Biological Assessment for the Grizzly Bear (*Ursus arctos horribilis*) for the Beaverhead-Deerlodge Revised Forest Plan (2009)

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Introduction

The Beaverhead-Deerlodge National Forest issued a Revised Forest Plan in January 2009. In accordance with the Endangered Species Act (ESA), implementation regulations and FSM 2671.4, the Beaverhead-Deerlodge National Forest (BDNF) is required to consult with the U. S. Fish and Wildlife Service (USFWS) on any prospective agency action authorized, funded or carried out by that agency if the agency believes that the action will likely affect any species listed as threatened or endangered.

This biological assessment is based on the best current data and scientific information available. A revised biological assessment must be prepared if: 1) new information reveals affects, which may impact threatened, endangered, and proposed species or their habitats in a manner or to an extent not considered in this assessment; 2) the proposed action is subsequently modified in a manner that causes an affect, which was not considered in this assessment; or 3) a new species is listed or habitat identified, which may be affected by the action.

The Forest Plan revision process occurred over a 7 year time span from 2002 to 2009, with the final Record of Decision signed in January, 2009. The BDNF entered into early consultation with the Montana Field Office, (USFWS) on the forest plan revision process in 2003. The Yellowstone Distinct Population Segement (DPS) of grizzly bears was removed from protection of the ESA on April 30, 2007 (USDI Final Rule 2007), but subsequently relisted in 2009.

The BDNF encompasses approximately 3.3 million acres in southwest Montana (Figure 1). The 2009 Revised Forest Plan Forest-wide desired future condition and revised goals, objectives, and standards have been established for a variety of social values and environmental factors. These include Air quality, American Indian Rights & Interests, Aquatic Resources, Economics and Social Values, Fire Management, Heritage Resources, Infrastructure, Lands, Livestock Grazing,

Minerals/Oil/and Gas, Recreation and Travel Management, Scenic Resources, Soils, Special Designations (i.e: wilderness, national scenic trails, historic sites, scenic byways, research natural area s etc), Timber Management, Vegetation, and Wildlife Habitat.

On September 21, 2009 the Federal District Court (Missoula, MT) directed the US Fish and Wildlife Service to reclassify the Yellowstone Distinct Population Segment as Threatened under the Endangered Species Act. The USFWS issued a new species list (9/24/2009) for the BDNF that shows the revised status for the grizzly bear on the BDNF. As the Yellowstone grizzly bear DPS was reclassified to ESA *threatened* status after the release of the 2009 Revised Forest Plan, consultation for potential adverse effects to the grizzly bear resulting from implementation of the revised BDNF Forest Plan and FEIS (Record of Decision 1, 01/09 and Record of Decision 2, 02/10, RODs 1 and 2) has not occurred.

The BDNF 2009 Revised Forest Plan incorporates the 2006 *Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests* (2006 Forest Plan Amendment) (USDA Forest Service 2006). The 2006 Forest Plan Amendment adopted the habitat standards and other relevant provisions of the March, 2003 *Final Conservation Strategy for the Grizzly Bear in the Yellowstone Ecosystem* (2003 Conservation Strategy). The BDNF retained the direction of the 2006 Forest Plan Amendment and 2003 Conservation Strategy when the Yellowstone DPS was reclassified as threatened in 2009. This biological assessment was prepared for ESA Section 7 consultation on the BDNF 2009 Revised Forest Plan RODs 1 and 2. While the 2006 Forest Plan Amendment and 2003 Conservation Strategy are embedded in the 2009 Revised Forest Plan, they are identified individually through this analysis for clarity and the tracking of rationale associated with program-specific determinations.

Summary of potential effects: While individual resource effects are expected to be minimal, implementation of the 2009 revised Beaverhead-Deerlodge Forest Plan across the spectrum of resource areas **is likely to adversely affect the threatened grizzly bear.**

Action Area The action area for purposes of the grizzly bear analysis is those four BDNF land areas that lie within the Yellowstone DPS area as defined by the USFWS (Figure 2). The Distinct Population Segment area is bounded by I-15 on the west, northwards to its junction with I-90. Interstate 90 forms the northern boundary of the Yellowstone grizzly bear DPS. The four Forest Service land areas within the DPS are the Gravelly Landscape (474, 610 acres), the Madison Landscape (127, 132 acres), the Tobacco Root Landscape (187, 523 acres) and the Highland Mountains (108, 261 acres). National Forest System lands within the DPS total 897,526 acres, or approximately 27 percent of the BDNF.

The Madison Landscape includes portions of the Taylor-Hillgard unit of the Lee Metcalf Wilderness. The Taylor-Hillgard unit is included in the much-larger Primary Conservation Area (PCA, the former *Recovery Zone* as described in the 1993 *Grizzly Bear Recovery Plan* [Yellowstone Grizzly Bear Population], USDI FWS 1993).

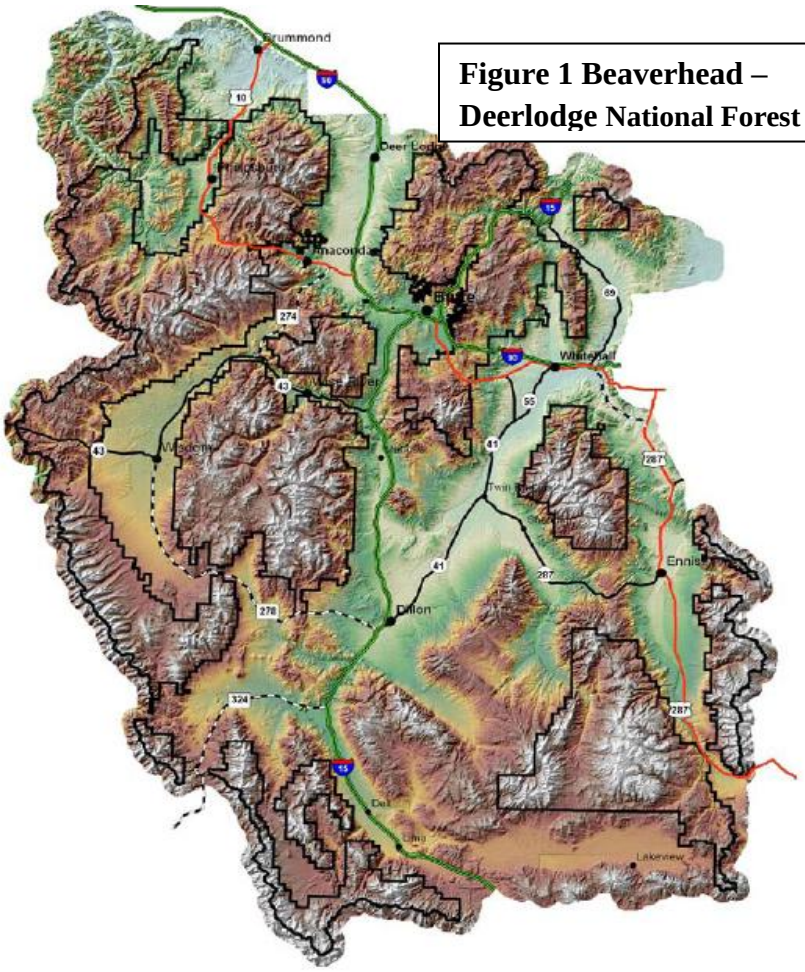


Figure 1 Beaverhead – Deerlodge National Forest

No other mapped grizzly bear ecosystems occur on the BDNF. See Schwartz et al. 2005- Figure 3, for the delineation of the Yellowstone Grizzly Bear Ecosystem and Mace et al. 2009 – Figure 4 for delineation of the Northern Continental Divide Grizzly Bear Ecosystem and the Bitterroot Grizzly Bear Ecosystem.

The 2006 Forest Plan Amendment direction, application rules and monitoring guidance require monitoring of various elements on annual, every 2 year and every 5 year intervals. Conditions and actions within the PCA are generally monitored anually; conditions outside the PCA are mointored every second year, and habitat effectiveness, as determined by the Cumulative Effects Model (CEM) and evaluated at the PCA scale is monitored every 5.

The Beaverhead-Deerlodge and Custer national forests differ from other Greater Yellowstone national forests in that only a small portion of these forests is actually within the PCA. The 2006 Forest Plan Amendment incorporates the concept of management for the grizzly bear in all areas that are *biologically suitable and socially acceptible* for the species. This is the Beaverhead portion of the BDNF for the context of monitoring every second year, with the exception of the northern portion of the Tobacco Root Mountains. The northern portion of the Tobacco Root Mountains are, of course, contiguous with the southern portion of the Tobacco Root Mountains, though separated by the boundary between the Madison and Jefferson ranger districts, formerly the boundary between the Beaverhead and Deerlodge national forests.

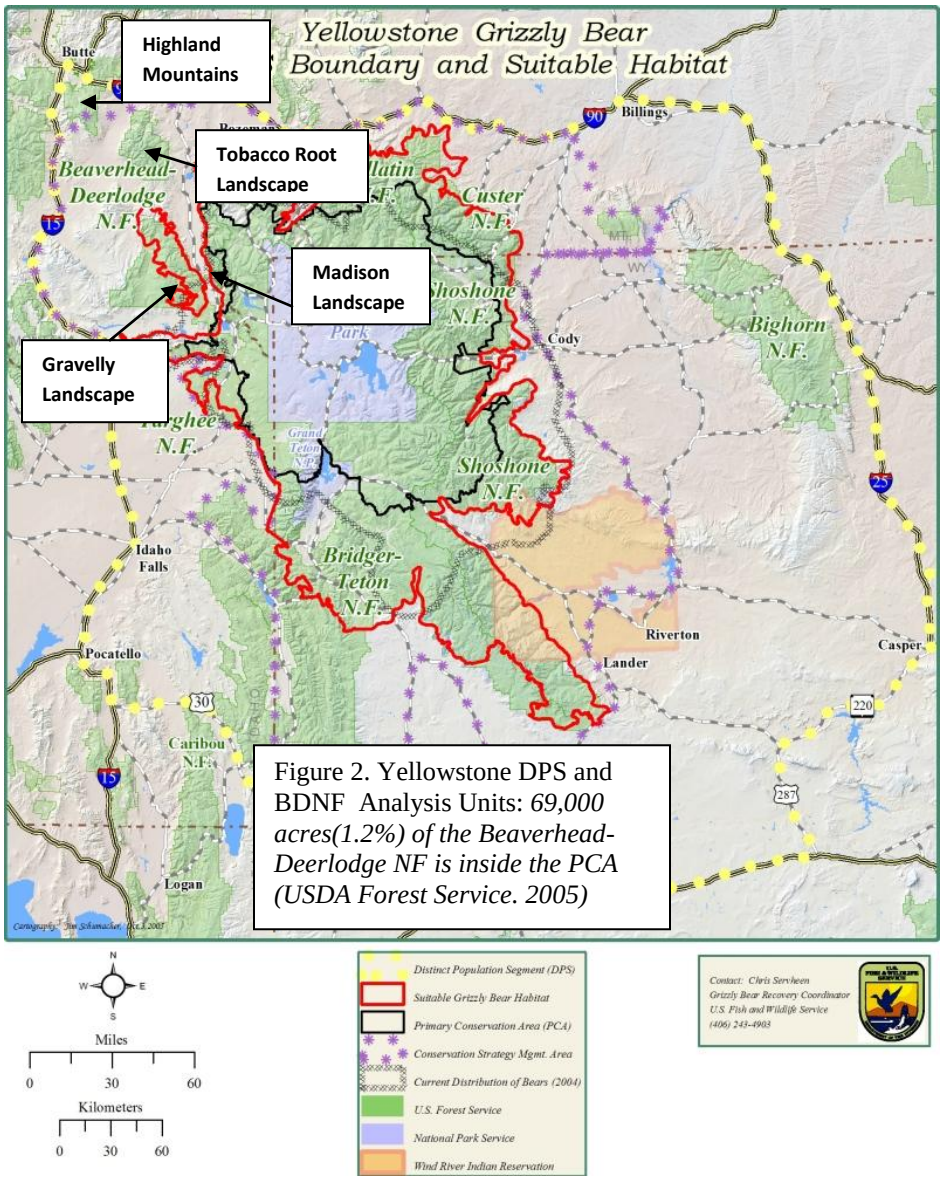


Figure 2. Yellowstone DPS and BDNF Analysis Units: *69,000 acres(1.2%) of the Beaverhead-Deerlodge NF is inside the PCA (USDA Forest Service. 2005)*

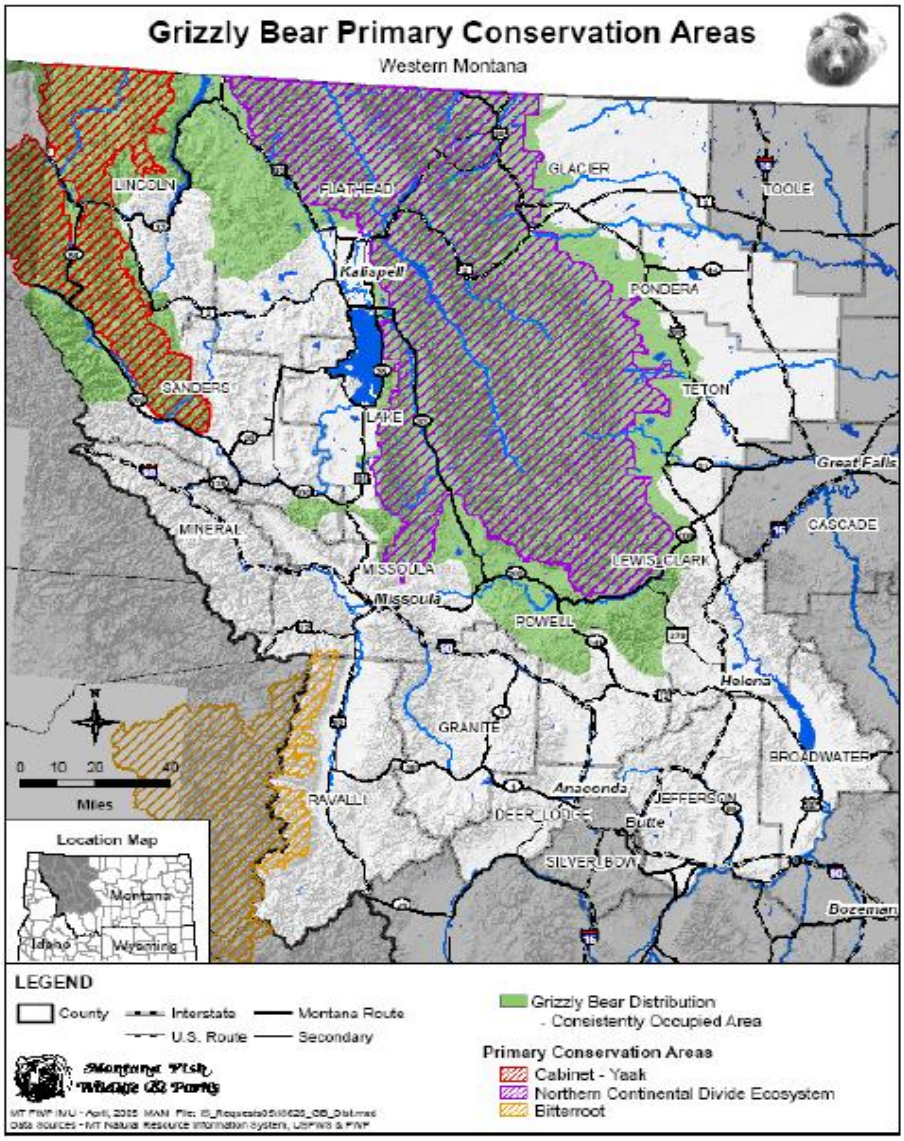


Figure 3. Northern Continental Divide & Bitterroot Grizzly Bear Distribution (Mace et al 2009)

Status of the Grizzly Bear on the Beaverhead-Deerlodge National Forest

The threatened status for the Yellowstone grizzly bears was reinstituted as a result of Federal Court direction in September, 2009. The mapped distribution of grizzly bears outside of the PCA is currently the southeast portion of the Gravelly Landscape and those portions of the Madison Landscape outside of the Lee Metcalf wilderness (Figure 3). Grizzly bears have been observed beyond the distribution line established by Schwartz et al. (2006) in the heart of the Gravelly Landscape on numerous occasions over the last decade.

