provide the diverse setting people requested**,** 10% of the Dakota Prairie Grasslands (DPG) would be managed to provide a nonmotorized setting under Alternative 3 (FEIS). Under all alternatives, the public can drive on existing roads and trails except in the management areas noted as nonmotorized. The following table displays the different acreages to be

managed as motorized or nonmotorized by alternative.

Table 3-173A - Total Motorized and Nonmotorized Area by Alternative on the Dakota Prairie Grasslands.

Alternatives	Areas with Motorized Uses Allowed on Existing Roads and Trails		Areas Managed for Nonmotorized Uses	
	acres	%	acres	%
1	1,256,890	99.9	1,500*	0.1
2	1,256,890	99.9	1,500*	0.1
3 (DEIS)	1,093,930	87.0	164,170	13.0
3 (FEIS)	1,128,420	90.0	130,690	10.0
4	1,058,860	84.0	199,660	16.0
5	1,102,890	88.0	155,230	12.0

*These acres are associated with the area closures for the Maah Daah Hey and North Country Trails and MA 2.2 Research Natural Areas. Table 2-7, from which this information is summarized, indicates that Alternative 1 has 42,990 acres of MA1.31. This represents acreage associated with MA J under the Custer Forest Plan. While this is a minimum development MA, public motorized travel is allowed on existing roads and trails.

In terms of effects, public motorized recreational access would be restricted in areas specified for nonmotorized use. However, access to the areas is still available to the public. The nonmotorized setting provides opportunities for those seeking quiet dispersed recreational experiences. Comments received during the OHV EIS (page 40) indicate that the prime motivation of nonmotorized users appears to be a quiet, peaceful experience in beautiful surroundings away from the rushing and crowding of everyday life. In areas managed for nonmotorized use, such activities as game retrieval and transporting camping equipment to a campsite will be more difficult because travel and transport of materials will have to be via foot travel, pack animal, or by bicycle versus an All-terrain Vehicle (ATV) or other motorized means.

Fire Suppression and Public Safety

Emergency and public safety situations, such as fire suppression and search and rescue, are provided for under the OHV Decision. Under all alternatives, the OHV Decision provides exemptions for military, fire, search and rescue, law enforcement, official administrative business, lessees and permittees in the administration of a valid federal lease or permit, and travel to a campsite within 300 feet of an existing road or trail. These exemptions are not thought to be extensive in scope and the effects associated with them are minimal (OHV ROD page 4).

Noxious Weeds

The invasion of native plant communities by noxious plant species is a threat with ecological and economic consequences. Weeds are spread many ways: animals (livestock, birds, wildlife), pets, people hiking, bicycling, all forms of motorized equipment, etc. One of the concerns with OHV travel is their potential to spread weed seed (OHV FEIS p. 59). The elimination of motorize wheeled cross-country traffic, by itself, would not make a large difference in weed spread. However, it could make an incremental difference. Under all alternatives, the OHV Decision, in concert with other programs such as weed-free forage and nonmotorized areas implemented across public land, could have a cumulative effect of substantially reducing the spread of noxious weeds across the landscape (OHV

FEIS page 65). Because Alternative 4 contains the most nonmotorized area, it may provide the greatest opportunity to stem the spread of noxious weeds, followed in turn by Alternatives 3 (DEIS), 5, 3 (FEIS), with Alternatives 1 and 2 being equal. Although the OHV Decision restricts travel to existing roads and trails, it allows for motorized cross-country travel for official administrative purposes, which would include treatment of noxious weeds (OHV FEIS p. 4).

Valid Existing Rights

All alternatives honor all valid existing rights pertaining to the development, production, and transport of mineral resources, pre-existing rights, such as treaty rights, mineral rights, water rights, and private access. This includes valid RS 2477 or ANICLA rights of access, both access to private surface and subsurface. Travel management decisions do not apply to these rights. The incorporation of the OHV Decision, Roadless Rule, and the Transportation Rule and Policy do not individually or cumulatively affect these rights.

Chapter 3, page 3-341 *Insert the following* after the fourth paragraph under Effects Common to All Alternatives:

The incorporation of the OHV Decision into the FEIS has no cumulative affect, under any alternative, on access to private minerals or private lands. Valid existing rights are honored under all the alternatives regardless of the OVH Decision. This includes valid RS 2477 rights or ANICLA rights of access (either to access private surface or subsurface), or the development, production, and transport of mineral resources done under a permit or lease. The OHV decision exempts lessees and permittees for administrative needs associated with their federal permit or lease. They can travel cross-country for authorized administrative use in areas that are closed to other public motorized access. The Northern Great Plains FEIS tiers to the Off-Highway Vehicle (OHV) FEIS and its ROD dated January 2001 and adopts the direction and exemptions identified in those documents.

Chapter 3, page 3-344 *Insert the following discussion* after the last paragraph:

Consideration of Other Directives

Roadless Area Conservation Rule

On January 12, 2001, the Special Areas; Roadless Area Conservation Final Rule, 66 FR 3244, (Roadless) was signed by former Secretary of the U.S. Department of Agriculture Dan Glickman. The Roadless Rule is codified at 36 CFR 294 Subpart B (2001). The Roadless Rule prohibited new road construction and timber harvest in inventoried roadless areas (IRA's) with some exceptions. The Roadlesss Rule, however, did not adopt any travel management direction for existing roads, trails, travelways, or areas. On May 10, 2001, the Idaho District Court granted the preliminary injunction requested in *Kootenai Tribe of Idaho vs. Veneman* and *State of Idaho vs. U.S. Forest Service*, enjoining the Forest Service from implanting "all aspects of the Roadless Area Conservation Rule." The Roadless Rule currently remains enjoined. As such, in terms of existing travel management direction, the Roadless Rule has no cumulative effect under any of the alternatives considered in the FEIS.

Despite the enjoined Roadless Rule, road construction/reconstruction associated with oil and gas development is likely to continue. Sixteen of the 25 inventoried roadless areas located on the Dakota Prairie Grasslands have some portion of their area under lease for oil and gas development and exploration. All 16 of these inventoried roadless areas are located on the Little Missouri National Grassland. Since completion of the roadless inventory in 1998, oil and gas development has occurred in the Tracey Mountain and Johns Town/Horse Creek IRAs. It is reasonably foreseeable that further road development associated with oil and gas development will occur in some of the inventoried

roadless areas throughout the life of the Dakota Prairie Grasslands Land and Resource Managment Plan.

The cumulative effects of the construction/ reconstruction of roads within the various inventoried roadless areas will vary depending on the amount of area under lease and the degree of oil development. The extent of oil and gas development is generally driven by commodity prices for oil and gas. Road presence and impacts associated with roads (including noise, dust pollution, changes in visual quality and ROS settings) may effectively reduce the area that meets the roadless area evaluation criteria.

If and when, the Roadless Area Conservation Rule injunction is lifted and the agency implements a Roadless Rule resulting in a change in management direction, the ROD and plan revision will be evaluated to determine the effects and any needed changes.

Transportation Rule and Policy

The Transportation Rule and Policy (66 FR 3206 Jan. 12, 2001 and as revised 66 FR 65801 Dec. 20, 2001) provides only guidance for transportation analysis; it does not dictate or adopt land management decisions.

The Transportation Rule requires the Forest Service to determine a minimum road system – determining those roads that are needed (classified) and those unneeded (unclassified). Decisions on needed and unneeded roads will be accomplished through area/project planning with NEPA analysis and public participation. The Transportation Policy also requires a roads analysis process to inform road management decisions. A roads analysis process (watershed or project area scale) must be prepared prior to most road management decisions to construct or reconstruct roads throughout National Forest System lands (whether they are inventoried roadless or not) beginning on January 12, 2002. The roads analysis process itself does not make decisions. Road management decisions are made through NEPA analysis and public participation.

The FEIS on page 3-336 acknowledges the Transportation Rule and the requirements therein including a science-based Roads Analysis, which is included in Goal 4a of the Dakota Prairie Grasslands Land and Resource Management Plan (page 1-7).

As noted above, Roads Analysis is not a decision-making process, therefore there are no cumulative effects. Effects resulting from road construction/reconstruction, maintenance or decommissioning will be analyzed through the NEPA process at the site-specific project level.

Summary

There are no effects to the FEIS alternatives due to the Roadless Rule or Transportation Rule individually or cumulatively. The Roadless Conservation Rule is enjoined and therefore has not been implemented. The Transportation Rule and Policy directs that roads analysis is to be conducted to provide information for road management decisions, it is not a decision making process.

The OHV Decision restricts motorized travel to existing roads and trails thus prohibiting cross-country travel with exceptions for military, fire, search and rescue, law enforcement, official administrative business, lessees and permittees in the administration of a valid federal lease or permit, and travel to a campsite within 300 ft of an existing road or trail. Under all alternatives, the OHV Decision will potentially have a beneficial effect by helping stem the spread of noxious weeds, while still providing access to treat existing noxious weed infestations. The OHV Decision, under all alternatives, has no effect on valid existing rights and does not affect access to private or oil and gas exploration and development. Those seeking areas where solitude prevails would benefit from the OHV Decision. Other recreationists, such as hunters and campers used to motorized access for game retrieval, transporting camping equipment, or cross-country motorized recreation, would not.

Chapter 3, page 3-363, the next to the last sentence of the first paragraph under General Effects	*Should read* The total acreage of inventoried roadless areas identified for Management Area 1.2A is 39,770.
Chapter 3, page 3-368, fourth paragraph, fourth sentence	*Should read* The Grand River National Grassland roadless areas were not allocated to Management Area 1.2 because of the existing level of development. Inventoried roadless areas on the Grand River (Grand Badlands was deleted and the South Fork was reduced in size) were adjusted because of the high proportion of private land in these or portions of these areas. This made management as any roadless area unfeasible.
Chapter 3, page 3-369, Table 3-195	*First column heading should read* "Unit" rather than "Alternative." *Remove the asterisk* under Nebraska National Forest, FEIS Alt 3 column There is no Recommended for Wilderness on the Dakota Prairie Grasslands
Chapter 3, page 3-369, Table 3-196	*Add the following footnote* to the number 41,520 under MA 1.2A column FEIS Alternative 3: In addition to the 39,770 acres of inventoried roadless area, 1,750 acres were added to Kinley Plateau to provide a manageable boundary, for a total of 41,520 acres.
Chapter 3, page 3-381 Table 3-205,	*Change* Cellars to Cellers.
Chapter 3, page 3-383 Table 3-206	*Change* Cellars to Cellers.

Chapter 3, page 3-421, third paragraph,

First sentence should read "Sheyenne and Grand River National Grasslands" rather than "Dakota Prairie Grasslands."

Reword the remaining paragraph as follows:

Initial attack fire suppression response on the Sheyenne, Grand River, and Cedar River National Grasslands is provided by local volunteer fire departments, through agreements between and coordination with Forest Service and local grazing associations. If the size of the fire is beyond the scope of control for volunteer fire departments, then the Forest Service is contacted for suppression action.

On the Little Missouri National Grasslands, the Forest Service and local volunteer fire departments have agreements with local grazing associations to coordinate initial attack fire suppression. Additional volunteer fire department response is coordinated through an annual operating plan between the USDA Forest Service and North Dakota Forest Service.

Chapter 3, page 3-424 *Insert the following discussion* under Effects from Range Management and Livestock Grazing:

Of the thirteen identified fuel models used in the U.S., fuel model 1 tends to best correlate with the types of fuels represented on the Dakota Prairie Grasslands. This fuel model is dominated by fine continuous herbaceous vegetation that has cured or is nearly cured. Fire behavior outputs for a fire burning in this fuel model show that an increase in grass structure height of 6-8 inches, with no external environmental influences such as wind and or topography affecting fire behavior, will result in an increase in flame lengths of 6-8 inches and increases in rates of spread from 93 feet per hour to 264 feet per hour (BehavePlus Version 1.0.0).

This type of modeling shows that increased grass structure levels and associated fuel loadings will result in increased fire behavior. However, this does not necessarily mean that increased grass structure and fuel loadings increase the potential for large fire occurrence. Rates of spread and fire intensity are influenced by a combination of fuels, weather, topography, and season. All these factors affect the quantity of fuel available, the moisture content of the dead fuels, and how intensely and quickly fuels will burn.

In reviewing the historic occurrence of large fires on the Dakota Prairie Grasslands over the past 20 years, six fires exceeded 2,000 acres in size and all occurred in the 1988 or 1999 fire seasons. In 1988, prolonged drought conditions during the winter, spring, and early summer months resulted in low soil moisture content and resulting poor grass production. Despite the lack of fuels, factors such as climate, local weather conditions, and badlands topography influenced fire intensities and rates of spread, resulting in the worst fire season on record. The two largest fires on the Dakota Prairie Grasslands are the Gap Fire (burning 51,627 acres) and the Rough Creek Fire (burning 7,979 acres) Both occurred on October 31, 1999 when a cold front moved through western North Dakota with wind gusts exceeding 60 mph.

Computer modeling shows that increased grass structure levels will intensify fire behavior but appear to play a secondary role compared to the environmental conditions that influence fire behavior. Historically, large fire occurrence on the Dakota Prairie Grasslands results from influences of season, daily weather conditions such as strong gusty winds and climatic conditions such as long-term drought.

The proposed Dakota Prairie Grasslands Land and Resource Management Plan calls for suppressing all wildfires, natural and human-caused, using fire management strategies based on aggressive initial attack (Land and Resource Management Plan, Chapter1, p. 1-18). The Forest Service is providing training and equipment to rural fire departments to improve the response, safety, and effectiveness of their firefighting resources, and has developed suppression capability to supplement rural fire department initial attack forces. In addition, planning during site-specific allotment management plan revision will also consider the locations and dispersion of areas with higher residual grass structure to minimize and reduce overall impact of any increased fuel loading and its application to large fire spread.

Chapter 3, page 3-427, Laws, Policy, and Direction	*Delete from the last sentence* "… or for removing any paleontological resource for commercial purposes."
Chapter 3, page 3-466	*Add to last paragraph* Plains pocket gopher is added to the list of mammal species.
Chapter 3, page 3-467, Birds, fourth paragraph	*Delete* the first American Crow and the first black-billed magpie.
Common and Scientific Names Section	*Add* Big sagebrush *Artemisia tridentata* to the list of common and scientific names following the FEIS bibliography.

Appendices

Appendix B, page B-36, bottom of the page	*Add* the abbreviation SLT, Standard Lease Terms
Appendix B, page B-42, Table B-6	Row entitled Wild and Scenic Classification in the last column, FEIS Standards and Guidelines: *Change to read* Wild and Scenic designations within TRNP only.
Appendix B, page B-43, Table B-6	In the row entitled Dispersed the last column, FEIS Standards and Guidelines, *change* w/I to within.
Appendix B, page B-43 Table B-6,	In the row entitled Special Interest Areas, *change* Cellars to Cellers. In the row entitled MA 4.22 Little Missouri River Corridor, the last column, FEIS Standards and Guidelines, *change* w/I to within.
Appendix B, page B-53, Cedar River, Grand River, Little Missouri, and Sheyenne National Grasslands, last sentence	*Should read* Of the site-types listed above, those with 200 lbs. production/acre and water were considered not capable.
Appendix B, pages B-76 and B-77	*Change* Cellars to Cellers.
Appendix B, page B-102, Dakota Prairie Grasslands, Existing Production	*Add the following footnote*: See May 20, 2002 memorandum in the Administrative Record, subject: "Clarification of the Analysis of Grasslands Plan S&Gs Relating to Livestock Grazing on the Dakota Prairie Grasslands" for further clarification.
Appendix B, page B-103, Table B-17	*Add the following footnote* to the table: Existing average pounds per acre were developed as described on p. B-102, Existing Production.
Appendix B, page B-104, Process to Determine Forage Outputs	*Add the following footnote*: See May 20, 2002 memorandum in the Administrative Record, subject: "Clarification of the Analysis of Grasslands Plan S&Gs Relating to Livestock Grazing on the Dakota Prairie Grasslands" for further clarification.

Appendix B, page B-106, Calculation of Forage Use	*Add the following footnote* to the last sentence on this page immediately after the words, "Dakota Prairie National Grassland:" See May 20, 2002 memorandum in the Administrative Record, subject: "Clarification of the Analysis of Grasslands Plan S&Gs Relating to Livestock Grazing on the Dakota Prairie Grasslands" for further clarification.
Appendix B, page B-111, Table B-23	This table shows allocation for livestock use with no other consideration for other resource uses.
Appendix C, page C-206, H A Divide: Environmental Consequences, Alternative 3	*Change* MA 3.65 to MA 5.12.
Appendix C, page C-207-208, Designation: Non-wilderness, Prescription: MA 3.65, Rangelands with Diverse Natural-appearing Landscapes, Alternatives: 3	*Delete* Environmental Consequences; Mitigation Measures; and Economic and Social Effects.
Appendix C, page C-208, Designation: Non-wilderness, Prescription: MA 5.12	*Change* Alternatives: 2 to Alternatives: 2 and 3.
Appendix C, pages C-338 to C-344	*Delete* Tables C-13, C-14, and C-15. *Replace with* Tables H-2, H-3, and H-6 under Appendix H.
Appendix D, page D-5, under Alternative 3 at the top of page	*Add* Dakota Prairie Grasslands does not require that pasture size be maintained or increased.
Appendix D, page D-8, Tables D-1, D-2 and D-3	*Table titles should read* Levels of colony acreages that would trigger reevaluation of prairie dog management.
Appendix D, page D-9, second paragraph, Guideline 2, second sentence	*Should read* Restrictions may be year-long or seasonal.
Appendix D, page D-11, under Rangeland and Forest Health by Alternative, Objective	In the parenthesis, *include* … reference desired forest structural stages in Appendix B, starting on page B-123.
Appendix F, page F-5	*Change* Cellars to Cellers.

Appendix F, SIA boundary maps	*The Bessey Ranger District Tree Plantation SIA boundaries* have been corrected to include the entire plantation. The new maps are at the end of the addendum, following the comment and response section. The changes increased the acres in MA 2.1 by 3.445 and decreased MA 6.1 acres by 3.445.
Appendix H, Table of Contents	*Add* Blanding's turtle (*Emydoidea blandingii*) page H-138.
Appendix H, page H-4, Table H-1, Mixed-grass, Nebraska	*Should read* 19,190,000 rather than 190,190,000.
Appendix H, page H-13, Table H-2, Ute ladies'-tresses	*Should read* a "P" for TBNG and "PSH" for ONG
Appendix H, page H-44, BGNG, second paragraph	*Delete* (Northern Great Plains Terrestrial Assessment)
Appendix H, page H-81, Conservation Planning	*Should read* Moffat and McPhillips (1993)
Appendix H, page H-95, Table H-4	*Delete* the entire column titled, Current Number of Colonies
Appendix H, page H-99, Biological Determinations, Risk Assessments, and Rationale	*Delete* BGNG from the list (GR/CRNG,FPNG, BGNG, ONG) and *insert it* in the lower list (LMNG, TBNG)
Appendix H, page H-99, Biological Determinations, Risk Assessments, and Rationale, GR/CRNG, FPNG, BGNG, ONG	*Add the following sentence* If plague epizootics become problematic in the future on these areas, Outcome V may be a more appropriate selection.
Appendix H, page H-101, Species, Nodding buckwheat	*Change* TGNG, BGNG, and ONG from "P" to "K."
Appendix H, page H-102, Species, Alkali sacaton	*Change* TGNG, BGNG, and ONG from "P" to "K."