Distribution

Schwartz et al. (2006) described the distribution of grizzly bears from 1990 through 2004 to include the Gravelly and Madison landscapes on the BDNF. Grizzly bear distribution within the GYA increased by an estimated 1097 mi^2 between 2000 and 2004, an increase in area of about 8 percent (Schwartz et al. 2006). To our knowledge, there has been no delineation of the distribution of the grizzly bears in the Yellowstone DPS area using data derived later than 2004. See Figure 5.

Physical Characteristics

Grizzly bears are generally larger than black bears with longer, curved claws distinctive humped shoulders and a concave face. Pelage coloration is variable (USDI 1993). In the lower 48 States male grizzlies average 400 to 600 pounds with females averaging 250-300 pounds (USDI Fish & Wildlife Service 1993). An occasional male may attain 800-100 pounds (USDI Fish & Wildlife Service 1993). Adults stand 3.5 to 4.5 feet at the hump and rear up to more than 8 feet on their hind legs (USDI Fish & Wildlife Service 1993).

Life History

The grizzly has a broad range of habitat tolerance. Occupied habitat is generally characterized as contiguous, relatively undisturbed mountainous habitat with considerable topographic and vegetative diversity. Habitat loss and human caused mortality is related to historical declines. (USDI Fish & Wildlife Service 1993).

Adult bears are normally solitary except for breeding and caring for cubs. The young will stay with the female for approximately two years. Siblings may stay together for several years after being weaned (USDI Fish and Wildlife Service 1993).

Grizzlies spend the winter in dens that they excavate. Den digging starts as early as September or may take place just prior to entry in late November (USDI Fish & Wildlife Service 1993). Steep slopes at higher elevations away from development or human activity where deep snow can accumulate and not melt during warm periods are preferred den locations (USDI Fish and Wildlife Service 1993).

Grizzly bears are opportunistic feeders and will prey or scavenge on almost any available food including ground squirrels, ungulates, carrion, and garbage. In areas where animal matter is less available, roots, bulbs, tubers, fungi, and tree cambium may be important in meeting nutrient requirements. High quality foods such as berries, nuts, and fish are important in some areas (Grizzly EIS-USDA 2006).

The search for food has a primary influence on grizzly bear movements. Upon emergence from dens, they seek lower elevations, drainage bottoms, avalanche chutes, and big game winter ranges where their food requirements can be met. Throughout late spring and early summer, they follow plant maturity back to higher elevations. In late summer and fall, there is a transition

to fruit and nut sources, as well as other plant materials. This is a generalized pattern and it should be noted that bears will go where they can best meet their food requirements (Grizzly EIS - USDA 2006).

Grizzly bears in the GYA have the highest percent of meat consumption in their diet of any inland grizzly bear population (Hildebrand et al. 1999). Approximately 30 to 70 percent of the Yellowstone grizzly bear diet is some form of meat. Adult males eat the greatest proportion of meat. Meat is considered to be any form of animal including big game (i.e., deer, elk, moose, bison), fish, army cutworm moths, other insects, and small mammals (i.e., ground squirrels, mice, voles) (Grizzly EIS - USDA 2006).

Specific to the GYA, four seasonal foods have been identified as being important to the grizzly bear population (Grizzly EIS - USDA 2006).

- Ungulates (primarily elk and bison, but also deer and moose) are especially important during spring after emergence from dens and through the calving/fawning seasons. Recent research has demonstrated that grizzly bears seek hunter-killed carcasses and gut piles (Grizzly EIS - USDA 2006).

- Whitebark pine seeds are the most important fall food of Yellowstone grizzly bears. The availability of nuts influences annual feeding strategies and movement patterns and influences the number of grizzly bear/human conflicts and human-caused bear mortalities, (Grizzly EIS - USDA 2006).

- Army cutworm moths are a preferred source of nutrition for many grizzly bears in the Yellowstone ecosystem and represent a high quality food that is available during the summer (Grizzly EIS - USDA 2006).

- Grizzly bears feed on spawning cutthroat trout along the tributaries of Yellowstone Lake during the spawning season from May 1 to July 15. Male bears consumed 92 percent of all trout ingested by grizzly bears and that the estimated cutthroat trout intake per year by the grizzly bear population was only a small fraction of that estimated by previous investigators. These data suggest that female grizzly bears living near these spawning streams have a poorer quality diet (Grizzly EIS - USDA 2006). While the BDNF does not have similar biomass of spawning fish, forest streams do have comparable spawning seasons.

Ninety percent of 2,261 aerial radio relocations of 46 instrumented grizzly bears were in forest cover too dense to observe the bears. Interspersed open parks as feeding sites associated with cover are important as only 1 percent of the radio relocations were in dense forest more than a kilometer from an opening (Grizzly EIS - USDA 2006).

Forest cover was found to be very important to grizzly bears for use as beds. Most beds were found less than a yard or two from a tree; only 16 of 233 beds observed (6.7 percent) were without immediate cover (Grizzly EIS - USDA 2006).

The management of human use levels through access route management is one of the most powerful tools available to balance the needs of grizzly bears with the activities of humans. Secure habitat for grizzly bears is accomplished through managing access routes at low levels. Secure habitat is defined in the 2003 Conservation Strategy as more than 500 meters from an open or gated motorized access route or recurring helicopter flight line. Secure habitat must be greater than or equal to 10 acres in size, and large lakes greater than one square mile are not included.

Grizzly Bear Use of the Action Area

Schwartz et al. (Figure 4) shows grizzly bear distribution, and includes the southeastern portion of the Gravely landscape. There are five reported detections in the Gravelly landscape including a 2008 research capture in the Standard Creek drainage (Figure 5). We have numerous grizzly observations across the southern Gravelly Landscape over the last decade. The line between the Madison Range and Gravellys is very fluid, and it appears that bears move back and fourth fairly regularly. When the young male was captured in 2008, Chad Dickerson (USGS) identified 3 other unique bears in the Standard Creek drainage during the same week.

The reported FWP WL lab mortality detections in Figure 5 do not contain detail that describe the detections. These detections do not coincide with the narrative in the Yellowstone Grizzly Bear Amendment that mentions only one documented bear mortality from 1992 through 2004(USDA 2006). The sub adult male that was captured and released at Standard Creek in the Gravelly landscape on 7/10/08 by IGBST team (Schwartz et al. 2009. p. 5) was the first research capture of a grizzly bear in the Gravelly landscape. Annual grizzly bear reports for 2005 through 2008 and the preliminary update for 2009 show no additional grizzly bear mortalities (IGBST 2005 - 2008).

There were no reports of human/grizzly conflicts in the BDNF action area for the period 2006 through 2008 (Schwartz et al. 2009. p. 41)

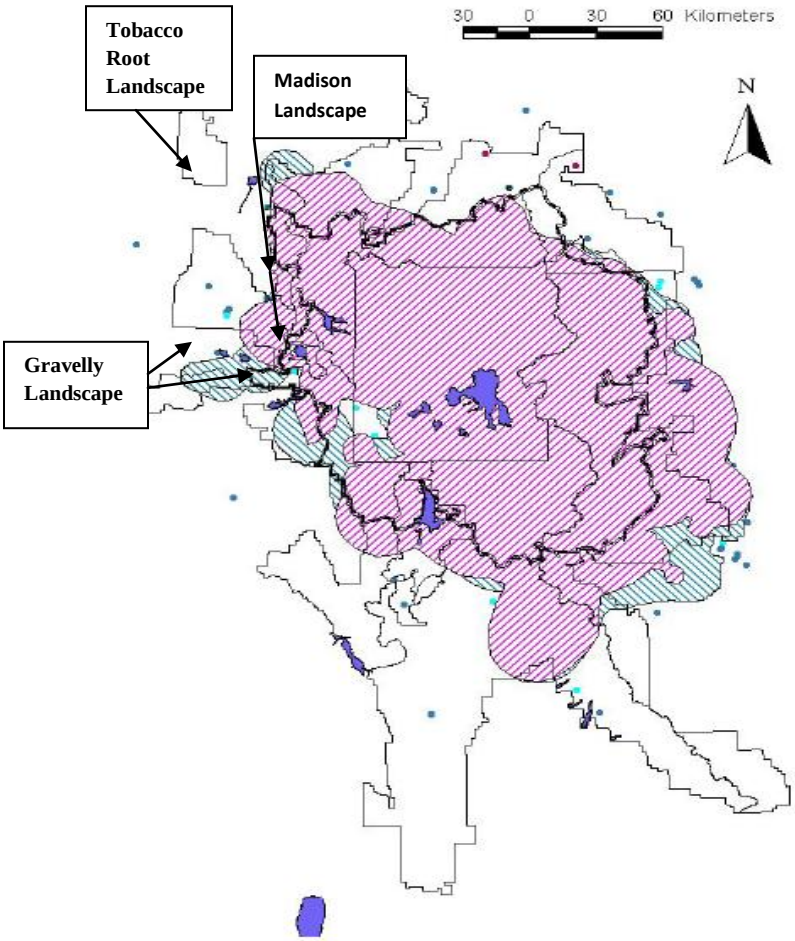


Figure 4. Distribution of grizzly bears in the Greater Yellowstone Ecosystem as determined by Schwartz et al. (2002) (diagonal lines sloping down to the left) overlaid onto the current distribution (1990-2004) presented here (diagonal lines sloping down to the right). Points represent conflicts, telemetry locations, and sightings of unduplicated females with cubs excluded from individual kernel ranges (Schwartz et al. 2005)

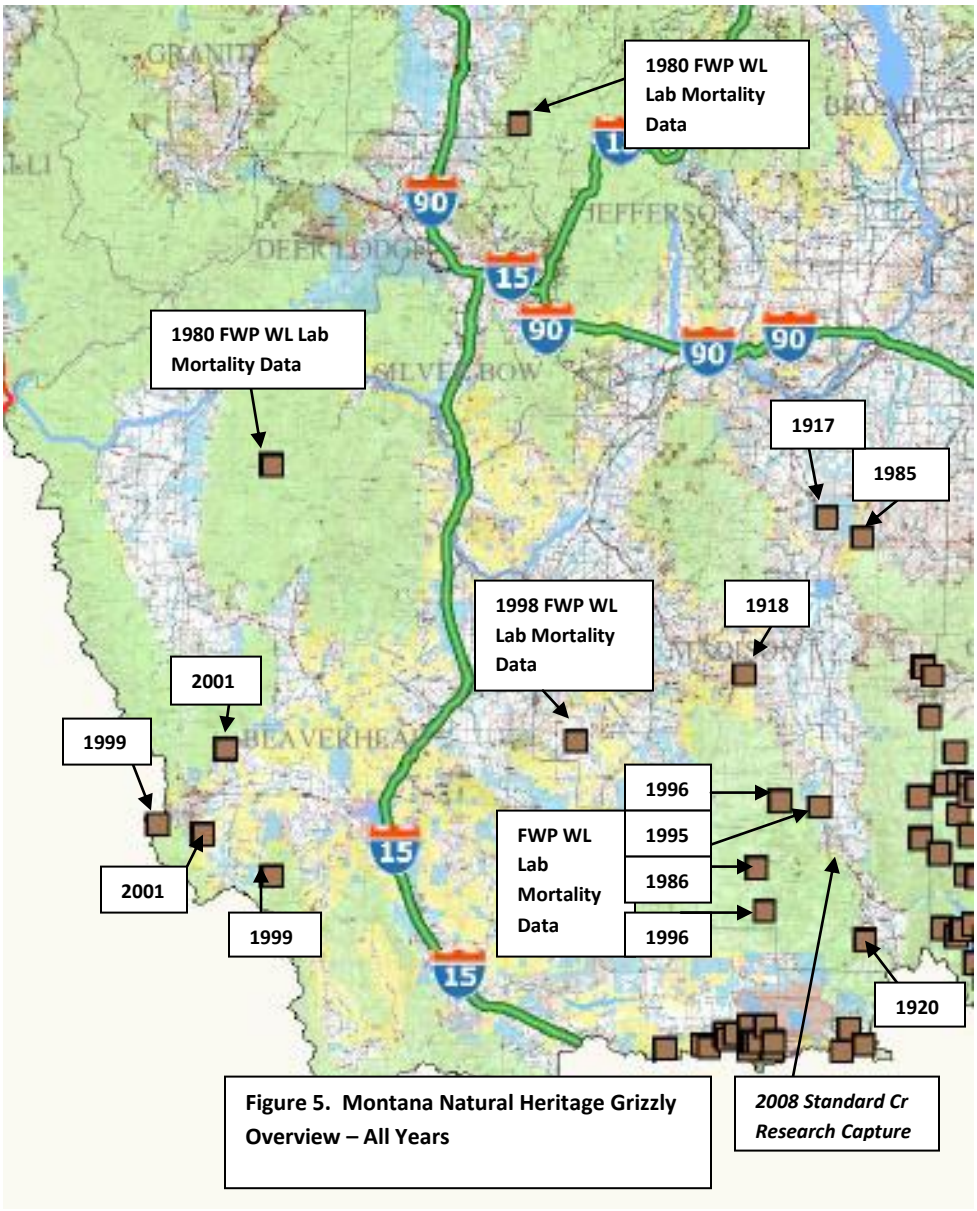


Figure 5. Montana Natural Heritage Grizzly Overview – All Years

1. Beaverhead NF grizzly bear mortality (USDA 2006)							
Land ownership	Mortality category *(Known and probable human caused grizzly bear deaths from 1975 through 2004)*						Total
	Site Conflicts	Self Defense	Vandal Killing	Mistaken Identity	Livestock	Accidents	
Beaverhead NF	0	0	0	0	1 (no details)	0	1

Table 2. Beaverhead NF bear / human conflicts (USDA Forest Service 2005)							
Management Agency	Grizzly Bear/Human Conflicts *(Number of conflicts by landowner and category 1992 - 2004)*						Total
	Livestock Depredation	Property Damage	Human Injury	Unnatural Foods	Gardens and Orchards	Beehives	
Beaverhead NF	1(no details**)	1(no details**)	0	1 (no details**)	0	0	3
** Appear to be in Madison Valley on private land. Schwartz et al. 2008 Figs 20 & 21							

The Highlands portion of the action area is not included, nor is the northern portion of the Tobacco Root Landscape. Both areas are located on the Deerlodge portion of the combined Beaverhead-Deerlodge NF.