Appendix H, page H-106, Screen 1 (Importance of Area)	*Add the following text* under Screen 1 (Importance of Area): TBNG, BGNG, FPNG, ONG, NNF-BRD, NNF-PRRD, SRMNG = Golden-crowned kinglet (*Regulus satrapa*) Rationale: Observations of this species on these areas are uncommon and incidental. The species occurs as a migrant or winter visitor, and breeding on these areas is highly unlikely.
Appendix H, page H-158, Second paragraph	*Add* the word "intermittent" to the sentence as follows: It also only represents riparian habitat associated with intermittent and perennial streams…
Appendix H, page H-159, Unit-wide Direction (Chapter 1)	"Conduct actions so that habitats are maintained or improved toward robust stream health" *should read:* Allow only those actions next to perennial and intermittent streams, seeps, springs, lakes, and wetlands that maintain or improve long-term proper functioning of riparian ecosystem conditions.
Appendix H, page H-161, Organization Rankings	*Change* Carter et al. 1998 to Carter et al. 1996.
Appendix H, page H-183, first paragraph	*Change:* Becker and Sieg (1985) to Becker and Sieg (1987).
Appendix H, page H-186, Biological Determinations, Risk Assessments, and Rationale, second paragraph	*Replace* Ferruginous hawks with Merlin.
Appendix H, page H-243, Biological Determinations, Risk Assessments, and Rationale	*Replace* BGPN with BGNG
Appendix H, page H-305 Table H-9; page H-306 Table H-10; and page H-307 Table H-11	*Change* Cellars to Cellers.
Appendix H, page H-307, Table H-11	*Change* the heading "percent" to "percent of suitable acres."

Addendum

Appendix H, page H-308 *Add the following references* to References Consulted section:

Baicich, P.J., and C.J.O. Harrison. 1997. A guide to the nests, eggs, and nestlings of North American birds. Academic Press. 347pp.

Cole, T., and R.S. Sharpe. 1976. The effects of grazing management on a sandhills prairie community. Proceedings of the Nebraska Academy of Science Affiliated Society 86:12.

Ernst, C.H., R.W. Barbour, and J.E. Lovich. 1994. Turtles of the Unites States and Canada. Smithsonian Institute Press, Washington, D.C. 578pp.

Frankel, O.H., and M.E. Soule. 1981. Conservation and evolution. Cambridge University Press, Cambridge.

Lagler, K.F. 1943. Food habits and economic relations of turtles of Michigan, with special reference to fish management. American Midland Naturalist 29(2):257-312.

National Geographic Society. 1987. Field guide to the birds of North America. National Geographic Society, Washington, D.C. 464pp.

Peterjohn, B.G., J.R. Sauer, and W.A. Link. 1994. The 1992 and 1993 summary of the North American Breeding Bird Survey. Bird Populations 2:46-61.

Terres, J.K. 1980. The Audubon Society encyclopedia of North American birds. Alfred A. Knopf, New York City, New York.

Appendix H, page H-315 Czaplewski, et al *should be* 1983 and not 1979.

Appendix H, page H-332 *Add the following reference*:

McCarthy, C., T. Pella, G. Link, and M.A. Rumble. 1997. Greater prairie chicken nesting habitat, Sheyenne National Grassland, North Dakota. Pages 13-18 in D.W. Uresk, G.L. Schenbeck, and J. T. O'Rourke (tech coord.). Conserving biodiversity on native rangelands: symposium proceedings. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-GTR-298. 38pp.

Appendix H, page H-339 *Change* Romin and Muck reference to the following*:*

Romin, L.A., and J.A. Muck. 1999. Utah field office guidelines for raptor protection from human disturbance, a review. U.S. Fish and Wildlife Service unpublished report. 31pp.

Summary Document Final Environmental Impact Statement

FEIS Summary, page 26 *The following information replaces* the oil and gas portion of Community/Lifestyle Relationships, Table 7. Comparison of Alternatives by Major Revision Topic for Dakota Prairie Grasslands.

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Community/Lifestyle Relationships							
Oil/gas activities on NFS lands (Change From Existing Condition)	0%	0%	0%	-3%	-3%	-7%	-3%
direct and indirect jobs (number)	1,081	1081	1081	1045	1,045	1,009	1,045
direct and indirect income (millions of 1997 $)	32.9	32.9	32.9	31.8	31.8	30.7	31.8

FEIS Summary, page 28 *The following information replaces* the numbers for Recreation Opportunity Spectrum Classes in Table 7. Comparison of Alternatives by Major Revision Topic for Dakota Prairie Grasslands.

Revision Topic/Key Indicators	Existing Condition	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Recreation Opportunity Spectrum Classes							
urban acres	760	760	760	440	450	760	440
rural acres	301,580	294,860	301,570	289,510	291,960	290,050	279,620
roaded modified acres	116,720	116,620	116,620	112,900	112,920	114,080	114,350
roaded natural acres	610,750	605,690	609,730	577,050	586,690	559,670	578,960
roaded natural nonmotorized acres	0	920	1130	3010	3370	3,050	1,080
semi-primitive motorized acres	228,320	196,290	228,320	113,770	135,120	93,430	129,510
semi-primitive nonmotorized acres	0	43,000	0	161,460	127,610	197,100	154,160

FEIS Summary, page 32, Rangeland and Forest Health, plains sharp-tailed grouse, Existing Condition

Change 1-55% to 1-50%.

FEIS Summary, page 34, Table 9, Comparison of Alternatives by Major Revision Topic for Nebraska National Forest Units

Under Recommended for Wilderness, Areas, it *should read* FEIS Alt3 Areas = 2; Alt 4 Areas = 5.

FEIS Summary, page 35 *The following information replaces* the numbers for MA 3.63 Black-footed Ferret Reintroduction Habitat in Table 10, Management Area Acres by Alternative for Thunder Basin National Grassland

Management Area	Alt 1	Alt 2	DEIS Alt 3	FEIS Alt 3	Alt 4	Alt 5
Category 3						
3.63 Black-footed Ferret Reintroduction Habitat	33,750	41,230	45,470 (5,930)	47,890 (5,930)	112,510 (16,550)	27,850 (13,380)

Land and Resource Management Plan, Nebraska National Forest

Preface, page 1, last paragraph	*Should read* Alternatives were formulated according to the NFMA and NEPA. An extensive analysis of the alternatives is described in the accompanying Final Environmental Impact Statement (FEIS). The planning process and the analysis procedures used to develop this Revised Management Plan are described or referred to in the FEIS. The FEIS also describes other alternatives considered in the planning process.
Preface, page 3, the graphic illustrating Category 1 through 8	*Should read* "least facilities" in place of "least human disturbance" and "most facilities" in place of "most human disturbance."
Preface, page 8, third bullet statement	*Should read* Nebraska National Forest
Chapter 1, page 1-4, Goal 1.c, Objectives, #8	*Should read* In a timely manner, review PSD permit applications and make recommendations where needed to reduce impacts to those congressionally designated Class I areas specified in the federal Clean Air Act as subject to air quality related values.
Chapter 1, page 1-10, Physical Resources, A. Air, #1	*Replace with* Meet state and federal air quality standards, and comply with local, state, and federal air quality regulations and requirements, either through original project design or through mitigation, for such activities as prescribed fire, mining, and oil and gas exploration and production (see Appendix A). Standard
Chapter 1, page 1-10, Physical Resources, A. Air, #3	*Replace with* Reduce the impacts to air quality and loss of energy resources by only allowing flaring of gas from oil wells during production testing of wells. Connection to a pipeline or re-injection will be required once production is established. Exceptions will be considered on a case-by-case basis. Guideline
Chapter 1, page 1-10, Physical Resources, A. Air	*Add #4:* Partner with local and state government, energy producers, and other appropriate stakeholders to devise dust control plans for unpaved roads. Expedite permitting processes, where necessary, to implement the plans that are developed through this partnership. Guideline

Chapter 1, page 1-11, #7	*Replace with* Return and/or maintain sufficient stream flows under appropriate authorities to minimize damage to scenic and aesthetic values, fish, and wildlife habitat, and to otherwise protect the environment. Standard
Chapter 1, page 1-15, #14	*Reword second sentence* A sharp-tailed grouse display ground is no longer considered active if it has been unoccupied during the last 2 breeding seasons.
Chapter 1, page 1-15, #15, bullet 8	*Should read* Training of bird hunting dogs. Guideline
Chapter 1, page 1-15, #17	*Should read* as guideline, not standard.
Chapter 1, page 1-17, #33	*Should read* as guideline, not standard.
Chapter 1, page 1-17, #34, second sentence	*Should read* A display ground is no longer considered active if it's known to have been unoccupied during the last 2 breeding seasons.
Chapter 1, page 1-17, #35, Construction	*Delete* pipelines and utilities.
Chapter 1, page 1-17, #35, bullet 4	*Should read* Training of bird hunting dogs. Standard
Chapter 1, page 1-18, #43	*Delete* … that are occupied or thought to be occupied by black-footed ferrets or burrowing owls.
Chapter 1, page 1-21, H. Animal Damage Management, #2	*Delete* … U.S. Fish and Wildlife Service-approved,
Chapter 2, for all GAs	*The objective for fire* is minimum acres to be prescribed burned
Chapter 2, page 2-16, Wildlife, Fish and Rare Plants, #1	*Should read* … at least 100 adult male prairie chicken rather than 250.
Chapter 2, page 2-32, Mountain Plover, cont., second bullet	*Replace with* To avoid attracting avian predators, new structures and facilities in occupied mountain plover habitat will be designed with low profiles and/or perch inhibitors. This does not apply to structures and facilities less than 4 feet in height or those not expected to be used as hunting perches by raptors. Guideline

Chapter 2, page 2-39, second bullet statement — *Should read* as guideline, not standard

Chapter 2, page 2-39, thirteenth bullet — *Reword* the "small openings" standard as follows:

When conducting vegetation management projects, maintain small openings within sagebrush and greasewood stands at a ratio of no more than 25% opening and at least 75% shrub canopy (e.g., 1 acre of opening for every 3 acres of shrub within the discrete stand). Standard

Chapter 2, page 2-41, third bullet — *Replace with* To avoid attracting avian predators, new structures and facilities in occupied mountain plover habitat will be designed with low profiles and/or perch inhibitors. This does not apply to structures and facilities less than 4 feet in height or those not expected to be used as hunting perches by raptors. Guideline

Chapter 2, page 2-76 *Add the following* to the standards and guidelines under Mountain Plover (Sensitive Species, Candidate Species):

(The following mountain plover direction will apply if plover are eventually found or established in this geographic area.)

- To help maintain suitable nesting habitat for mountain plover, prohibit development of new facilities within 0.25 miles of known mountain plover nests or nesting areas. This does not apply to pipelines, fences, and underground utilities. **Standard**
- Any net loss of suitable and occupied mountain plover habitat as a result of prairie dog poisoning or development of new facilities within prairie dog colonies will be replaced within the year by concurrent expansion of suitable plover habitat or, in some cases, by enhanced management and protection of occupied plover habitat elsewhere on or near the national grassland. The amount of habitat loss is based on the amount of suitable and occupied habitat available prior to prairie dog dispersal in the year of the poisoning or development. **Guideline**
- To help reduce disturbances and risks to nesting mountain plover, prohibit the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:
    - Construction (e.g., roads, water impoundments).
    - Reclamation.
    - Drilling of water wells.
    - Prescribed burning. **Standard**
- To help reduce disturbances and risks to nesting mountain plover, do not authorize the following activities in plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31:
    - Construction (e.g., pipelines, utilities, fencing.
    - Permitted recreation events involving large groups of people.

  - Grasshopper spraying.
  - Prairie dog shooting (in consultation with state wildlife agencies and U.S. Fish and Wildlife Service). **Guideline**

- To help reduce risks to mountain plovers from traffic, limit vehicle speeds in occupied mountain plover habitat to 25 mph on resource roads and 35 mph on local roads. **Standard**
- Vegetation management projects in suitable mountain plover habitat will be designed to maintain or improve mountain plover habitat. **Standard**
- To avoid attracting avian predators, new structures and facilities in occupied mountain plover habitat will be designed with low profiles and/or perch-inhibitors. This does not apply to structures and facilities less than 4 feet in height or those not expected to be used as hunting perches by raptors. **Guideline**
- Use the following criteria at the project level to help determine where to use prescribed burning and high livestock grazing intensities (Appendix I) to provide low grassland structure and enhanced mountain plover nesting and brooding habitat:
  - Proximity to existing mountain plover nesting areas.
  - Proximity to prairie dog colonies.
  - Presence of expansive and flat grassland areas. **Guideline**

Chapter 2, page 2-81, #3	*Should read* 20-40 sq. ft basal area
Chapter 3, page 3-5, Recreation, #2	*Should read* Initiate a permit system and limit use when the established capacity level is exceeded. Guideline
Chapter 3, page 3-5, Recreation	Under this section, the standards and guidelines are mis-numbered; number 1 appears twice.
Chapter 3, page 3-8, General, #4	*Should read* as a Standard
Chapter 3, page 3-18, Standards and Guidelines, General	*Delete* #3 Limit all motorized use, including snowmobiles, to authorized administrative use, law enforcement, search and rescue, and emergency and scientific purposes. Standard
Chapter 3, page 3-20, Bessey Unit, Nebraska National Forest, first paragraph	*Change* 49 degrees Celsius to 49 degrees Fahrenheit
Chapter 3, page 3-23, Recreation	*Delete* #2 Snowmobile use is prohibited in the management area. Standard
Chapter 4, page 4-13 and 4-14, MIS 1, MIS 2, and MIS 3, Scale	*Should read* Geographic area wide rather than Administrative unit wide

Chapter 4, page 4-26, "Notes" under Special Interest Areas	*Should read* An understanding of the condition and trend of the features or communities that lead to protecting 2.1a thru 2.1m in Chapter 3, pages 3-13 thru 3-16 is needed so management action can be taken to preserve or enhance Special Interest Areas.
Chapter 4, page 4-27, Goal 2.b, Wilderness	*Should read* To what extent are the Soldier Creek Wilderness special features and communities of special concern conserved or enhanced?
Chapter 4, page 4-27, Goal 2.b, Recommended for Wilderness	*Should read* To what extent are the Red Shirt Recommended for Wilderness special features and communities of special concern conserved or enhanced?
Chapter 4, page 4-27, Goal 2.b, Recommended for Wilderness and Notes	*Add* Indian Creek to both sections
Appendix G	*Add the following:* Measurable Progress – Progress in meeting objectives that can be measured quantitatively or by visual but systematic monitoring procedures, including standard methods for assessing proper functioning condition or photographic keys for assessing various vegetation attributes.
Appendix G	*Replace* Guilds – a group of organisms, not necessarily taxonomically related, that is ecologically similar in characteristics such as diet, behavior, or microhabitat preference, or with respect to their ecological role (Ricketts et al. 1999).
Appendix G, Drought	*Change* 75% below average to 75% of normal.
Appendix G	*Add* Line of Sight – Refers to the presence or absence of topographical features or existing facilities that visually screen oil and gas exploration and development or other activities from raptor nests and winter roosts of bald eagles. Line-of-sight is determined from the height and location of the feature (ground nest, nest burrow opening, tree nest, cliff nest or roost site) being protected. Line-of-sight does not apply for noise disturbances or when disturbance to raptors that are temporarily off a nest is likely to result in nest abandonment.

Appendix G

Add Prairie Grouse – a term used to refer collectively to sharp-tailed grouse and prairie chicken

Appendix H

Add the following reference: Messmer, T.A. 1985. Effects of specialized grazing systems on upland nesting birds in south central North Dakota. MS Thesis. North Dakota State University, Fargo.

Appendix H, page H-2, first paragraph

Should read 25% rather than 20%.

Appendix H, page H-5, Sandhills Prairie, First paragraph

Replace with Quantitative information on the height and density of residual cover at prairie chicken nests in the sandhills is limited, and it's assumed that quality nesting habitat descriptions presented for prairie chicken in mixed grass prairie habitats would largely apply to prairie chicken nests in sandhill valleys. However, average spring VORs of 3 inches or more across the more productive range sites typically provide suitable nesting cover in the large valleys.

Alternative 3 Map for the Nebraska National Forest and Associated Units

Needs the following corrections:

Mallard Exclosure on Samuel R. McKelvie National Forest is shown as a Management Area 3.64 (Special Plant and Wildlife Habitat). It should have been shown as Management Area 2.1 (Special Interest Area).

A small part of the West Heron pasture is shown as Management Area 2.2 (Research Natural Area); this is incorrect. The area should be shown as part of Management Area 3.64 (Special Plant and Wildlife Habitat).

Land and Resource Management Plan, Thunder Basin National Grassland

Preface, page 1, last paragraph	*Should read* Alternatives were formulated according to the NFMA and NEPA. An extensive analysis of the alternatives is described in the accompanying Final Environmental Impact Statement (FEIS). The planning process and the analysis procedures used to develop this Revised Management Plan are described or referred to in the FEIS. The FEIS also describes other alternatives considered in the planning process.
Preface, page 3, the graphic illustrating Category 1 through 8	*Should read* "least facilities" in place of "least human disturbance" and "most facilities" in place of "most human disturbance."
Preface, page 8, The Management Plan Revision Process, third bullet statement	*Should read* "How well the Thunder Basin National Grassland …"
Chapter 1, page 1-4, Goal 1.c, Objectives, #8	*Should read* In a timely manner, review PSD permit applications and make recommendations where needed to reduce impacts to those Congressionally-designated Class I areas specified in the federal Clean Air Act as subject to air quality related values.
Chapter 1, page 1-9, Physical Resources, A. Air, #1	*Replace with* Meet state and federal air quality standards, and comply with local, state, and federal air quality regulations and requirements, either through original project design or through mitigation, for such activities as prescribed fire, mining, and oil and gas exploration and production. (See Appendix A) Standard
Chapter 1, page 1-9, Physical Resources, A. Air, #3	*Replace with* Reduce the impacts to air quality and loss of energy resources by only allowing flaring of gas from oil wells during production testing of wells. Connection to a pipeline or re-injection will be required once production is established. Exceptions will be considered on a case-by-case basis. Guideline
Chapter 1, page 1-9, Physical Resources, A. Air	*Delete* (See Geology and Minerals; Leaseable Minerals section to find air standards and guidelines related to mineral operations)

Chapter 1, page 1-9, Physical Resources, A. Air	*Add #4* Partner with local and state government, energy producers and other appropriate stakeholders to devise dust control plans for unpaved roads on the Thunder Basin National Grassland. Guideline
Chapter 1, page 1-10, #7	*Replace with* Return and/or maintain sufficient stream flows, under appropriate authorities, to minimize damage to scenic and aesthetic values, fish, and wildlife habitat, and to otherwise protect the environment. Standard
Chapter 1, page 1-11, Minerals and Energy Resources, Geophysical Operations, #5	*Should read* as guideline.
Chapter 1, page 1-13, General #2	*Should read* Modify livestock grazing practices, as needed, to reduce adverse impacts of drought to threatened, endangered, and sensitive species and species at risk. Standard
Chapter 1, page 1-14, #14	*Reword second sentence* A sharp-tailed grouse display ground is no longer considered active if it has been unoccupied during the last 2 breeding seasons.
Chapter 1, page 1-14, #15, bullet 8	*Should read* Training of bird hunting dogs. Guideline
Chapter 1, page 1-14, #17	*Should read* as guideline, not standard
Chapter 1, page 1-16, #33	*Should read* To avoid attracting avian predators, new structures and facilities in occupied mountain plover habitat will be designed with low profiles and/or perch inhibitors. This does not apply to structures and facilities less than 4 feet in height or those not expected to be used as hunting perches by raptors. Guideline
Chapter 1, page 1-18, #50	S*hould read* 10% or more canopy cover…
Chapter 1, page 1-19, #54	*Should read* (>15% canopy cover of big sagebrush, silver sagebrush, and greasewood)…