PRIMARY EFFECT FACTORS

The 2009 Revised Forest Plan enumerates several key factors for managing habitat and visitation for grizzly bears. Table 3, below outlines the standards, guidelines and monitoring requirements of the key factors applicable to the BDNF and the 2009 Revised Forest Plan RODs 1 and 2 for grizzly bears. The full text of the key factors can be found in Exhibit 5, attached to this biological assessment and as Appendix G in ROD 1 of the 2009 Revised Forest Plan (USDA Forest Services 2006b).

Table 3: Grizzly DPS Primary Effect Factors, 2009 revised Forest Plan including 2006 Forest Plan Amendment		
Key Factor	*Classification*	*Monitoring Requirements*
Secure Habitat	Standard	Secure habitat and motorized access inside and outside the PCA
Winter Motorized Access	Guideline 1	No monitoring required
Developed Sites	Standard	Developed sites inside the PCA
Livestock Grazing	Standard 3 & Guideline 2	Livestock grazing within the PCA and recurring conflicts with grizzly bears inside and outside the PCA.
Nuisance bears	Standard	No monitoring required
Attractant Management[1]	Standard 6 & Guideline 3	No monitoring required
Food Sources	Guideline 4	No monitoring required
The full text of these factors can be found in Exhibit 5, attached.		

The most important issues to manage on the landscape are the levels of human activities. Six of the key factors in Table 3 are directly related to human activities ; the seventh item is indirectly related to human activities. Human activities resulting in mortality and displacement were the main reasons the grizzly bear was listed as threatened. Changes in human activities have allowed bears to achieve recovery goals as described in the USFWS recovery plan.

This analysis tracks the BDNF compliance and proactive advances with the factors in Table 3 since the Yellowstone grizzly bear was delisted in 2007 through implementation of the 2010 ROD. Most of the standards in the 2006 Forest Plan Amendment have specific applicability to the PCA, and all of the monitoring requirements have one or more elements that too are specific to the PCA. A description of the Standards and Monitoring Requirements lead each section, followed by a short narrative to demonstrate compliance with the standard and results of monitoring conducted to date.

Monitoring under the 2006 Forest Plan Amendment occurs at two scales: the scale of BDNF portion of the PCA and the scale of the Beaverhead portion of the BDNF.

In addition to those factors in Table 3, two other factors will be considered in this analysis. These are the use of fire for resource benefit and vegetation management.

[1] Due to the nature of our special orders for minimizing the availability of non-natural food substances being available for bears on NFS lands, the BDNF uses the term *Attractant Management* rather than *food storage.*

EFFECTS OF THE BDNF REVISED FOREST PLAN IMPLEMENTATION

SECURE HABITAT

***2006 Forest Plan Amendment Direction- Grizzly bear habitat conservation standard for secure habitat*:** Inside the PCA, maintain the percent of secure habitat in Bear Management Unit (BMU) subunits at or above the 1998 levels.

Required monitoring: Inside the PCA, monitor, compare to the 1998 baseline and annually submit for inclusion in the Interagency Grizzly Bear Study Team (IGBST) annual report: secure habitat, open motorized access route density (OMARD) greater than 1 mile per square mile, and total motorized access route density (TMARD) greater than 2 miles per square mile in each subunit on the national forest. Outside the PCA, in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, monitor and submit for inclusion in the IGBST annual report changes in secure habitat by national forest every 2 years.

The PCA on the BDNF is limited to the Madison Landscape, specifically the Hilgard #1 BMU. The Hilgard #1 BMU is entirely within the Taylor-Hilgard unit of the designated Lee Metcalf Wilderness. The BDNF has no open motorized routes or ongoing/proposed projects within the PCA, and hence the OMARD and TMARD inside the PCA is zero. Our 2008 monitoring/analysis indicated slight improvements in secure habitat within the BDNF portion of the Hilgard #1 BMU based on proposed/actual road closures on the Gallatin NF.

There is no motorized vehicle access within the Lee Metcalf Wilderness, but roads outside and immediately adjacent to the Lee Metcalf Wilderness may influence secure habitat. There is no proposal to construct any motorized road or trail in the Lee Metcalf Wilderness. There is no known proposal to increase road area immediately adjacent to the Hilgard #1 BMU of the Lee Metcalf Wilderness on the BDNF. As such, the standard for secure habitat is met. This analysis is included in the annual monitoring report.

In 2008, the BDNF conducted an analysis of the density of motorized routes on the Beaverhead portion of the Forest, comparing OMARD, TMARD and secure habitat against the 2003 baseline for outside the PCA. The BDNF established 12 analysis units outside of the PCA in 2003. These analysis units approximated the size of BMU subunits in the Yellowstone Recovery Zone. The BDNF added one additional analysis unit in 2008 so that the Tobacco Root Mountains were not artificially divided by a biologically unsupportable line between administrative units, specifically the line between the former Beaverhead and Deerlodge national forests.

Section 7 consultation with the USFWS on the now threatened grizzly bear is at the scale of the Yellowstone Grizzly Bear DPS, which includes the Highland Mountains. The BDNF has added the Highland Mountains as an outside the PCA analysis unit in 2010.

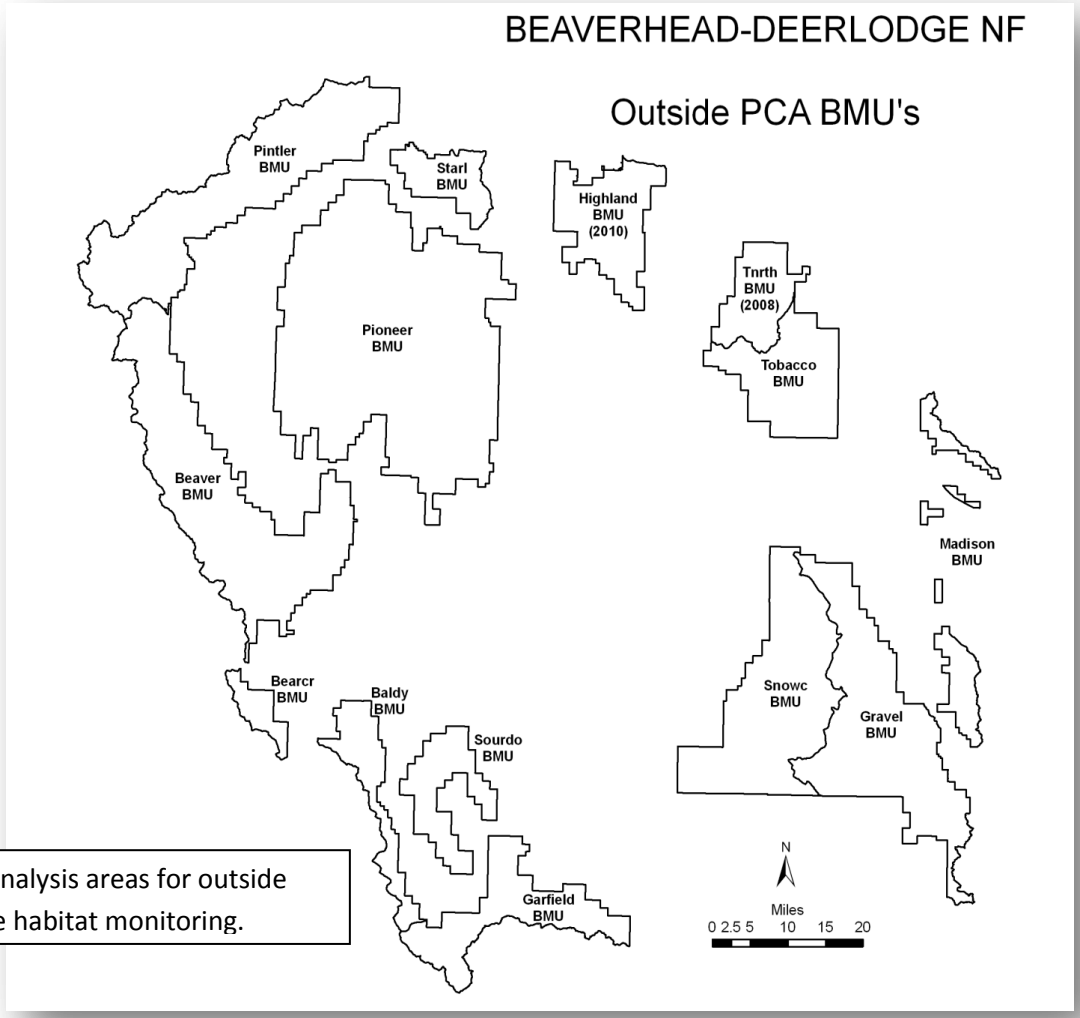


Figure 6. Analysis areas for outside PCA secure habitat monitoring.

The 2008 monitoring analysis for areas outside of the PCA used a route data layer developed for revision of the Beaverhead-Deerlodge Forest Plan. This data layer was used to derive secure habitat values for analysis units for comparison with the 2003 data. The 2008 route data layer represents the most up to date information on motorized routes on the Forest. Table 4 displays secure habitat values for the 12 analysis units for the 2003 baseline and 13 analysis units for 2008 and future monitoring.

Table 4. Beaverhead-Deerlodge NF Outside PCA secure habitat, 2003 to 2008				
Analysis Unit		2003 baseline Secure Habitat (percent)	2008 Secure Habitat (percent)	Difference (percent)
Baldy		57.4	46.2	-11.2
Bear Creek		38.6	60.8	+22.2
Beaver		52.9	48.6	-4.3
Garfield		54.1	65.7	+11.6
Gravelly		64.0	62.1	-1.9
Madison		97.1	100	+2.9
Pintler		62.4	59.2	-3.2
Pioneer		62.3	53.0	-9.3
Snowcrest		66.0	71.0	+5
Sourdough		47.8	40.1	-7.7
Starlight		51.6	40.0	-11.6
Tobacco Root N			52.8	
Tobacco Root S		46.7	47	0.3

Note that Table 4 identifies substantial differences in secure habitat values between 2003 and 2008. In 2003, the Beaverhead-Deerlodge NF trails layer had not yet been attributed with the motorized status of all individual routes, and consequently many were labeled "status unknown". Routes labeled "status unknown" were not included in the 2003 baseline data provided to the Grizzly Bear Habitat Modeling Team.

Since 2003, site specific information has been assembled for forest plan revision. Most motorized trails have been attributed with their appropriate motorized status. Trail attributing resulted in a large difference in secure habitat (as modeled in this effort) in some analysis units. For example, in the Pioneer Mountains, there were no routes in the West Pioneers WSA identified as 'motorized' in 2003, though it was known that some routes were being used by motorized vehicles. In 2008, nearly 81 miles of existing motorized trail were identified in the Pioneer Mountains WSA. For the 2008 Outside the PCA Monitoring Report, each analysis unit was reviewed, and all changes in secure habitat between 2003 and 2008 are a result of this updated data information, and not a result of a change in motorized access management. Motorized routes that are physically on the landscape in 2008 were also there in 2003, but were not identified as such in the 2003 baseline.

Table 4 identifies an increase in secure habitat in the Bear Creek analysis unit of 22 percent between 2003 and 2008. In 2003, the Beaverhead-Deerlodge NF identified many routes as open to motorized use, when in actuality most motorized routes identified were closed level-one roads.

Data from the Beaverhead-Deerlodge road accomplishment reports (the official reporting mechanism for road management activities) for FY2003 through FY2008 supports this. Table 5 identifies new road construction (system roads) and decommissioning (system and unauthorized roads) during the 2003 through 2008 period for the entire Beaverhead-Deerlodge NF, not just that portion of the Forest monitored for changes in secure habitat.

Table 5 identifies a net loss of system roads of 19.9 miles between 2003 and 2008. The new construction in FY03 was at administrative or recreation sites, specifically the Pintler Ranger Station parking lot (0.1 mi) in Philipsburg, MT and Lemhi Pass (0.4 mi). These data are consistent with the current direction of the BDNF.

Table 5. Road construction and decommissioning 2003 through 2008.

Fiscal Year	New road construction (miles)	Decommissioning (miles)		
		System roads	Unauthorized roads	Total
2003	0.5	1.5	1.5	3.0
2004	0	0.9	9.5	10.4
2005	0	3.5	0	3.5
2006	0	0	0	0
2007	0	0	0.5	0.5
2008	0	3.0	0	3.0
Totals	*0.5*	*8.9*	*11.5*	*20.4*

2009 Revised Forest Plan The 2009 Revised Forest Plan incorporates secure wildlife habitat and motorized route density into the wildlife standards, objectives and goals for maintaining and enhancing wildlife habitat across the BDNF. Management for *Grizzly Bear Security* at 60 percent is a wildlife habitat goal for the Gravelly Landscape. *Grizzly Bear Security* in this context is similar to secure habitat as used in the 2006 Forest Plan Amendment and monitored in the PCA and across the Beaverhead portion of the BDNF in that it identifies areas that are secure for wildlife based on the area size and distance from motorized routes. *Grizzly Bear Security* differs from *secure habitat*, however, in two key ways. Whereas the criterion for the distance from motorized routes for *secure habitat* is 500 meters (1640 feet), the distance criterion for *Grizzly Bear Security* is 1760 feet, 120 feet further from motorized routes. As a result, *Grizzly Bear Security* is a more conservative approach to identifying secure areas for bears. However, motorized routes that are gated as the method of closure are not buffered by the 1760 buffer during the period of the year when the gate is closed. In *secure habitat*, motorized routes must be inaccessible to motorized vehicles year round.

Table 6 compares *secure habitat* values to *Grizzly Bear Security* values on the 14 analysis areas that will be part of the 2010 Outside PCA monitoring as required under the 2006 Forest Plan Amendment. In addition to the criterion difference identified above, the protocol for roads off of National Forest System (NFS) lands differs as well. Under the GYA protocol, roads outside of NFS lands do not detract from secure habitat values. The BDNF protocol, requires that roads outside of NFS lands are buffered to the full 1760 feet. In addition, 2010 grizzly bear security values in Table 6 reflect implementation of ROD 2 of the 2009 Revised Forest Plan, wherein

motorized route closures associated with recommended wilderness and summer non-motorized land use allocations are in affect.