Chapter 1, page 1-19, #55	*Reword* In big sagebrush, silver sagebrush, and greasewood wintering habitat, do not prescribe burn or treat with herbicides unless it can be demonstrated to be beneficial for local sage grouse populations. Treatments should not be conducted where shrub canopy cover averages less than 15%. Limit treatments to less than 80-acre patches and no more than 20% of the shrub stands in the wintering habitat. Shrub stands within 100 yards of meadows, riparian areas, and other foraging habitats should not be burned or sprayed. Guideline
Chapter 1, page 1-19, #58	*Reword* Standard #58 as follows: When conducting vegetation management projects, maintain small openings within sagebrush and greasewood stands at a ratio of no more than 25% opening and at least 75% shrub canopy (e.g., 1 acre of opening for every 3 acres of shrub within the discrete stand). Standard
Chapter 1, page 1-19, #61, 62, 63	These are bullet statements for #60 and are guidelines
Chapter 1, page 1-19, #66	*Add the text in bold* to the standard: Coordinate and consult with appropriate wildlife management agencies **and local landowners** to prohibit prairie dog shooting in areas …
Chapter 1, page 1-20, #67	*Delete the following text* … that are occupied or thought to be occupied by black-footed ferrets or burrowing owls.
Chapter 1, page 1-22, #3	*Delete the reference* to wilderness areas and *add the text* in bold*:* In Backcountry Recreation Nonmotorized areas and Research Natural Areas, encourage the use of wildland fire suppression strategies **and tactics** that minimize land and resource disturbance.
Chapter 1, page 1-23, H. Animal Damage Management, #1	*Should read* Restrict instead of Prohibit.
Chapter 1, page 1-23, H. Animal Damage Management, #2	*Delete …* U.S. Fish and Wildlife Service-approved …
Chapter 1, page 1-24, Section J, Title	*Should read* Insect and Disease Control, Noxious Weeds, Non-native, and Invasive Species.

Chapter 1, page 1-27,	*Remove the following bullet statement* from Guideline #3: Lands in Congressionally designated Wilderness and other classified areas.
Chapter 2, page 2-1 and page 2-9	*Change* Cellars to Cellers.
Chapter 2, page 2-5, Vegetation, #1	*Should Read:* as guideline, not standard.
Chapter 3, page 3-7	*Change* Cellars to Cellers.
Chapter 3, page 3-7, Mineral and Energy Resources	*Delete* #2 Prohibit mineral material removal. Standard
Chapter 3, page 3-8, Special Use	*Delete* #2
Chapter 3, page 3-9, 2.1b – Cheyenne River Zoological SIA, Additional Direction	*Add the following bullet statement*: Prohibit new special-use facilities except for valid existing rights. Guideline
Chapter 3, page 3-9, SIA Descriptions, 2.1a – Cellers, SIA, Additional Direction	*Add the following bullet statement*: Prohibit new special-use facilities except for valid existing rights. Guideline
Chapter 3, page 3-10, 2.1d – Buffalo Divide SIA, Additional Direction	*Add the following bullet statement*: Prohibit new special-use facilities except for valid existing rights. Guideline
Chapter 3, page 3-11, 2.1e – Cow Creek Historic Rangeland SIA, Additional Direction	*Add the following bullet statement*: Prohibit new special-use facilities and range facilities that are not congruent with historic rangeland theme, except for valid existing rights. Guideline
Chapter 3, page 3-12, 2.1f – Lance Geologic SIA, Additional Direction	*Add the following bullet statement*: Prohibit new special-use facilities except for valid existing rights. Guideline
Chapter 3, page 3-13, Mineral and Energy Resources	*Delete* the second standard.
Chapter 3, page 3-15, Rock Creek RNA and Wildlife Draw RNA	*Add mule deer* to the list of animals found in the Rock Creek RNA *Add hound's tongue* to the vegetation found in the Wildlife Draw RNA.

Chapter 4, page 4-14 and 4-23	*Change* Cellars to Cellers.
Appendix D, page D-19	*Change* Cellars to Cellers.
Appendix G	*Add* Prairie Grouse – a term used to refer collectively to sharp-tailed grouse and prairie chicken.
Appendix G	*Add the following* Measurable Progress – Progress in meeting objectives that can be measured quantitatively or by visual but systematic monitoring procedures, including standard methods for assessing proper functioning condition or photographic keys for assessing various vegetation attributes.
Appendix G	*Replace* Guilds – a group of organisms, not necessarily taxonomically related, that is ecologically similar in characteristics such as diet, behavior, or microhabitat preference, or with respect to their ecological role (Ricketts et al. 1999).
Appendix G, Drought	*Change* 75% below average to 75% of normal.
Appendix G	*Add* Line of Sight – Refers to the presence or absence of topographical features that visually screen oil and gas exploration and development or other activities from raptor nests and winter roosts of bald eagles. Line-of-sight is determined from the height and location of the feature (ground nest, nest burrow opening, tree nest, cliff nest or roost site) being protected. Line-of-sight does not apply for noise disturbances or when disturbance to raptors that are temporarily off a nest is likely to result in nest abandonment.
Appendix H	*Add the following reference* Messmer, T.A. 1985. Effects of specialized grazing systems on upland nesting birds in south central North Dakota. MS Thesis. North Dakota State University, Fargo.
Alternative 3 Map for the Thunder Basin National Grassland	*Change the stippled area on the map legend* to read as follows: Inventoried roadless areas; check the Record of Decision for direction on roading decisions.

Land and Resource Management Plan, Dakota Prairie Grasslands

Chapter 1, page 1-2, Goal 1.b, Objectives, #1	*Should read* … under the Endangered Species Act, and incorporate conservation or recovery strategies into plan direction.
Chapter 1, page 1-3, Goal 1.b, Objectives, #8	*Should read* Complete conservation strategies for globally rare plant species (G1-3 rankings) and other high priority species in cooperation with other conservation agencies and organizations, and incorporate these strategies into plan direction.
Chapter 1, page 1-4, Goal 1.c, Objectives, #8	*Should read* In a timely manner, review PSD permit applications and make recommendations where needed to reduce impacts to those Congressionally-designated Class I areas specified in the federal Clean Air Act as subject to air quality related values.
Chapter 1, page 1-9, Standards and Guidelines, third paragraph, second sentence	*Should read* Deviations from guidelines must be analyzed and documented but do not require management plan amendments.
Chapter 1, page 1-9, Physical Resources, A. Air, #1	*Replace with* Meet state and federal air quality standards, and comply with local, state, and federal air quality regulations and requirements, either through original project design or through mitigation, for such activities as prescribed fire, mining, and oil and gas exploration and production. (See Appendix A) Standard
Chapter 1, page 1-9, Physical Resources, A. Air, #3	*Replace with* Reduce the impacts to air quality and loss of energy resources by only allowing flaring of gas from oil wells during production testing of wells. Connection to a pipeline or re-injection will be required once production is established. Exceptions will be considered on a case-by-case basis. Guideline
Chapter 1, page 1-18, H. Animal Damage Management, #2, third bullet	*Delete* … U.S. Fish and Wildlife Service approved,

Chapter 1, page 1-26, Q. Infrastructure Use and Management, #1	*Should read* Allow wheeled motorized use on existing roads and trails (Reference Region One BLM and Forest Service Off-Highway Vehicle EIS) as noted in the preferred alternative of the OHV decision. The same exceptions and exemptions apply. Standard.
Chapter 1, page 1-26, Q. Infrastructure Use and Management	*Delete* #2 and #3
Chapter 1, page 1-27, Q. Infrastructure Use and Management #5	*Delete* the word "maintenance" in the first sentence. *Delete* the entire second sentence.
Chapter 3, page 3-3, 1.2A-Suitable For Wilderness, first paragraph	*Delete the following sentence:* In the event these areas are threatened by future development that would degrade the wilderness character, the Forest Service would then officially recommend them to congress for wilderness designation.
Chapter 3, page 3-3, Standards and Guidelines, General, #1	*Should read* Allow uses and activities if they do not preclude wilderness designation. Standard
Chapter 3, page 3-14, Mineral and Energy Resources, #1	*Add after (PL 94-576)* … as mineral entry relates to the Mining Law of 1872.
Chapter 3, page 3-14, Mineral and Energy Resources, #2	*Replace with* Allow oil and gas leasing; however, prohibit ground-disturbing oil and gas activities. Standard.
Chapter 3, page 3-25, 3.51A Bighorn Sheep Habitat with Non-Federal Mineral Ownership, Minerals and Energy Resources, #1	*Reword Minerals and Energy Standard #1 as follows:* Leasing of federal minerals parcels will not occur until there is development of a well on an adjacent spacing unit or an access road is built across the management area to access existing rights. Once development on an adjacent spacing unit or adjacent non-federal mineral estate occurs, the adjacent federal minerals may be leased using Controlled Surface Use and Timing Limitations. If the adjacent federal minerals parcel is leased, subsequent surface operations may be modified or moved to minimize the additional impacts on bighorn sheep habitat. The Hanks Gully bighorn sheep habitat area has non-federal mineral ownership within it.

Chapter 3, page 3-26 *Insert the following* after MA 3.51A:

3.51B Bighorn Sheep Habitat with Non-federal Mineral Ownership

The following bighorn sheep habitat areas have non-federal mineral ownership within them: Icebox Canyon, Buckhorn Creek, Dry Creek, and Wannagan. Because of the non-federal mineral ownership, development could occur at any time. These areas are managed to provide quality forage, cover, escape terrain, and solitude for bighorn sheep while accounting for the development of the non-federal mineral ownership (see Preface for an explanation of existing mineral rights). These areas would also allow petroleum resource development on federal minerals with appropriate protections through Controlled Surface Use (CSU) and Timing Limitations (TL) stipulations.

Desired Conditions

Bighorn sheep habitat provides an abundant supply of food and cover. Other resource management activities are modified, as needed, to maintain high habitat suitability levels and acceptable levels of solitude. To achieve population objectives, the integrity of breeding, lambing, and other important habitat features (e.g. escape terrain) in occupied and unoccupied habitat will be protected.

Coordinate with other federal and state agencies and private landowners to manage habitat and monitor herd size of existing bands of bighorn sheep. In conjunction with North Dakota Department of Game and Fish, consider augmenting existing populations with additional sheep introductions.

Mineral operations will occur in a manner that minimizes effects on bighorn sheep and their habitat.

Standards and Guidelines

General

1. Maintain bighorn sheep habitat while allowing activities that do not significantly degrade the characteristics for which the area was designated. **Standard**
2. Implement habitat enhancement projects that improve sheep foraging habitat and provide connectivity of foraging areas with escape terrain. **Guideline**

Minerals and Energy Resources

1. Allow oil and gas leasing with surface occupancy using CSU and TL stipulations, as necessary, to prevent significant adverse impact to bighorn sheep. Subsequent surface operations may be modified or moved to minimize the additional impacts on bighorn sheep habitat. **Standard**
2. Identify and implement surface and mineral estate land exchanges that contribute to bighorn sheep management objectives. **Guideline**
3. Refer to Chapter 1 (Grassland-wide Direction), Section D, for additional minerals and energy resources direction.

Fire

1. Refer to Chapter 1 (Grassland-wide Direction), Section G, for additional fire management direction.

Livestock Grazing

1. Do not convert existing livestock allotments to domestic sheep or goat allotments in or adjoining this management area. **Standard**
2. Limit livestock forage allocation based on bighorn sheep needs. **Guideline**
3. Refer to Chapter 1 (Grassland-wide Direction), Section L and Chapter 2 (Geographic Area Direction) for additional livestock management direction.

Invasive Species

1. Domestic sheep may be permitted as part of an integrated pest management (IPM) control program if they do not conflict with bighorn sheep management objectives. The North Dakota Game and Fish Department will be consulted if such a program is considered. **Guideline**
2. Refer to Chapter 1 (Grassland-wide Direction), Section J, for additional invasive species direction.

Recreation

1. Snowmobile use is prohibited in the management area. **Standard**
2. Restrict travel to protect sheep concentrations during breeding, lambing, and winter use, except for administrative use. **Guideline**
3. Refer to Chapter 1 (Grassland-wide Direction), Section K, for additional recreation direction

Heritage Resources

1. Refer to Chapter 1 (Grassland-wide Direction), Section N, for additional heritage resource direction.

Scenery Management

1. Manage area to encompass the spectrum of Scenic Integrity Objectives. **Guideline**
2. Refer to Chapter 1 (Grassland-wide Direction), Section L, Chapter 2 (Geographic Area Direction) for Scenic Integrity Objectives map and Appendix G (Glossary) for definition of terms.

Special Uses

1. Allow construction of new utility corridors only if they do not degrade the characteristics for which the area was designated. **Standard**
2. Refer to Chapter 1 (Grassland-wide Direction), Section P, for additional special uses direction.

Infrastructure

1. Restrict construction of new travel routes across bighorn sheep habitat; however, allow for valid existing rights such as oil and gas leases. **Guideline**
2. Refer to Chapter 1 (Grassland-wide Direction), Section Q and Chapter 2 (Geographic Area Direction) for additional infrastructure direction.

Chapter 3, page 3-28, Mineral and Energy Resources, cont., #8	*Replace with* Prohibit activities that would alter water flow regimes and flood prairie dog burrows that are occupied or thought to be occupied by black-footed ferrets or burrowing owls. Standard
Chapter 3, page 3-30, Mineral and Energy Resources, #2	*Should read* as a Standard.
Chapter 3, page 3-37, Recreation, #2	*Reword* as follows: "Restrict OHV trail construction. Guideline"

Appendix D, page D-11, Application Methodology

Should read This stipulation applies to active golden eagle, merlin, and ferruginous hawk nests.

Appendix D, page D-22, MA 3.51A – Bighorn Sheep Habitat with Nearby Non-Federal Mineral Ownership

Sub-heading should read Not Currently authorized for Leasing (NCA)/Timing Limitations (TL)/Controlled Surface Use (CSU)

Appendix D, page D-22 *Insert the following* after Resource: Bighorn Sheep Habitat (CSU), Stipulation:

Resource: Bighorn Sheep Habitat (TL)

Stipulations

- Drilling, testing, and new construction activity will be confined to June 15-October 15 to accommodate breeding, winter range, and lambing seasons for bighorn sheep.
- Limit on-lease activities (operation and maintenance of facilities) to the period from 10 a.m. to 4 p.m. except in emergency situations.

Appendix D, page D-23 *Add the following* before MA 3.63:

MA 3.51B – Bighorn Sheep Habitat with Non-Federal Mineral Ownership

Timing Limitations (TL)/Controlled Surface Use (CSU)

Leasing of the federal mineral estate shall occur in MA 3.51B with surface occupancy using TL and CSU.

Resource: Bighorn Sheep Habitat (CSU)

Stipulations

- Operations may be modified or moved to minimize additional impacts on bighorn sheep habitat.
- Future roads to non-producing wells on private minerals under NFS lands would be obliterated and the disturbed areas reclaimed.
- Road construction and associated lease activities will be located to minimize loss of bighorn sheep habitat.
- Well locations will be located to avoid lambing areas, steep slopes (escape terrain) and known travel corridors.
- Whenever possible, access roads will be gated to prevent unnecessary human activity.

Resource: Bighorn Sheep Habitat (TL)

Stipulations

- Drilling, testing, and new construction activity will be confined to June 15-October 15 to accommodate breeding, winter range, and lambing seasons for bighorn sheep.
- Limit on-lease activities (operation and maintenance of facilities) to the period from 10 a.m. to 4 p.m. except in emergency situations.

Objective (Justification)

For justification, refer to the Land and Resource Management Plan Management, MA 3.51B, Bighorn Sheep Habitat with Non-Federal Ownership, Standards and Guidelines, Minerals and Energy Resources, Number 1. The objectives are to provide quality forage, cover, escape terrain, and solitude for bighorn sheep.

Application Methodology

Use this stipulation in MA 3.51B, Bighorn Sheep habitat with interspersed non-federal minerals. This stipulation applies to drilling and testing of wells, new construction projects and to operations or maintenance of production facilities.

Waivers

No conditions for a waiver are anticipated, and approval of waiver is unlikely.

Exceptions

The authorizing officer may grant an exception to this stipulation if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.

Modifications

The boundaries of the stipulated area may be modified if the authorizing officer determines that portions of the area do not include bighorn sheep populations.

Appendix D *Add the following lease notice* at the end of Appendix D:

Parcel No.

Serial No. _____

USDA - FOREST SERVICE

THREATENED, ENDANGERED, AND SENSITIVE

PLANT OR ANIMAL SPECIES LEASE NOTICE

The lease area may contain threatened and endangered species or habitat necessary for the continued existence of threatened, proposed, candidate or endangered species which are protected by the 1973 Endangered Species Act, as amended (16 USC 1531 et seq.) and implementing regulations (50 CFR 402 et seq.). The lease area may also contain habitat or species, which may require protective measures to prevent them from being listed as threatened or endangered; or result in a loss of viability or biological diversity

(36 CFR 219.19 or 219.26). A biological evaluation of the leased lands may be required prior to surface disturbance to determine if endangered, threatened, proposed, candidate or sensitive plant or animal species or their habitat are present and to identify needed mitigation measures. Prior to under taking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

1. Contact the Forest Service to determine if a biological evaluation is required. The

Forest Service is responsible for ensuring that the leased land is examined through a biological evaluation, prior to undertaking any surface-disturbing activities, to determine effects upon any plant or animal species listed or proposed for listing as threatened, endangered, or a sensitive species.

2. The lessee or operator may choose to conduct the evaluation on the leased lands at their discretion and cost. This biological evaluation must be done by or under the supervision of a qualified biologist/botanist approved by the Forest Service. An acceptable report must be provided to the Forest Service identifying the anticipated effects of a proposed action on endangered, threatened, proposed, candidate or sensitive species. An acceptable biological evaluation is to be submitted to the Forest Service for review and approval no later than that time when an otherwise complete application for permit to drill or subsequent surface-disturbing operation is submitted.

3. Implement mitigation measures required by the Forest Service. Mitigation may include the relocation of proposed lease-related activities or other protective measures. The findings of the biological evaluation, analysis and consultation may result in restrictions to the operator's plans or even disallow use and occupancy to comply with the 1973 Endangered Species Act (as amended), threatened and endangered species regulations and Forest Service statutes and regulations.

If endangered, threatened, proposed, candidate or sensitive plant or animal species are discovered in the area after any required biological evaluation has concluded, an evaluation will be conducted to assess the effect of ongoing and proposed activities. Based on the conclusion drawn in the evaluation, additional restrictions or prohibitions may be imposed to protect the species or their habitats.

USDA - Forest Service R1-FS-2820-18a (5/02)

Appendix G, page G-15, Drought

Should read Any year or sequence of years when annual precipitation amounts are 75% or less of normal.

Appendix G, page G-24, Guilds

Should read A group of organisms, not necessarily taxonomically related, that are ecologically similar in characteristics such as diet, behavior, or microhabitat preference, or with respect to their ecological role.

Appendix H

Add the following reference Messmer, T.A. 1985. Effects of specialized grazing systems on upland nesting birds in south central North Dakota. MS Thesis. North Dakota State University, Fargo.