Table 6. Comparison of secure habitat and grizzly bear security analysis methods

Analysis Unit	GYA protocol for secure habitat-2003 baseline	GYA protocol for secure habitat 2008 run	BDNF protocol for grizzly bear security- 2010 run
Baldy	57.4	46.2	51.6
Bear Creek	38.6	60.8	55.5
Beaver	52.9	48.6	51.8
Garfield	54.1	65.7	64.4
Gravelly	**64.0**	**62.1**	**57.1**
Highland	**--**	**--**	**38.0**
Madison	**97.1**	**100**	**94.8**
Pintler	62.4	59.2	62.9
Pioneer	62.3	53.0	53.1
Snowcrest	**66.0**	**71.0**	**71.9**
Sourdough	47.8	40.1	41.2
Starlight	51.6	40.0	35.6
Tobacco Root North	**--**	**52.8**	**49.0**
Tobacco Root South	**46.7**	**47.0**	**43.4**

Bold=DPS units

All of the landscapes on the BDNF are managed with the wildlife habitat goal of managing motorized route density to a specific numerical value. Under the 2009 Revised Forest Plan, open motorized road and trail densities are calculated for summer and fall at landscape and hunting unit scales, respectively. Motorized route densities are reduced in the fall (10/15 through 12/1) to increase wildlife security during the general hunting season. There is a substantial pulse of dispersed recreation related to deer/elk hunting unmatched at other times of the year. Southwestern Montana receives approximately 45 percent of the elk hunting activity in the State, with the bulk of it focused on hunting districts on the BDNF (USDA 2009b).

Table 7 : Plan implementation motorized route density and percent grizzly bear security

Landscape	Desired Summer Open Motorized Road and Trail Density *(motorized at some point in the Summer Season)*	Summer Grizzly Bear Security (1)
Highland Mtns (Hunt unit 340)	1.9 mi/mi^2	38%
Gravelly	0.7 mi/mi^2	60%
Madison	0.0 mi/mi^2	96%
Tobacco Root	1.3 mi/mi^2	45%

As noted at Table 7, landscape scale road densities will be maintained at levels below 1.0 mi/mi^2 in the Gravelly and Madison landscapes with high levels of secure habitat (Figure 6). The secure habitat goal of 60% or greater for the Gravelly Landscape provides for habitat into which grizzly bears can disperse. -The Madison landscape at 96 percent secure habitat will be maintained into the future in the Lee Metcalf Wilderness.

The 2009 Revised Forest Plan recommended additions to the National Wilderness Preservation System. Included in these recommendations were seven additions to the Taylor Hilgard unit of the Lee Metcalf Wilderness. See Figure 7. Direction in the 2009 Revised Forest Plan manages recommended wilderness such that motorized vehicles and mechanized transport are prohibited uses. These recommended additions to the Lee Metcalf Wilderness contribute to secure habitat on the Madison Landscape.

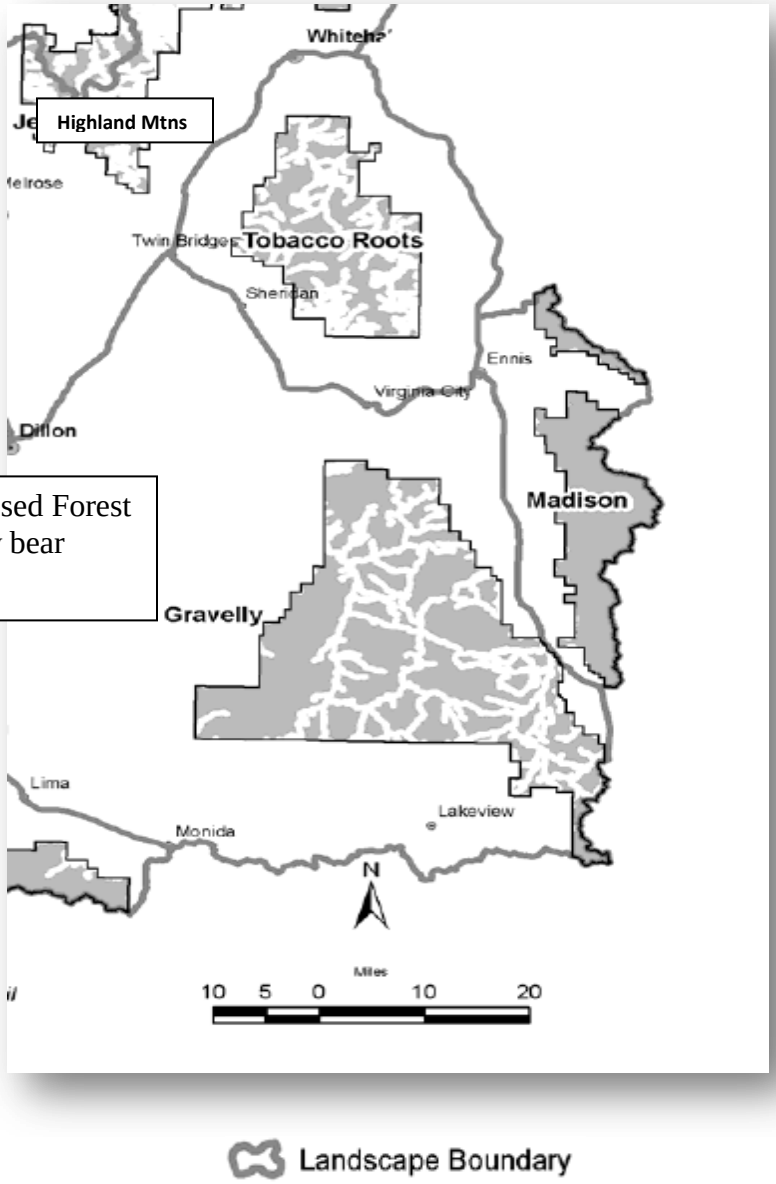


Figure 6. 2009 Revised Forest Plan summer grizzly bear security.

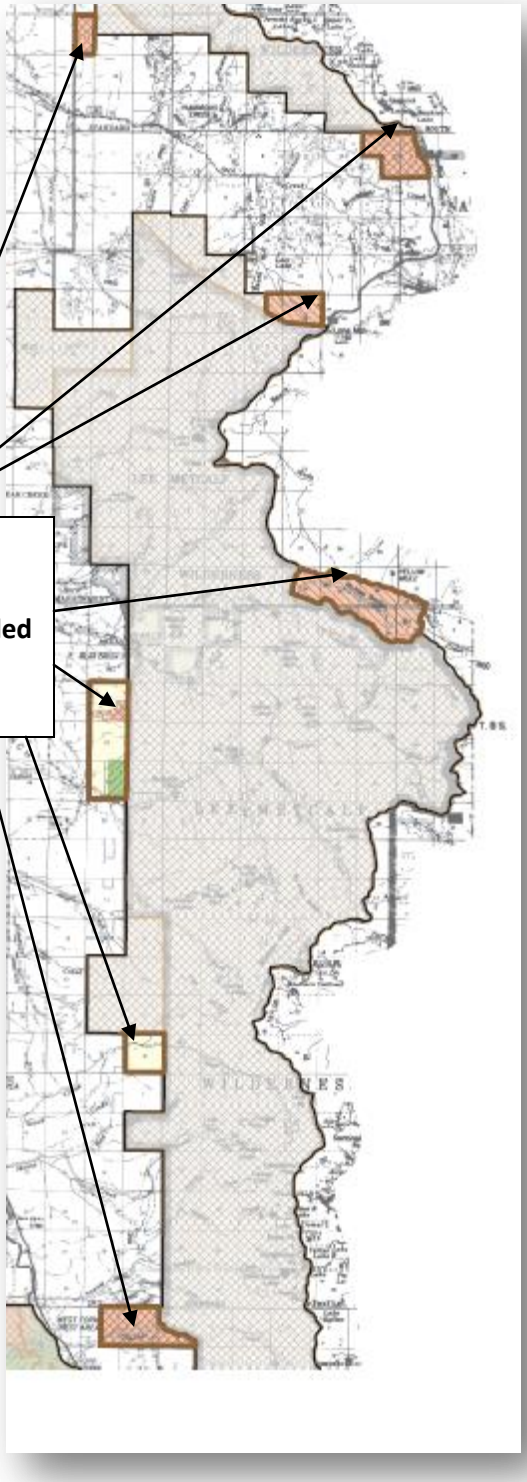


Figure 7: Madison Recommended Wilderness Additions

Table 8: Hunting Unit motorized route density / % Secure Habitat			
Hunting Unit	1986 Plan density - % secure	Desired Fall Motorized Route Density (10/15 – 12/1)	2009 Plan Fall - % Secure Area
311	0.0 mi/mi^2 – 93%	0.0	93
320	0.7 - 61	0.8	61
323	0.5 - 73	0.5	73
324	0.5 - 72	0.4	75
327	0.8 - 54	0.8	54
330	0.7 - 63	0.7	63
333	1.0 - 50	0.9	50
340	1.5 - 42	1.4	43
360	0.0 - 96	0.0	96
362	0.0 - 97	0.0	97

As noted in the Forest Plan FEIS a second decision, ROD2 closed motorized roads and trails identified in Figure 9. Those roads and trails in the Gravelly Landscape total 26.5 miles. At the scale of the Gravelly landscape, there will be only an incremental reduction in open motorized road/trail density.

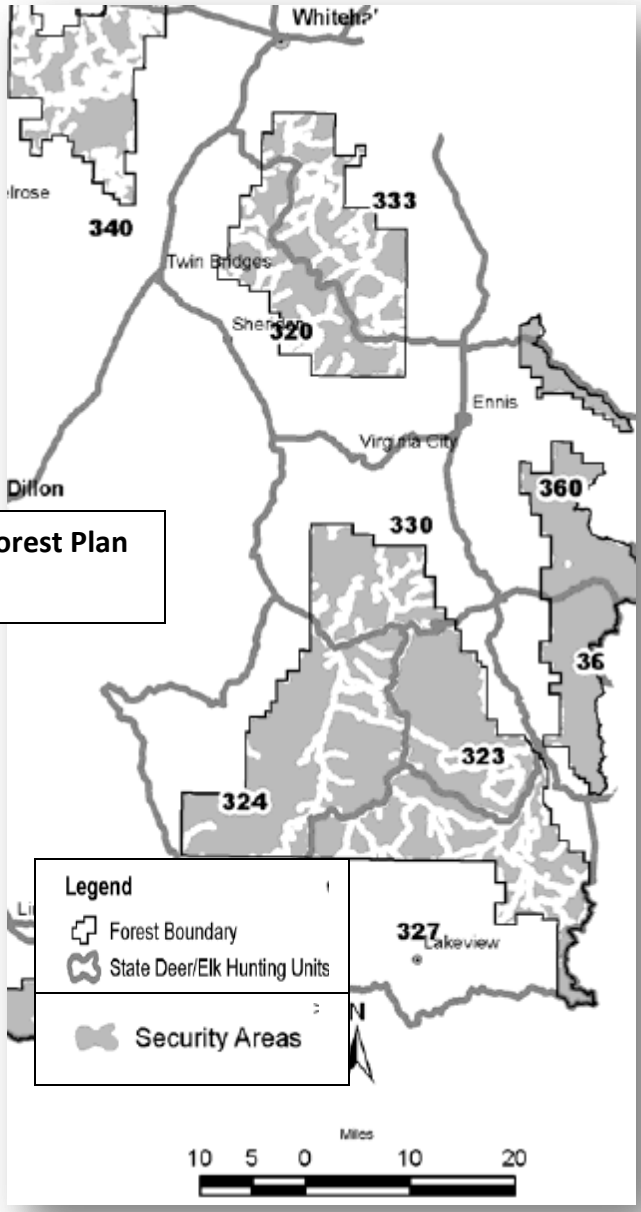


Figure 8: 2009 Revised Forest Plan Fall grizzly bear security

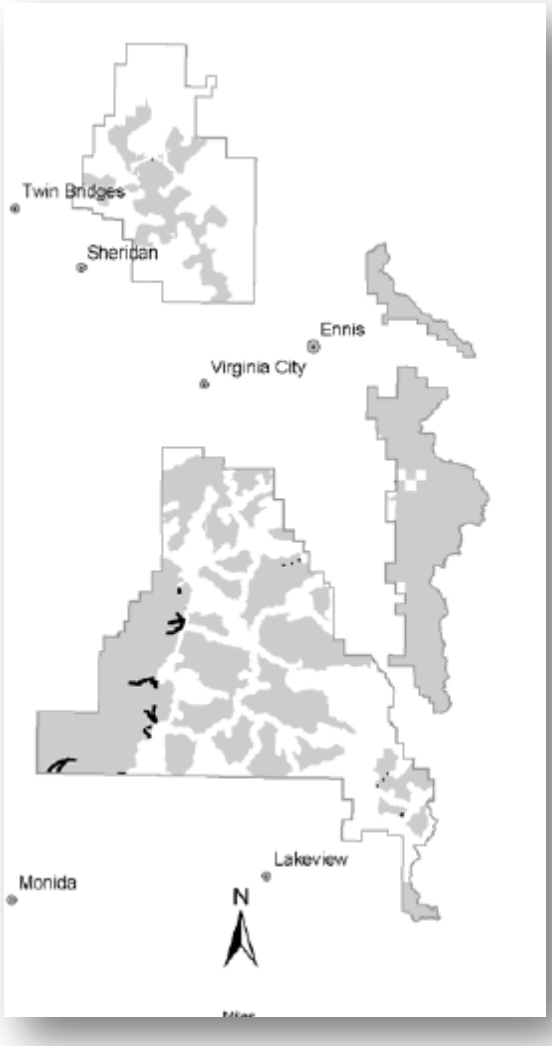


Figure 9. Open motorized roads and trails to be closed by ROD 2.

Forest plan implementation will reduce open motorized routes across the Yellowstone DPS and the entire forest. Secure habitat will be maintained or increased and roads are closed or decommissioned at both the landscape and hunting unit scale both summer and fall.

Winter Motorized Access

As described in Table 9, the 2009 Revised Forest Plan establishes considerable changes in winter motorized access across the entirety of the Yellowstone grizzly bear DPS on the BDNF. The 2009 Revised Forest Plan reduces winter motorized area by 292,350 acres. See Table 9 and Figures 12, 13.

Table 9. Winter Motorized Access			
Landscape	Acres	1986 Forest Plan Winter Motorized	2009 Forest Plan Winter Motorized
Highland Mtns	108,261	103,790 acres 95.8%	46,022 acres 42.5%
Tobacco Root	187,523	164, 604 87.8%	83, 815 44.7%
Gravelly	474,610	377, 904 79.6%	234, 576 49.4%
Madison	127,132	13, 162 10.3%	2,697 2.1%
TOTAL	897,526	659,460 acs 73.5% of NF DPS ownership	367,110 acs/ 40.1% of NF DPS ownership

Table 9 and figures 10, 11 illustrate reductions in winter motorized at key areas of the landscape. Winter motorized access has been restricted in those portions of the landscape that, for the most part, are high in elevation and maintain snow cover later in the year. Winter motorized recreation has been restricted in those areas that have been recognized as having wilderness character and have been recommended for inclusion in the National Wilderness Preservation System. In the Gravelly Landscape, for example, winter motorized access is restricted in the high peaks of the Snowcrest Mountains Recommended Wilderness and in the high, rugged slopes around Wolverine Basin. These are potential denning sites for grizzly bears, and winter motorized use in these area had been increasing under direction of the 1986 Beaverhead Forest Plan.

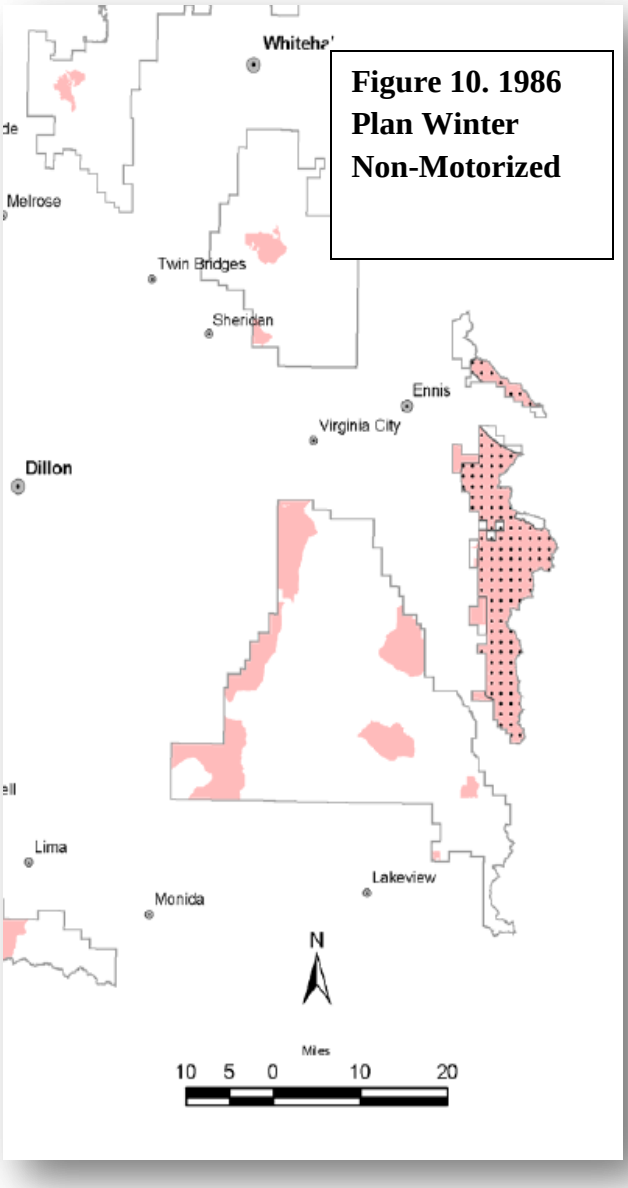
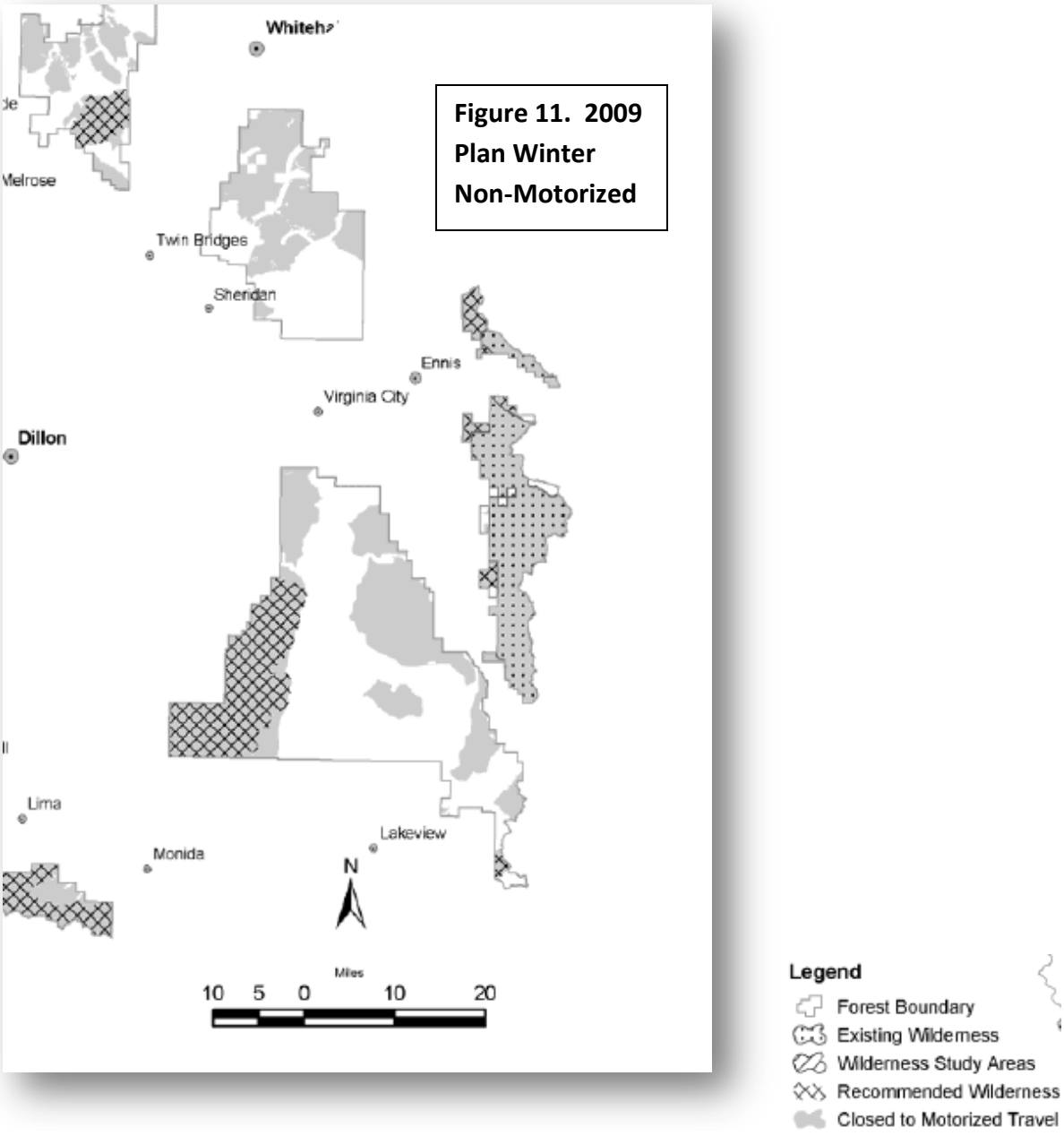


Figure 10. 1986 Plan Winter Non-Motorized

Legend

- Forest Boundary
- Existing Wilderness
- Wilderness Study Areas
- Recommended Wilderness
- Closed to Motorized Travel Winter



Summary of potential effects of motorized recreation and secure habitat

Secure habitat in the PCA has been maintained at the 1998 baseline, meeting the standard in the 2006 Forest Plan Amendment. Secure habitat in the Madison Landscape has been enhanced by the designation of several parcels as recommended wilderness. These parcels complement the designated Lee Metcalf Wilderness. Monitoring of secure habitat across the Beaverhead portion of the BDNF indicates that secure habitat is being maintained at and above levels established as the baseline in 2003.

The 2009 Revised Forest Plan establishes road density objectives at the landscape scale for summer and at the hunting unit scale for the fall (Tables 7 & 8, Exhibits 6 & 7). Fall road density objectives are lower in response to the large influx of recreationists associated with the general hunting season. Potential disturbance to grizzly bears, including direct mortality, is highest during the general hunting season. The increased visitation during the hunting season accounts for 20 to 25 percent of the annual recreation visitor days on the forest. In Montana, 35 to 40 percent of big game hunter days are spent in MT Fish, Wildlife, and Parks Region 3 (southwestern Montana) which encompasses all of the Beaverhead and a large portion of the Deerlodge NF. Reducing open motorized route densities, particularly in the Gravelly Landscape, reduces the potential for hunting season mortality for grizzly bears.

Winter motorized recreation is reduced by 292,350 acres in the Yellowstone DPS under the 2009 Revised Forest Plan (Table 9, Figures 10 & 11), constituting a 44.3 percent reduction in acres available for winter motorized use over the 1986 Beaverhead Forest Plan.

Motorized recreation as implemented in the 2009 Revised Forest Plan and subsequent ROD 2 increases the area of secure habitat available to the grizzly bear at all times of the year. Further reducing motorized access under the 2009 Revised Forest Plan is anticipated to be beneficial effect to grizzly bears. Implementation of the 2009 Revised Forest Plan for secure habitat and winter motorized recreation will have minimal effects on the bear.

DEVELOPED SITES

***2006 Forest Plan Amendment standard for developed sites*:** *Inside the PCA, maintain the number and capacity of developed sites at or below 1998 levels (minor changes are permitted but not applicable to the BDNF).*

There are few developed sites[2] in the PCA on the BDNF. In 1998, the BDNF identified 3 developed sites: McAtee Cabin, Indian Creek Cow Camp and Shedhorn Cow Camp. In 2007, the BDNF determined that two of these developed sites, the Indian Creek Cow Camp and Shedhorn Cow Camp, were no longer in use or necessary for the administration of livestock. In 2007, these sites were removed from the list of developed sites within the PCA, reducing the number of developed sites within the PCA on the BDNF to 1. There are no current plans to add additional developed sites in the PCA on the BDNF. The BDNF meets the 2006 Forest Plan Amendment standard for developed sites.

There are fifty four (54) Forest Service developed sites in the Yellowstone DPS (Figure 12) and summarized in Table 10 by landscape. Developed sites include 26 sites in the Gravelly Landscape: 7 campgrounds, 6 cabins, 3 trailheads, 4 rest areas, 3 dispersed sites, 2 boat launches, and 1 picnic site. The 5 sites in the Madison landscape include 2 trailheads, 1 cabin, 1 bunkhouse, and 1 campground. The 9 sites in the Tobacco Roots include 4 campgrounds, 3 dispersed sites, and 2 trailheads. The 14 sites in the Highland Mtns include 5 campgrounds, 3 dispersed sites, 2 trailheads, 2 fishing access sites, 1 cabin, and 1 picnic area.

[2] Developed sites are defined on page A-9 of the 2006 ROD, Forest Plan Amendment for Grizzly Bear Habitat Conservation. Developed sites in this definition include campgrounds, trailheads, improved parking areas, administraitive and similar sites.

Table 10. Developed Sites		
Land Area	1986 Forest Plan Baseline	2009 Forest Plan Revision
Gravelly	26 Sites	No additional sites
Madison[3]	5 Sites	No additional sites
Highland Mtns	14 Sites	Construct 2 additional trailheads
Tobacco Root	9 Sites	No additional sites

There are no planned reductions in developed sites in the 2009 Revised Forest Plan. As noted at Table 10 two additional trailheads may be constructed in the Highland Mountains during the life of the plan. No additional developed sites are planned in the Tobacco Root, Gravelly, and Madison landscapes.

The three BDNF attractant management orders mandate attractant management in all dispersed sites across the entirety of the Tobacco Root, Madison, and Gravelly landscapes. There is no order for attractant management for the Highland Mountains, however. See Exhibit 3, attached for the most recent attractant management order.

Summary of Potential Effects of Developed Sites

The BDNF meets the standard for developed sites within the PCA, and has reduced developed sites in the PCA since the 1998 baseline.

As noted at Table 10 two additional trailheads may be constructed in the Highland Mtns over the life of the plan. No additional developed sites are planned for the Tobacco Root, Gravelly, and Madison landscapes. The latter two landscapes constitute the occupied areas on the BDNF (Figure 4). However, no developed sites are proposed for closure under the 2009 Revised Forest Plan direction.

The 2009 Revised Forest Plan specifically calls for implementing food storage and sanitation orders in areas classified as occupied grizzly bear habitat as a wildlife objective. Forest order No. 2004-D6/D7-031 and other related orders specifically direct attractant management for all occupancy and use of the Madison, Gravelly, and Tobacco Root landscapes from March 1 through December 1. Attractant management has been required in occupied grizzly bear habitat on the BDNF since 1987.

With an active attractant management orders in effect and limited grizzly bear conflicts, impacts form the continued use of developed sites are anticipated to be insignificant. The continued use developed sites under the 2009 Revised Forest Plan is expected to have minimal effects on grizzly bears.

[3] Developed sites in the Madison Landscape as described in Table 9 do not include the one remaining developed site inside the PCA.