Appendix J

The following text replaces Appendix J, Paleontology, for the Nebraska National Forest, Thunder Basin National Grassland and Dakota Prairie Grasslands of the Land and Resource Management Plans:

Appendix J Paleontology

Fossil Yield Potential Classification - (FYPC)

Introduction

This is a planning tool wherein geological units, usually at the formation or member level, are classified according to the probability of yielding paleontological resources that are of concern to land managers. Existing statutes and policies regulate the collection and disposition of scientifically significant fossils, but do not impact the recreational use of common variety fossils. Therefore, this classification is based largely on how likely a geologic unit is to produce scientifically significant fossils. The fossil yield potential classes are described below, with some examples of corresponding management considerations or actions. Useful references are the Scientific Significance Criteria for Fossil Resources, Locality Sensitivity Ranking, and the Paleontological Survey Process.

NOTE: This system only applies to Forest acres where geologic bedrock is exposed or in the shallow subsurface (covered by less than 1 meter of surficial material). This system is based on **probabilities**, not certainties or special circumstances. There may be exceptions to each criterion used as the basis for classification, and one particular geologic unit may be given different FYPC values in different places. Such instances are to be expected given the complexity of the system being modeled.

FYP Class 1

Description: Igneous and metamorphic (volcanic ashes are excluded from this category) geologic units that are not likely to contain recognizable fossil remains.

Basis:

- Fossils of any kind not known to occur except in rare circumstances.
- Igneous or metamorphic origin.

Example: Vishnu Schist

Management examples:

1. After initial designation as FYP Class 1, such acres are no longer included in Geologic Services Outputs.
2. No FYP Class 1 acres included in paleontological reconnaissance work plans.
3. Class 1 acres documented as nonfossiliferous and then excluded from the remainder of the NEPA process.

The land manager's concern for paleo resources on Class 1 acres is negligible. Ground-disturbing activities will not require mitigation and/or monitoring for paleontology except in rare circumstances. Plans and budgets do not need to address the range of potential uses, availability, or management options. Much of the acreage of high altitude, mountainous districts (mountain cores) will be determined Class 1. Significant fossil deposits are known to occur within caves or fissure fills developed in Class 1 units (Unwiley Coyote Site, Black Hills, South Dakota).

FYP Class 2

Description: Sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically non-significant fossils.

Basis:

- Non-significant fossils of low diversity occur in relative abundance.
- Vertebrate fossils known to occur *very rarely or not at all*.
- Age greater than Cambrian.
- Diagenetic alteration.
- Deep-water marine or eolian origin.

Example: Madison Limestone; Navajo Sandstone.

Management examples:

1. After initial designation as FYP Class 2, such acres are not included in Geologic Services Outputs.
2. Class 2 acres *generally not* included in paleontological reconnaissance work plans, there may be rare exceptions.
3. Recreational (hobby) collecting of non-significant fossils in Class 2 acres allowable unless otherwise prohibited by Forest Plan or special designation.
4. Consideration under NEPA not likely to be necessary.

The land manager's concern for paleo resources on FYP Class 2 acres should be weighted towards high access or availability and low risk management. For example, Class 2 acres may be designated as open to recreational collecting once cleared by an assessment. Ground-disturbing activities are not likely to require mitigation and/or monitoring. In some cases, Class 2 acres may be relatively abundant with non-significant, nonvertebrate fossils.

Class 3

Description: Fossiliferous geologic units whose fossil content varies in significance, abundance, and predictable occurrence. Also sedimentary units of unknown fossil potential.

Basis:

- Marine units with sporadic known occurrences of vertebrate fossils (fish scales and shark teeth, occasionally more significant specimens).
- Terrestrial units containing dominantly widespread and well-known plant remains.
- Vertebrate fossils and significant nonvertebrate fossils known to occur inconsistently--predictability known to be low.
- Poorly studied and/or poorly documented, FYPC cannot be assigned without ground reconnaissance.

Example: Chinle Formation, Greenhorn Limestone

Management examples:

1. FYP Class 3 acres are implemented into a program of cyclical survey and salvage with a Geologic Services Outputs accompanying each cycle.
2. Recreational (hobby) collecting of common variety fossils in class 3 acres allowable unless otherwise prohibited by Forest Plan or special designation.
3. NEPA assessment is a necessity as such acres have unknown/unpredictable fossil potential.
4. FYP Class 3 units may be given another classification as more geologic and paleontologic knowledge is acquired.

The land manager's concern for paleo resources on Class 3 acres may extend across a wide variety of management actions. Some areas will require very little budget and management while providing high levels of availability and unregulated access. The land manager should be concerned with this classification because significant locations may be discovered, thus requiring budget and management attention. Depending upon degree of significance/re-classification, these units may require mitigation and/or monitoring for ground-disturbing activities.

FYP Class 4

Description: Class 4 geologic units are Class 5 units (see below) that have lowered risks of human-caused adverse impacts and/or lowered risk of natural degradation.

Basis:

- Significant vegetative cover; (outcrop is poorly exposed).
- Outcrop area is small, and not easily accessed or visible from road/trail.
- Vertical and/or inaccessible outcrops.
- Areas that historically produced significant fossils but have since been degraded by intense fossil collecting and/or other inadvertent destructive recreational activities.
- Other characteristics that lower site sensitivity (see Locality Sensitivity Ranking).

Example: Covered acres of Morrison Formation.

Management examples:

1. FYP Class 4 acres are implemented into a program of cyclical survey and salvage with a Geologic Services Outputs accompanying each cycle.
2. Due to the sensitive nature of significant fossil resources occurring on Class 4 acres, recreational (hobby) collecting of non-significant fossils requires a permit.
3. Designate as a Paleontological Special Interest Area.
4. NEPA assessment is a necessity; as such acres are known to yield significant fossil resources.

The land manager's concern for paleo resources on Class 4 acres may extend across a wide variety of management actions. Some areas will require very little budget and management attention until ground disturbing activities are identified. Detailed NEPA assessment and mitigation closely monitored by a paleontologist is required during ground disturbing activities in Class 4 areas. Depending upon the mitigation recommendations, reclamation including reseeding of the disturbed area may be a necessity.

Class 5

Description: Fossiliferous geologic units that regularly and predictably produce vertebrate fossils and/or scientifically significant nonvertebrate (plant and invertebrate) fossils, and that are at risk of natural degradation and/or human-caused adverse impacts.

Basis:

- Vertebrate fossils and/or scientifically significant nonvertebrate fossils are *known and documented* to occur consistently, predictably, and/or abundantly.
- Known for high fossil yield, numerous sites per section of land.
- Known for high risk of theft and/or vandalism.
- Outcrop area is well exposed, little or no vegetative cover.
- Roads/trails provide easy access to geologic exposures (increased potential for illegal collection; damage by vandals and thieves).
- Other characteristics that increase site sensitivity (see Locality Sensitivity Ranking).

Example: White River Formation/Group

Management examples:

1. FYP Class 5 acres are implemented into a program of cyclical survey and salvage with a Geologic Services Outputs accompanying each cycle.
2. Due to the sensitive nature of significant fossil resources occurring on Class 5 acres, recreational (hobby) collecting of non-significant fossils requires a permit.
3. Designate as a Paleontological Special Interest Area.
4. NEPA assessment is a necessity; as such acres are known to yield significant fossil resources.
5. Paleontological reconnaissance work should focus on poorly known areas of Class 5 acres.

The land manager's highest concern for paleo resources should focus on Class 5 acres. Most illegal, un-authorized collection of fossil resources on National Forest System Lands will occur in Class 5 areas. Mitigation of ground disturbing activities is required and may beintense. Frequent use by the entire spectrum of interested publics is to be expected. Areas of special interest and concern should be designated and intensely managed. Field-based, technical training in paleo resource management should be provided to Forest and District staff and to Law Enforcement Officers. Memoranda of Understanding, Challenge-Cost Share, and/or Participating agreements with professional academic paleontologists should be sought and maintained in order to provide a consistent source of outside expertise. Curation Agreements should be maintained with area museums so that there is always a repository for collected fossils. Class 5 acres are likely to yield appropriate recreational and educational opportunities, though it is more difficult to isolate opportunity acres from surrounding critical acres and therefore access must be more intensely regulated. These areas should be identified and utilized under recreation fee authorities, but the delicate balance between opportunity and potential degradation of critical Class 5 paleo resources must be recognized and addressed in planning for such use.

Predictive Modeling and the Designation of Paleo Classes

The Region 2 Paleontological Program will continue to test and refine the FYPC model in subsequent years. This mission is being performed in conjunction with numerous professional paleontological institutions from all 5 states in the Rocky Mountain Region. The successful implementation of the FYPC model requires accurate geologic maps. Those Forests/Ranger Districts for which detailed geologic data is not available should be considered high priority for reconnaissance efforts. The specific FYPC model for any Region/Forest/District should be accompanied by a Fossil Yield Potential Map (FYPM), which

depicts the surface distribution of FYP classes for a particular area. The ultimate FYP maps that develop out of the FYPC model will dictate where paleo resource management and dollars should be concentrated in the Rocky Mountain Region.

FYP classes are assigned to geologic units in the Rocky Mountain Region based on empirical data gathered through literary survey and field experience of R2 paleontologists and other ground-based personnel. This method does not allow designation of Class 4 acres, because in most cases the depth to bedrock will not be accurately known. Therefore, we can only accurately predict the occurrence of Class 4 units in and around Class 5 exposures. The existing FYPC model can be refined a level further by use of detailed surficial geologic maps. Detailed surficial information will yield a much more realistic FYPM, allowing accurate prediction of unseen class 4 units in the shallow subsurface (Class 5 units covered by less than 1 meter of surficial material and which will be impacted by shallow surface disturbance).