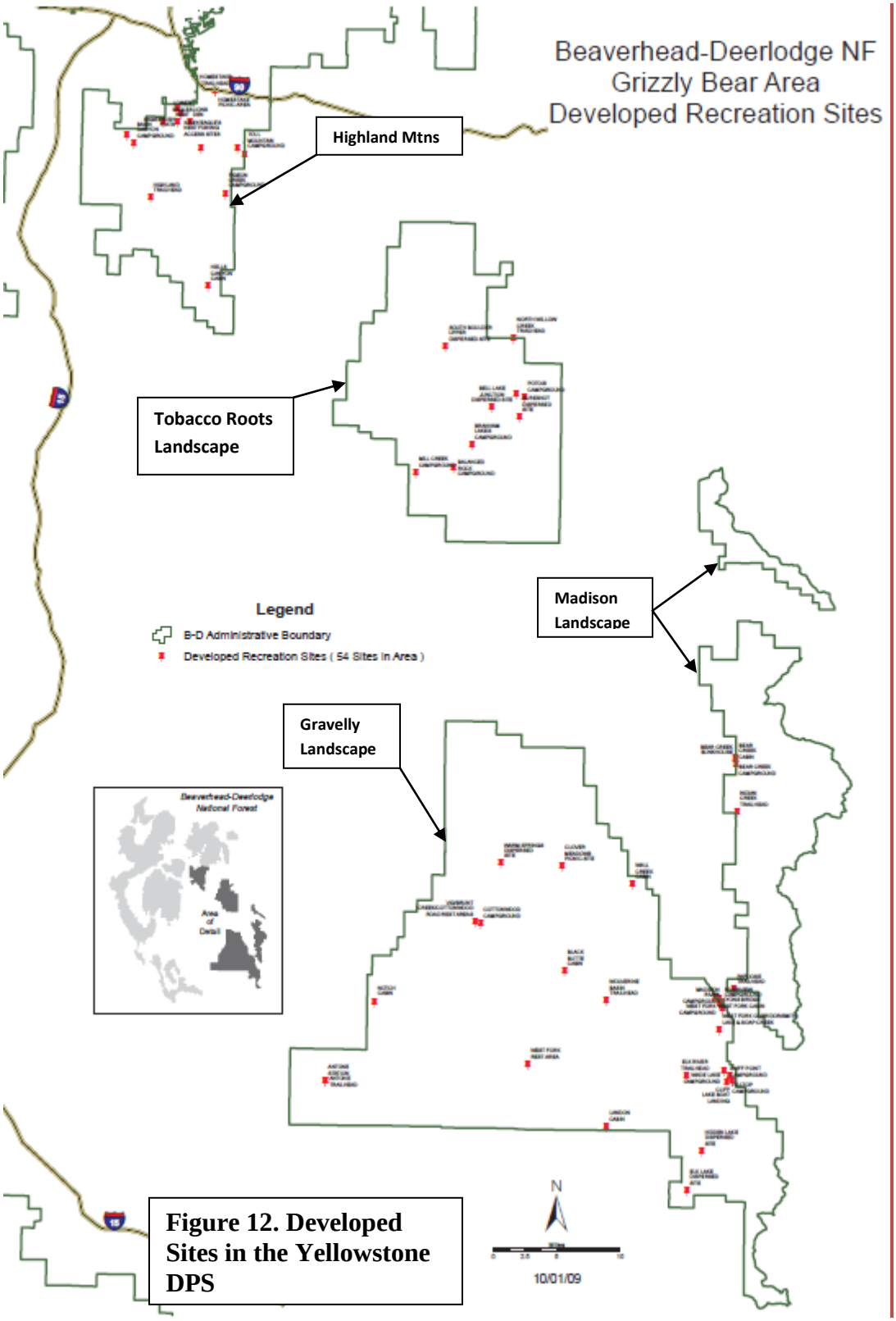


Figure 12. Developed Sites in the Yellowstone DPS

LIVESTOCK GRAZING

2006 Forest Plan Amendment Direction for Livestock Grazing Standard: *Inside the PCA do not create new active commercial livestock grazing allotments, do not increase permitted sheep animal months from the 1998 baseline, and phase out existing sheep allotments as opportunities arise with willing permittees.*

Application Rule: *Reissuance of permits for vacant cattle allotments may result in an increase in the number of permitted cattle, but the number of cattle allotments must remain at or below the 1998 baseline. Allow combining and dividing existing allotments as long as acreage in allotments does not change. Use of vacant cattle allotments resulting in an increase in permitted cattle numbers could be allowed only after an analysis to evaluate impacts to grizzly bears.*

Grizzly Bear habitat conservation guideline for livestock grazing: *Inside and outside the PCA in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, all or portions of cattle allotments with recurring conflicts that are unresolved through grazing practice modifications may be retired as opportunities arise with willing permittees. Allotments with recurring conflicts will be given opportunities to use vacant allotments outside the PCA where there is less likelihood for conflicts with grizzly bears as these allotments become available.*

With implementation of the Forest Plan Amendment in 2007, the BDNF began monitoring the allotments in the PCA to ensure that no new commercial grazing allotments were created. As of May 2010, the number of cattle allotments remain below 1998 baseline. Monitoring for these parameters occurs annually; the prepared report is provided to the USGS Grizzly Bear Study Team for publication in the Study Team Annual Report. There are currently three active cattle allotments within the PCA. These are South Indian Creek, Papoose Creek and Jeffers On-Off. The Indian Creek (as opposed to South Indian) and Shedhorn Allotments in the PCA were identified as VACANT cattle allotments in the 1998 baseline. These allotments are now CLOSED. The standard for livestock grazing in the PCA has been met.

Also in 2007, the BDNF initiated an annual review of livestock allotments on the Beaverhead portion of BDNF where conditions are biologically suitable and socially acceptable for grizzly bears. This is the scale established for secure habitat and livestock grazing monitoring under the 2006 Forest Plan Amendment. There are currently 148 active allotments on the Beaverhead portion of the Forest, 10 are inactive (vacant) and 22 are closed. Nine of the active allotments are sheep allotments. Seven of these are on the Gravelly Mountains, two are in the Tendoy Mountains.

Section 7 Consultation on the 2009 Revised Forest Plan is conducted at the scale of the Yellowstone grizzly bear DPS. Seventy-six livestock grazing allotments are disbursed across the Yellowstone DPS. There are 47 allotments in with the Gravelly landscape alone. In 2008, four vacant sheep & goat allotments in the Gravelly landscape were analyzed to determine the future suitability for livestock grazing. Analysis factors for the Cascade-Lobo, Clover Creek, West Creek, and Selway allotments included:

- Grizzly bear habitat management
- Forest Plan direction
- Access issues
- Permittee willingness & use
- Wildlife values

These four allotments encompass a total of 39,018 acres between 7200 and 10,581 feet and were permanently closed to all grazing on September 30, 2008 (USDA 2008), leaving a total of seventy-two (72) active allotments in the Yellowstone DPS area.

2009 Revised Forest Plan Wildlife Standard 5: *Sheep allotments within the Gravelly Landscape which become vacant will be closed to sheep grazing or the allotment may be used by an existing Gravelly Landscape sheep permittee with no increase in permitted use.*

Two livestock operators use the seven active sheep allotments in the Gravelly Landscape. There are approximately 7800 permitted sheep on the Gravelly Landscape during the permitted season, though this number may vary slightly from year to year. Sheep grazing on these allotments generally occurs from July 1 to October 6. See Table 11 and Figure 13.

Table 11. Permitted sheep grazing in the Gravelly Landscape Sheep

Allotment	Permitted Season	Term No.
Barnet S&G	7/11-9/21	1350 e/l 2 H
Coal Cr. S&G *	7/1-7/18 9/21-10/6	1350 e/l 2 H
Fossil Hellroaring S&G	7/19-9/20	1350 e/l 2H
Lyon Wolverine S&G	7/11-9/21	1350 e/l 2H
Poison Basin S&G Upper Ruby Middlefork Pasture	7/17-10/6 7/1-7/16	1350 e/l 4H
Black Butte S&G	7/12-9/16	1400e/l 2H
Cottonwood S&G	7/12-9/16	1000e/l 2H

e/l is ewes/lambs, H is horses. * This allotment used by the Fossil Hellroaring Bands

As with other permitted operations on the Gravelly, Tobacco Root and Madison landscapes, sheep herders and operators are required to manage attractants (including dog food and horse grain) in compliance with attractant management regulations. To improve our communication with sheep herders in the Gravelly Landscape, attractant management regulations were translated into Spanish by the BDNF in 2009.

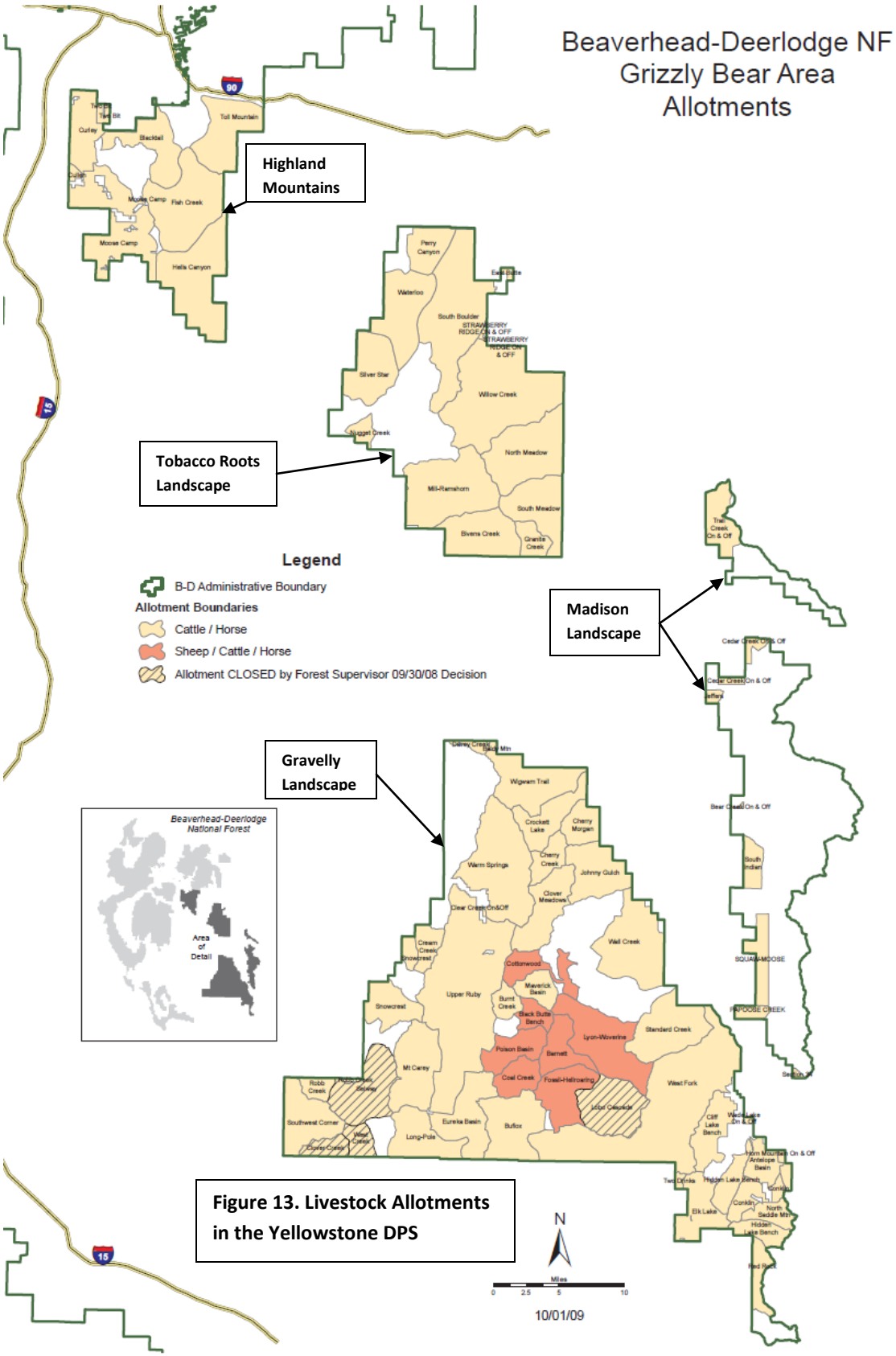


Figure 13. Livestock Allotments in the Yellowstone DPS

The remaining allotments in the 2003 Conservation Strategy area are cattle/horse allotments. In summary there are now 7 active sheep allotments and 54 active cattle/horse allotments across the three major landscapes (Figure 13).

As noted at Tables 1, 2, and 12 grizzly bear depredations have yet to be an important issue in the three landscapes. Depredations by wolves in the Conservation Strategy area have been much more significant. Allotments will be closed if vacated by willing permittees or made available to existing permittees with no increase in sheep numbers.

Table 12: Beaverhead Documented Allotment Conflicts 2004 – 2008 (BDNF Annual Monitoring Report 2008)

Allotment	Total Acres	Acres Inside PCA	2004 (Y/N)	2005 (Y/N)	2006 (Y/N)	2007 (Y/N)	2008 (Y/N)	Recurring Conflicts
West Fork Madison	**53,093**	**0**	**N**	**Y***	**N**	**Y***	**0**	**No**

* Two livestock mortalities were confirmed by Wildlife Services on the West Fork Madison cattle allotment during this period, a bovine cow in 2005 and a bovine calf in 2007.

To our knowledge, there have been no documented conflicts with humans that resulted in injury to bears or people anywhere on the Beaverhead-Deerlodge National Forest in the last decade (Table 2).

Summary of potenntial effects of livestock management

The BDNF is meeting the livestock grazing standard within the PCA, and is conducting the annual monitoring as required under the 2006 Forest Plan Amendment.

Livestock management under the revised forest plan will maintain the existing number and distribution of allotments. Of the 76 total allotments in the Yellowstone DPS, 47 are located in the Gravelly Landscape (Figure 13). Seven of these allotments are grazed by domestic sheep.

There has been limited conflict between grizzly bears and domestic livestock in the last decade, though grizzly bear distribution has increased in the DPS. All permittees are required to incorporate attractant management into operations as appropriate. These are actions and conditions that occurred under the 1980s era Beaverhead and Deerlodge forest plans. No increase in livestock numbers is anticipated under the 2009 Revised Forest Plan. Livestock conflicts across the BDNF portion of the grizzly bear DPS have not been an issue (Tables 1, 2 & 12).

The 2009 Revised Forest Plan adopts the direction of the 2003 Conservation Strategy that willingly-vacated sheep allotments will be closed or offered to an existing sheep permittee with no increase in numbers. See Exhibit 5.

Livestock management as conducted under the 2009 Revised Forest Plan improves upon grazing management that occurred under the 1980s era Beaverhead and Deerlodge Forest Plans.

Potential impacts from livestock grazing under the 2009 Revised Forest Plan are not anticipated to be significant.

NUISANCE BEARS

1986 Beaverhead Forest Plan Threatened & Endangered species standard 2f. *Address "problem" bears in accordance with "Interagency Agreement of Management Involving Grizzly Bears in the Greater Yellowstone Area, for Determining Grizzly Bear Nuisance Status and for Controlling Nuisance Grizzly Bears on National Forest Land"*

This standard was in effect on the BDNF from 1986 through 2006 when the BDNF amended the 1986 plan with the 2006 Forest Plan Amendment.

2006 Forest Plan Amendment standard for nuisance bears. The standard for nuisance bears is established in the 2006 Forest Plan Amendment. As currently conceived, this standard originated in the 2003 Conservation Strategy, which is subject to interagency review and updating. In the event of a nuisance bear situation the BDNF will work with state and federal partners to resolve to situation using interagency cooperation and the best available science. The BDNF continues to focus on the intent of the Nuisance Bear Standard through strategies and actions to prevent or minimize grizzly bear/human conflicts. The full text of the nuisance bear requirements as incorporated into the 2009 Revised Forest Plan can be found in Exhibit 5, attached.

The 1986 Beaverhead Forest Plan specifically notes that the Beaverhead National Forest was not considered occupied by grizzly bears at the time of the completion of the plan. There was, however, clear intent in the 1986 Beaverhead Forest Plan that grizzly bears, should they occur on the Forest, were to be managed following the leading science and management guidelines available at the time. Threatened and Endangered Species Standard 2e of the 1986 Beaverhead Plan required that any area designated as occupied by grizzly bears be managed in accordance with the *Greater Yellowstone Grizzly Bear Recovery Plan*, presumably the 1982 USFWS recovery plan. Nuisance bears were to be managed under Threatened and Endangered Species Standard 2f), which required the Forest Service to coordinate with the USFWS and other participating agencies to determine grizzly bear nuisance status and the capture, translocation, and release and/or disposal or nuisance bears (USDA Forest Service 1986a). See also Exhibit 4, attached.

Guidelines under the 2009 Revised Forest Plan are incorporated from the Record of Decision (USDA Forest Service 2006), Appendix G of the Revised Forest Plan. Appendix G adopts the nuisance bear standards from the 2003 Conservation Strategy. .