The management examples and narrative recommendations are not to be considered directives, or standards and guidelines for planning purposes. They are informal guidelines to supplement policies, regulations, and directions in draft for the national paleontology program. These guidelines are not exhaustive; many other factors are considered in management decisions. The criteria given as the basis for classification are not exhaustive either. They are designed to guide the outside expert who may be recommending classification as part of a partnership, contract, or permit. A reviewing Forest Service paleontologist or a qualified colleague will make designations from another Federal agency. Designations are not final and are expected to change as we gain understanding about the paleo resources of National Forests and Grasslands.

Significance Criteria for Paleontological Resources -- Vertebrate, Invertebrate, and Plant Fossils, including Ichnofossils

Scientific significance may be attributed to a fossil specimen or trace and/or to its context (e.g., location in time and space; or association with other relevant evidence.

The scientific significance of a paleontological specimen or trace and/or its context is determined by meeting any one of the following criteria:

Specimen-based criteria:

- Represents an unknown or undescribed/unnamed taxon.
- Represents a rare taxon, or rare morphological/anatomical element or feature. The "rareness" criterion comprises either absolute rareness in the fossil record, or relative or contextual rareness as described below.
- Represents a vertebrate taxon.
- Exhibits an exceptional type and/or quality of preservation.
- Exhibits remarkable or anomalous morphological/anatomical character(s) or taphonomic alteration.
- Represents "soft tissue" preservation or presence.

Context-based criteria:

- Is associated in a relevant way with other evidence of scientific interest, providing taphonomic, ecologic, environmental, behavioral, or evolutionary information.
- Is evidence that extends and/or constrains the stratigraphic, chronologic and/or geographic range of a species or higher-level taxonomic group.

Locality/Site Sensitivity Rankings For Fossil Resources

Paleontological sensitivity rankings are composite evaluations derived from individual consideration of

the following factors. Sensitivity rankings apply to paleontological sites and localities, not to individual specimens.

Each factor should be ranked individually on a scale of 1 to 5, where **1** is the **lowest** sensitivity ranking and **5** the **highest**. The composite ranking of sensitivity for a locality or site is the arithmetic mean of the individual rankings.

1. **Scientific significance** of specimens associated with the site (see above).
2. **Fossil Yield Potential Classification** based on likelihood that geologic strata at the site are fossiliferous. This factor may be evaluated by pedestrian inventory, literary survey, and consultation with professional specializing in the particular geologic interval/area in question..
3. **Values** of an educational, interpretive, and/or recreational opportunity. Public education, interpretive, and recreational values are those that utilize the power of fossil resources to provoke insight into ancient life forms and ancient ecology, and to reveal their connections to the present and future. Educational values also enhance a stewardship ethic towards legacy resources, and stress the importance of environmental and scientific literacy.
4. **Risk** of resource degradation at the site. Risk factors include:
    - Biotic agents: vandalism, theft, ground disturbance; grazing impact; trail-use impact.
    - Abiotic agents: chemical and mechanical destruction of fossils exposed by erosion; landslides; inundation; fluvial transport, etc.

Example 1. A *category: vertebrate site* is identified in rocks of the White River Formation on the Pawnee National Grassland. Resources at the surface include fragments of horse and oreodont skeletons.

1. Scientific Significance ranking = **5**.

   See Scientific Significance Criteria above. The site is composed of vertebrate fossils, the likelihood of excellent preservation is expected, and it may produce a rare skeletal element or specimen. Context-based criterion-2 is met--the mammalian fauna of the Pawnee NG is important for better defining the biostratigraphic ranges within the Chadronian and Orellan Land Mammal Ages.

2. Fossil Yield Potential Classification = **4**.

   The formation is known to produce scientifically significant fossils. Mammal fossils are likely to be found following erosional events.

3. Values ranking = **4**.

   The mammalian fauna of the White River Formation in this area is informative to questions of paleoecology and biogeography. Interpretive materials that utilize this paleontological resource would be good examples of the way scientists interpret ancient ecosystems, and how that information can be applied to modern-day problems of global change.

4. Risk factor ranking = **5**.

   Biotic agents: Significant and sensitive sites are located near or on trails. These trails are advertised in area guides as "good places to pick up fossils."

   Abiotic agents: Sites are located in geologic strata that erode very easily and rapidly, especially during the spring and early summer. Fossils may be easily washed out of their informative context, or removed altogether and re-buried downstream. The site occurs within a grazing allotment, and cattle have trampled the site in the past.

5. Composite ranking: 5 + 4 + 4 + 5 = 18; divide by 4 = **4.5 sensitivity ranking for this site.**

   Appropriate management strategies for this site would include: designation as a Special Interest Area; cost-share initiated collection of exposed resources by a professional paleontological institution (museum/university; and fencing off the geologic exposures to prevent cattle from damaging the site. Potential recreational activities would include participation in research/field excavation by qualified investigators, technical educational field work by non-specialists overseen by qualified FS personnel,, and guided interpretive tours for the public.

Example 2: A *category: invertebrate site* is identified in Cretaceous marine rocks (Turner Sandy Member, Carlile Shale) on the Buffalo Gap National Grassland. Resistant layers containing ammonites form a capping layer along ridges in many parts of the district.

1. Scientific Significance ranking = **3**.

   Ammonites within the Turner Sandy Member are relatively abundant, and the majority of specimens are either *Scaphites whitfieldi* or *Prionocyclus wyomingensis*. These two particular taxa occur over a wide geographic range and their occurrence is well documented within the particular unit.

2. Fossil Yield Potential Classification = **5**.

   Ammonites are relatively abundant; occur in many areas of the Grassland

3. Values ranking = **3**.

   The recreational public is likely to enjoy picking up ammonites in this area, and to consider the past environment in which they were deposited --without interpretive aids. The ammonites provide an invaluable biostratigraphic teaching tool for schools and universities. The distribution of this resource does not lend itself to formal interpretive displays or activities.

4. Risk factor ranking = **5**.

   Biotic agents: Commercial fossil hunters have significantly impacted some areas searching for the ammonites, overturning the cap-rock layer along many ridges. The likelihood that sufficient collecting by the general public will deplete the supply of ammonites is low for the foreseeable future; however, the possibility that other, more significant fossils will be found and carried away exists and cannot be easily monitored.

   Abiotic agents: The sandstone layers are relatively resistant and slow weathering, thus the threat of resource loss due to the elements is low. Composite ranking: 3+5+3+5= 16; divide by 4 = **4 sensitivity ranking for this site.**

   Appropriate management strategies for this site might include: 1) educational and interpretive field trips to promote understanding of represented ancient environment; 2) posting signage near un-impacted sites stating that commercial collecting of fossil material is not allowed, and that no unweathered rock should be over-turned; 3) request that the public report any unusual fossil finds; 4) occasional reconnaissance to determine if collecting of ammonites is threatening other resources in the area or affecting the scenic and aesthetic values of the site.

Paleontological Survey Process

Once a ground-disturbing project is identified to take place and during the NEPA process, a series of steps are taken to determine if paleontological resources will be impacted and what process will be needed for mitigation:

Step 1. Determine if the area to be disturbed will impact paleontological resources:

- Each unit will determine if the project area contains fossils by consulting the maps delineating the geologic formation classifications.
- If the formation is Class 1, fossils are not likely to be discovered; document in NEPA project file.
- If the formation is Class 2, significant fossils are not likely to be discovered; notify the Forest Service Paleontologist and proceed with Step 2.
- If the formation is Class 3-5, significant fossils will likely be discovered; notify the Forest Service Paleontologist and proceed with Steps 2-5.

Step 2. The Forest Service Paleontologist will conduct a literature search of paleontological information for the project area that may be contained in permitting documents, scientific literature, geological maps, libraries, and museums. This information will become of the NEPA project file. Surveying will not be required when no scientifically important specimens or sites are discovered in the literature. Go to Step 3 if the literature review indicates scientifically important fossils may be impacted.

Step 3. Forest Service Paleontologist, and/or qualified consultant will conduct a pedestrian survey of proposed project area and document findings. If paleontological sites are discovered then go to Step 4. If survey reveals no surface indication of fossils, then document in the NEPA project file.

Step 4. The Forest Service Paleontologist or qualified consultant will determine the sensitivity ranking for the sites to be impacted. (A Class 5 geologic formation may contain sites of low sensitivity.) The paleontologist on site will have to make this determination based on professional judgment and according to the process outlined in the Sensitivity Ranking.

Step 5. In sites with Class 3, 4, or 5 and a high sensitivity ranking, a Forest Service Paleontologist shall develop a protection and mitigation plan prior to project initiation and periodically monitor for compliance with the mitigation plan throughout the project.

Note: Units with formations ranked, as Classes 3-5 should have repository agreements in place with agencies or institutions collecting fossils as part of mitigation in order for the fossils to be cared for in perpetuity.

Qualifications for a Paleontologist

"Professional Paleontologist"

- Formal education resulting in a graduate or professional degree in paleontology, OR in a closely related field such as geology, biology, botany, or anthropology with a **major emphasis** in paleontology; **or**
- Equivalent training including at least 36 months of pertinent, professionally supervised experience with increasing responsibility leading to professional duties similar to those required by the instrument of record; **and**
    - Demonstrated experience in collecting, analyzing, and reporting paleontological information of the type and in the scope of the work required by the instrument of record; and
    - Demonstrated experience in planning, equipping, staffing, organizing, and supervising crews of persons performing paleontological work of the type and in the scope of that required by the instrument of record; and
    - Demonstrated experience in carrying through to completion projects of the type and in the scope of the work required by the instrument of record, as evidenced by timely completion and/or publication of theses, research reports, scientific papers.

"Paraprofessional Paleontologist"

A paraprofessional paleontologist must present evidence of passage in good standing in a paraprofessional training course in paleontology such as that offered through the Denver Museum of Nature and Science. Graduate students working toward an advanced paleontological degree may be designated paraprofessionals by cooperating professional paleontologists.