The focus and intent of nuisance grizzly bear management inside and outside the PCA are predicated on strategies and actions to prevent grizzly bear/human conflicts. It is recognized that active management aimed at individual nuisance bears will be required in both areas (inside and outside the PCA), though it is unlikely that the BDNF would initiate management actions inside the PCA. Management actions outside the PCA will be implemented according to state management plans in coordination with landowners and land management agencies. These

actions will be compatible with grizzly bear population management objectives for each state for the areas outside the PCA.

Nuisance grizzly bears have yet to be a substantive issue on the BDNF (Tables 2 & 12). Should nuisance bears be identified on the BDNF, the BDNF will work within the nuisance bear guidelines to resolve the situation. Active and enforced attractant management requirements are in place on the three landscapes most likely to experience nusiance bear situations in the foreseable future, substantially reducing the potential for nuisance bear situations to develop. It is unlikely that the BDNF would initiate nuisance bear management actions within the PCA. It is recognized that nuisance grizzly bear situations that are not resolved following the existing nuisance bear guidelines are more likely to lead to grizzly bear mortality.

The BDNF will not likely be the lead agency on any nuisance bear situation requiring action. As such, the Revised Forest Plan will not impact nuisance bear management.

ATTRACTANT MANAGEMENT

2006 Forest Plan Amendment standard for food storage: *Inside the PCA, minimize grizzly bear/human conflict using food storage, information and edcation and other management tools.*

2006 Forest Plan Amendment guideline for food storage: *Outside the PCA in areas identified in state mangement plans as biologically suitable and socially acceptible for grizzly bear occupancy, emphasisze proper sanitation techniques, including food storage orders, information and education, while working with local governments and other agencies.*

Attractant management has been required on areas of the Beaverhead portion BDNF since 1987, one year after the signing of the 1986 Beaverhead Forest Plan. The 1987 Regional (USFS R1) Special Order required that any nourishing substance (excluding baled hay and water) for humans, pets and livestock be acceptably stored under specified criteria. Further, the 1987 order required that harvested wildlife carcasses be managed to reduce potential human/grizzly bear interaction and camping within specified distances of a known animal carcass. The 1987 special order required attractant manage in the area delineated as the recovery zone for the Yellowstone grizzly bear population, currently recognized as the PCA.

Area restrictions for attractant management were issued for those portions of the Madison Landscape not included in the 1987 Special Order in 2000. The 2000 Area Restriction Order identified the primary goal of the order was to "minimize grizzly bear/human encounters and thereby provide for user safety and protection" of the then-threatened species. The 2000 order also revised key definitions and the period the year when restrictions are in place, extending the restriction period 1 month earlier and 10 days later in the year.

In 2004, the BDNF instituted mandatory attractant management on the Gravelly and Tobacco Root landscapes following the general principles of the earlier two orders in place on the Madison landscape. The 2004 order expanded the definition of items requiring acceptable storage to include human health care products, refined the definition of animal carcass and clarified the intent of "acceptable storage".

Currently, the BDNF has three separate attractant management orders in place with slightly different required criteria and restriction dates, all within the portion of the BDNF in the Greater Yellowstone Area. All three attractant management orders are actively enforced.

Summary of potential effects from attractant management

The separate 1986 Beaverhead and Deerlodge NF plans used the 1986 grizzly bear guidelines for the former and was silent on food storage for the Deerlodge. The BDNF 2009 Revised Forest Plan plan adopts the attractant management direction from the 2003 Conservation Strategy. Since 2004 mandatory attractant management has been in effect for the entirety of the Madison, Gravelly, and Tobacco Root landscapes from March 1 through December 1, with the exception of the area within the area of the 1987 Special Order. Within the PCA, attractant management is required from April 1 through November 20. Attractant management will likely have a beneficial effect on grizzly bears in the short and long term. Continued use of attractant management as has occurred since 2004 will minimize these effects on grizzly bears.

FOOD SOURCES

2006 Forest Plan Amendment Guideline 4- Food Sources: *Inside and outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, maintain the productivity, to the extent feasible, of the four key grizzly bear food sources as identified in the Conservation Strategy. Emphasize maintaining and restoring whitebark pine stands inside and outside the Primary Conservation Area.*

Of the four key grizzly bear food sources, whitebark pine is the source of primary concern on the BDNF. To date, there has been little management action that actually impacts whitebark pine, with the exception of the broad-scale suppression of wildfire.

The Madison, Gravelly and Tobacco Root landscapes are within the Greater Yellowstone Area (GYA) where substantial mortality in whitebark pine has occurred from white pine blister rust and the current outbreak of mountain pine beetle. The BDNF is a core and active member of the Greater Yellowstone Coordinating Committee Whitebark Pine Subcommittee (GYE WbP Committee). The GYE WbP Committee is nearing completion of a comprehensive protection and restoration strategy for this species in the GYE. This strategy will guide managers in conservation of whitebark pine at the landscape scale, protecting whitebark pine where feasible and restoring with the appropriate tools where possible.

Monitoring is a key element of this strategy. The cone production surveys described below are typically conducted by the Grizzly Bear Study Team.

Monitor whitebark pine occurrence, productivity, and health inside and outside the Primary Conservation Area in cooperation with other agencies. Annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: results of whitebark pine cone production from transects or other appropriate methods, and results of other whitebark pine monitoring."

Summary of potential effects from food sources

The predominant vegetative food source on the Beaverhead-Deerlodge NF is whitebark pine. As noted at table 3, the 1980s era Beaverhead and Deerlodge plans were silent on whitebark pine. The 2009 Revised Forest Plan emphasizes maintaining and restoring whitebark pine stands inside and outside the Primary Conservation Area (Exhibit 5). As such, managing whitebark pine as in the 2009 Revised Forest Plan is expected to help maintain this food source on the forest.

FIRE FOR RESOURCE BENEFIT

Wildland fire control efforts and use of prescribed burning will continue under the 2009 Revised Forest Plan. Fire will also be used for resource benefit as a management tool for vegetation and fuels. The acres available and their locations vary. If large in scale and intensity, wildland fires may result in lowered forest cover for a few years in those areas affected by the disturbance. These effects cannot be predicted or analyzed, and the area would naturally recover over time. The nearest model is the 1988 fire event in Yellowstone National Park which burned through the heart of the PCA for the grizzly bear. The fires had no observable impact on the number of bears in the Greater Yellowstone area (USFWS 2003, Franke 2000).

Fire for resource benefit may be an important tool for progressive management of whitebark pine. Fire may be used for seedbed preparation, the reduction of competing subalpine fir and other resource products.

The use of wildland fire for resource benefit as a management tool is available across the entirety of the grizzly bear DPS. The use of fire for resource benefit is expected to help maintain grizzly bear habitat.

VEGETATION MANAGEMENT

Suitable timber land is defined as those acres that are classified as available for timber production and are specifically managed for growth and yield. In the 1986 Beaverhead and Deerlodge forest plans, 646,000 acres were identified as in the suitable timber base for the combined forests. Approximately 768,000 additional acres were available for management entry for other resource benefits, such as fuel reduction, salvage and wildlife habitat improvement.

The 2009 Revised Forest Plan reduces the acres identified as suitable for timber production to 284,000 acres forest-wide. Approximately 1,633,000 additional acres are available for management entry for other resource benefit. Within the grizzly bear DPS the suitable acres total 78,730 acres under the 1986 plan and 28,189 acres under the 2009 Revised Forest Plan (Table 9 & Figure 14) a substantial reduction in acres managed for timber production.

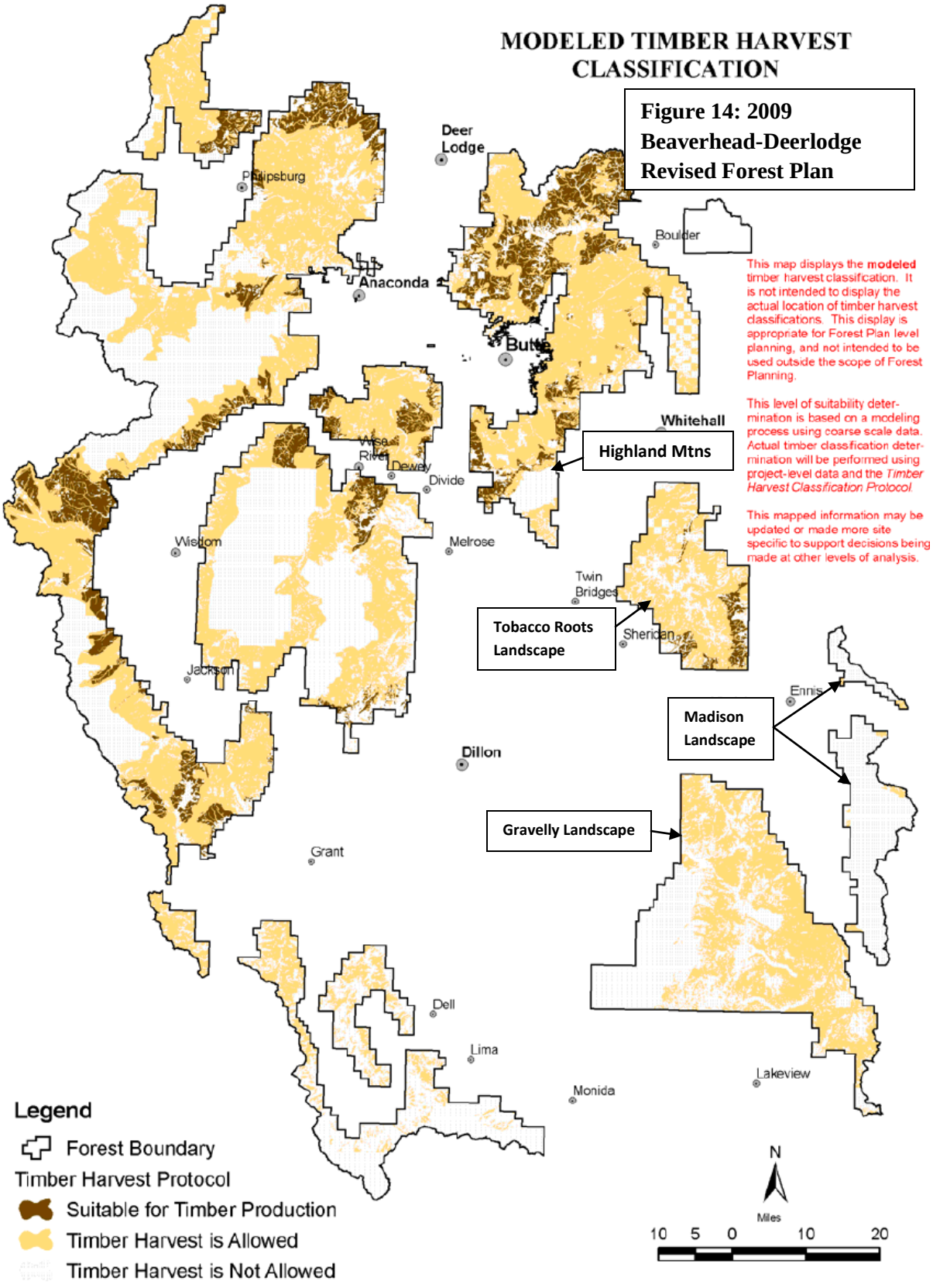
Timber harvest will not occur in the Lee Metcalf Wilderness of the Madison Landscape. There are several small areas on the periphery of the Madison Landscape where harvest for other resource needs (other than timber production) may occur.

Timber production for growth and yield will not occur in the Gravelly Landscape. Only a small portion of the Tobacco Root Landscape along the south/southeast portion is so classified. For those portions coded as "timber harvest allowed", salvage harvest can occur as well as vegetation management for other resource benefit. Site specific project analysis will determine the type and extent of harvest, following a specific classification protocol (Exhibit 1).

Most of the Tobacco Root Landscape is classified as timber harvest allowed with a small portion along the southeast and southwest peripheries available for timber production.

Table 13: Suitable Timber Acres – Yellowstone Grizzly Bear DPS

Landscape	Timber Suitability Classification	Acres		Percent of Landscape	
		1986 Plan	2009 Plan	1986 Plan	2009 Plan
Highland Mtns	Suitable for Timber Production	16,617	15,535	15%	14%
	Not Suitable, Timber Harvest Allowed	33,554	53,767	31%	50%
	Not Suitable, No Harvest Allowed	58,040	38,909	54%	36%
Tobacco Root Landscape	Suitable for Timber Production	20,497	12,654	11%	7%
	Not Suitable, Timber Harvest Allowed	46,617	112,533	25%	60%
	Not Suitable, No Harvest Allowed	120,364	62,291	64%	33%
Madison Landscape	Suitable for Timber Production	0	0	0%	0%
	Not Suitable, Timber Harvest Allowed	4,107	4,433	3%	3%
	Not Suitable, No Harvest Allowed	122,761	122,435	97%	97%
Gravelly Landscape	Suitable for Timber Production	41,616	0	9%	0%
	Not Suitable, Timber Harvest Allowed	125,764	223,327	27%	47%
	Not Suitable, No Harvest Allowed	303,677	247,730	64%	53%


MODELED TIMBER HARVEST CLASSIFICATION
Figure 14: 2009 Beaverhead-Deerlodge Revised Forest Plan
Deer Lodge
Philipsburg
Anaconda
Butte
Boulder
Whitehall
Wise River
Dewey
Divide
Wisdom
Melrose
Twin Bridges
Sheridan
Jackson
Ennis
Dillon
Grant
Dell
Lima
Monida
Lakeview
Highland Mtns
Tobacco Roots Landscape
Madison Landscape
Gravelly Landscape
This map displays the modeled timber harvest classification. It is not intended to display the actual location of timber harvest classifications. This display is appropriate for Forest Plan level planning, and not intended to be used outside the scope of Forest Planning.
This level of suitability determination is based on a modeling process using coarse scale data. Actual timber classification determination will be performed using project-level data and the Timber Harvest Classification Protocol.
This mapped information may be updated or made more site specific to support decisions being made at other levels of analysis.
Legend
Forest Boundary
Timber Harvest Protocol
Suitable for Timber Production
Timber Harvest is Allowed
Timber Harvest is Not Allowed
N
Miles
10 5 0 10 20

With timber harvest classification for growth and yield (timber production) ranging from 0 percent to 7 percent across the entirety of the grizzly bear DPS landscapes (Table 13), this activity is Not Likely to Adversely Affect the grizzly bear. While timber harvest classification for other resource benefit (harvest allowed) increases under the 2009 Plan, such classification does not automatically lead to implementation of harvest activities. Site specific analysis using the timber protocol (Exhibit 1) must be applied. No more than 47 percent of the occupied Gravelly Landscape or 3 percent of the occupied Madison Landscape are classified for "harvest allowed" (Table 13).

Vegetation management also includes reducing conifer encroachment on 74,000 acres of grasslands, riparian areas, and shrublands. The revised plan also calls for increasing the aspen component within lodgepole pine and other vegetation types, on 67,000 acres. (Exhibit 8 – Vegetation).

Summary of potential effects from vegetation management

Every proposed vegetation management project within the DPS will consider potential effects to grizzly bears during the project analysis process. Any project that the BDNF determines may affect the threatened grizzly bear would be subject to section 7 consultation with the USFWS. Across the timber management spectrum of suitable for timber production to "harvest allowed", vegetation management of this type is expected to be insignificant.

Table 14. Exhibits included in this Biological Assessment

Exhibit 1	Timber classification protocol		Exhibit 5	Appendix g - grizzly bear management direction
Exhibit 2	Related decisions which implement the forest plan		Exhibit 6	Fall road density and secure habitat
Exhibit 3:	Beaverhead-Deerlodge 2004 food storage order		Exhibit 7	Summer road density and secure habitat
Exhibit 4	1986 interagency grizzly bear guidelines		Exhibit 8	2009 Beaverhead-Deerlodge NF revised forest plan standards, guidelines, & objectives

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Exhibit 1: Timber Classification Protocol – 2009 Beaverhead-Deerlodge Revised Forest Plan

Lands Where Timber Harvest Is Not Allowed (Step One)

(Not suitable, not harvestable).

Lands where timber harvest is not allowed are those acres identified as Beaverhead-Deerlodge National Forest System lands that meet the following criteria:

1. Nonforested lands: [36 CFR 219.14(a)(1) and FSH 2409.13, 21.1]
    a. Lands that do not currently have and have never had 10% or greater tree cover
    b. Roads, railroads (16 foot buffer, 33 foot corridor)
2. Irreversible soil, slope, watershed conditions [36 CFR 219.14(a)(2) and FSH 2409.13, 21.41] (not modeled – site specific)
    a. Wetlands
    b. Landslide prone / high water table lands
3. Areas withdrawn from timber harvest by Congress, Secretary of Agriculture, or Chief of the Forest Service [36 CFR 219.14(a)(4) and FSH 2409.13, 21.2]
    a. Wilderness (Anaconda-Pintler MA, Lee Metcalf MA)
    b. Wilderness Study Areas (West Pioneer WSA MA, Sapphires WSA MA)
    c. Research Natural Areas
4. Areas withdrawn from timber harvest by Regional Forester / Forest Plan Decision, by Management Area:

    Anaconda-Pintler Recommended Wilderness Additions
    Lee-Metcalf Recommended Wilderness Additions
    Centennial Recommended Wilderness
    Torrey Mountain Recommended Wilderness
    West Big Hole Management Area
    Garfield Mountain Recommended Wilderness
    Mount Jefferson Recommended Wilderness
    Italian Peak Recommended Wilderness
    Quigg Recommended Wilderness
    Snowcrest Recommended Wilderness
    Stony Mountain Recommended Wilderness
    Table Mountain Recommended Wilderness
    Electric Peak Recommended Wilderness

5. ½ mile Eligible Wild River corridors (¼ mile buffer)

The remaining lands are used as a starting point for further classification.

Lands Not Suitable for Timber Production but Timber Harvest is Permitted to Meet other Resource Objectives (Step Two)

Lands where timber harvest is allowed are those acres not identified in the previous category that meet any of the following criteria.

1. Lands not capable of producing industrial wood [FSH 2409.13, 21.2]
   20 cubic ft/ac/yr used as cut-off
2. Lands where restocking within 5 years is not assured [36 CFR 219.14(a)(3) and FSH 2409.13, 21.42]
3. Lands with inadequate response information [FSH 2409.13, 21.5]
   Whitebark Pine cover type
4. Riparian Conservation Areas – 300 feet from perennial streams and 150 feet from intermittent streams
5. Municipal Watersheds (exception of Big Hole 4th Code and Basin Creek 6th Code HUCs)

Basin Creek South	South Boulder
Fish Creek	South Fork Divide Reservoir
Fred Burr Creek	Tin Cup Joe
Indian Creek	Yankee Doodle Creek
Rattlesnake	

6. Summer Non-motorized Allocations
7. Key Watersheds
8. Visual Quality / Recreation Areas
   a. By Management Area

Georgetown Lake	Mill Creek Corridor
I-15 Corridor	Pioneer Mountains Scenic Byway

   b. By other Definition
      i. 6th code HUCs (Montana NRIS 2003 Version Watersheds)
         - 100200041304 Trapper
         - 100200041305 Cherry Pioneers
         - 100200041307 Brownes* (sic)
         - 100200041308 Rock-Pioneers
         - 100200041403 Birch

      ii. ½ Mile Corridors (¼ mile buffer)
         - National Trails
         - Highways 1, 2, 43, 45, 278, and I-90
         - Eligible Scenic & Recreation Rivers

      iii. ½ Mile buffer around Delmoe Lake
      iv. 300 foot buffer around developed recreation sites
      v. Thompson Park (near Butte)
9. Rock Creek Drainage
   c. 5th code HUCs (Montana NRIS 2003 Version Watersheds)
      - 1701020207 East Fork Rock Creek
      - 1701020208 Middle Fork Rock Creek

- 1701020209 Ross Fork Rock Creek
- 1701020210 West Fork Rock Creek
- 1701020211 Upper Willow Creek
- 1701020212 Upper Rock Creek

10. Areas Evaluated for Potential Wilderness (FEIS, Appendix C)
11. Management areas allocated to resource uses, where timber harvest is permitted, but other resource objectives are primary.

Anderson Mountain	Hells Canyon	Ruby-Horse Creek
Antelope Basin	Horse Prairie South	Stony
Basin Creek Municipal Watershed	Idaho Creek	Timber Creek
Brown Back	John Long	Tobacco Root Peaks
Bull Mountains	Johnny Gulch	Upper Ruby
Centennial Foothills	Lima Peaks	Upper Willow
Chain of Lakes	Lobo Mesa Madison	Wall Creek
East Fork	Medicine Lodge / Tendoy	West Fork Madison
Electric Peak	Middle Fork	West Fork Rock Creek
Flint Uplands	Middle Mountain	Whitetail
Greenhorn Mountains	Ross Fork	Wigwam Cherry
Hellroaring	Ruby-Centennial Corridor	Wisconsin

The remaining lands are suitable for timber production

Lands Suitable for Timber Production: (Step Three)

Lands Suitable for Timber Production are those acres not identified as lands where timber harvest is permitted in the two classifications above.

Management Areas that contain lands allocated to Suitable for Timber Production:

Backyard Butte	Horse Prairie North	Ramshorn
Basin-Cataract	Humbug	Ruby
Boulder River-Sheepshead	Kit Carson	Selway-Saginaw
Bryant Creek	Little Boulder	South Fleecer
Burton Park	Little Boulder-Galena Gulch	South Boulder Corridor
Butte North	Meadow Creek	South Willow Corridor
East Deerlodge	Mormon-Buffalo	Tie-Johnson
East face	Northeast Fleecer	Trail Creek
Fishtrap-Mount Haggin	Pintler Face	Warm Springs
Flint Foothills	Pipestone	West Big Hole Flats
Harvey Creek Foothills	Quartz Hill	West Face

Exhibit 2

Related Decisions Which Implement the Forest Plan

A second ROD will be issued by the BDNF Forest Supervisor making site-specific decisions, including travel management decisions, necessary to implement the forest plan and manage resources or meet public expectations where existing non-conforming activity is taking place in an allocation. There is also a decision to be made whether the current direction from the 2001 Plan Amendment for Montana, North Dakota and portions of South Dakota (the Tri-State OHV Decision) will be modified to use a map base for defining roads and trails. The specific proposals to be decided on include:

1. A proposal to close all roads and trails to motorized uses on national Forest System lands allocated to non-motorized uses in the Revised BDNF Plan.

   Non-motorized recreation allocations are designed to provide quiet recreation and protect wildlife on winter range. Continued motorized use in this allocation following identification of the need would conflict with need for this allocation. Forest users indicated a desire to know what to expect of their favored areas in terms of conditions, management, and recreation opportunities in each season of use.

   Forest Service policy requires protection of wilderness potential in areas recommended for wilderness (FS Manual 1923.03 (2)): In this case a site-specific decision may be made to implement the standard which restricts activities not allowed in recommended wilderness.

2. A proposal to further define direction carried forward in the Revised BDNF Plan from the Tri-State OHV Decision is displayed on the Forest Plan Interim Roads and Trail Map which represent the GIS layer of roads and trails on the BNDF open to motorized travel.

   The Tri-State OHV Decision amended Forest and Grassland Plans in Montana and the Dakotas to restrict motorized wheeled vehicle travel off roads or trails (cross-country travel). That decision established the legality of motorized travel based on a visual interpretation by the user rather than a map of roads and trails where motorized uses are allowed. Monitoring and public comments since 2001 have shown that the "user interpretation" approach to identifying these routes has been confusing and ineffective. There has been a proliferation of new user-built routes and new motorized use of other routes that were not available to those uses prior to 2001. Therefore, the Forest Service is proposing to adopt a map (Revised Draft Plan, Page 55) developed over the past 5 years, through public involvement, specifying those routes in which motorized use is allowed. In conjunction, the direction of the Tri-State OHV decision would be supplemented to specify that cross-country wheeled motorized travel would be prohibited off of these routes, except as allowed by proposed Recreation Standards 2 and 3 of the proposed Revised Beaverhead-Deerlodge Forest Plan.

   This prohibition is not intended to supersede road and trail motorized vehicle restrictions already in place that regulate the type of vehicle or season of use. This decision is intended to be interim direction until such time as route specific motorized use designations are completed.

Exhibit 3: Beaverhead-Deerlodge NF 2004 Food Storage Order

BEAVERHEAD-DEERLODGE NATIONAL FOREST
420 Barrett Street
Dillon, MT 59725
Forest Supervisor's Order

For the purpose of minimizing adverse interactions between bears and humans and pursuant to Title 36 Code of Federal Regulation 261.50(b), the following uses are restricted in those areas of the Madison Ranger District and Jefferson Ranger District on the Beaverhead-Deerlodge National Forest as shown on the attached map (Exhibit B) and hereby made a part of this Order. Also attached, and hereby made part of this Order are Definitions (Exhibit A) of terms used in support of the restrictions. This Order is effective **March 1** through **December 1**, annually, until rescinded.

36 CFR 261.58 – Occupancy and Use:
Possessing or storing any food or refuse, as specified in the Order (36 CFR 261.58(cc)
Possessing, storing, or transporting any bird, fish, or other animal or parts thereof, as specified in the Order (36 CFR 261.58(s)
Camping as specified in the Order (36 CFR 261.58(e)

Under This Order it is Required That:
All food and refuse must be acceptably stored or acceptably possessed during daytime hours.
All food and refuse must e acceptably stored during nighttime hours, unless it is being prepared for eating, being eaten, being transported, or being prepared for acceptable storage.
Any harvested animal carcass must be acceptably stored, unless the carcass is being field dressed, transported, being prepared for eating, or being prepared for acceptable storage.
Camping or sleeping areas must be established at least ½ mile from a known animal carcass or at least 100 yards from an acceptable stored animal carcass.

Exemptions:

Pursuant to Title 36 CFR 261.50(e), the following are exempt from this restriction:

Persons with a permit issued by the Forest Supervisor specifically exempting them from the effect of this order.
Any Federal or State officer placing baits to capture animals for research or management purposes as part of their official duties.

Done at Dillon, Montana this 10th day of September, 2004.

THOMAS K. REILLY
Forest Supervisor

Penalty:
Violation of these prohibitions is punishable by a fine of not more than $5,000 for an individual or $10,000 for an organization, or imprisonment for not more than 6 months, or both (16 USC 551 and 18 USC 3559 and 3571).

Notification:
A copy of this order shall be posted as prescribed under 36 CFR 261.51.

Exhibit A

Occupancy and Use
Special Order—Food Storage and Sanitation
Definitions

"Food and Refuse" means any substance, solid or liquid (excluding water, baled hay, or hay cubes without additives) or refuse, which is or may be eaten or otherwise taken into the body to sustain health or life, provide energy, or promote growth of any person or animal. Also includes items such as soft drinks, alcoholic beverages, canned foods, pet foods, processed livestock feed and grains, personal hygiene products, and empty food and beverage containers.

"Animal carcass" means the dead body or parts thereof, of any harvested mammal, bird, or fish, including the head or skull plate with antlers or horns and hide or cape of big game animals and any domestic livestock that may be found in the restricted area. Packaged or prepared animal carcass products transported into the restricted area for consumption, game birds, small mammals, or fish harvested for consumption in the restricted area are considered food under the previous definition.

"Acceptably stored" means:

Stored in bear-resistant container certified through the Interagency Grizzly Bear Committee Courtesy Inspection Program. A container may be certified by the local District Ranger or their designated representative(s) if it meets the IGBC criteria, or

Stored in a closed vehicle where the storage compartment is constructed of solid, non-pliable material that, when secured, will have no openings, hinges, lids, or coverings that would allow a bear to gain entry by breaking, bending, tearing, biting, or pulling with its claws (any windows in the vehicle must be closed), or

Suspended at least 10 feet clear of the ground at all points and four feet horizontally from any supporting tree or pole, or

Stored within a hard-sided residence, building, or storage container subject to the terms and conditions of a special-use authorization or operating plan, or

Stored by other methods approved in a permit issued by the Forest Supervisor responsible for the area where the method is proposed for use.

For animal carcasses: stored as per 3. a-e when located from 100 yards to ½ mile of a camping or sleeping area or within 200 yards of a National Forest System Trail. Animal carcasses are not considered acceptably stored when within 100 yards of a camping or sleeping area or National Forest System Trail. Animal carcasses more than ½ mile from a camping area or sleeping area and more than 200 yards from a National Forest System Trail may be left on the ground.

Animal carcasses killed or harvested (and parts thereof) within ½ mile of any established camping area or sleeping area must be acceptably stored, possessed, or moved to a distance beyond ½ mile from any such camp or sleeping area by the party(-ies) responsible for killing or harvesting such mammal.

"Acceptably possessed" means:

Possessed or attended during daytime by a person(s) that is physically present within 100 feet and direct sight of the accessible food, or

Possessed or attended by such a person(s) for the purpose of field dressing lawfully taken animal carcasses, transporting any food or animal carcass, preparing any animal carcass or food for eating, or eating any food.

"Camping/sleeping area" means National Forest System Lands temporarily used for the purpose of overnight occupancy without a permanently fixed structure or lands temporarily occupied by unattended camping equipment.

"Daytime" means ½ hour before sunrise to ½ hour after sunset, Mountain Time.

"Night time" means ½ hour after sunset to ½ hour before sunrise, Mountain Time.

"National Forest System Trail" means a trail wholly or partly within, or adjacent to, and serving a part of the National Forest System and which has been included in a forest recreation map.

Note: Additional acceptable methods of storage can be added to this list as they become available.

Exhibit B

Occupancy and Use Order No. 2004-D6/D7-031

Special Order—Food Storage and Sanitation
Area of Application

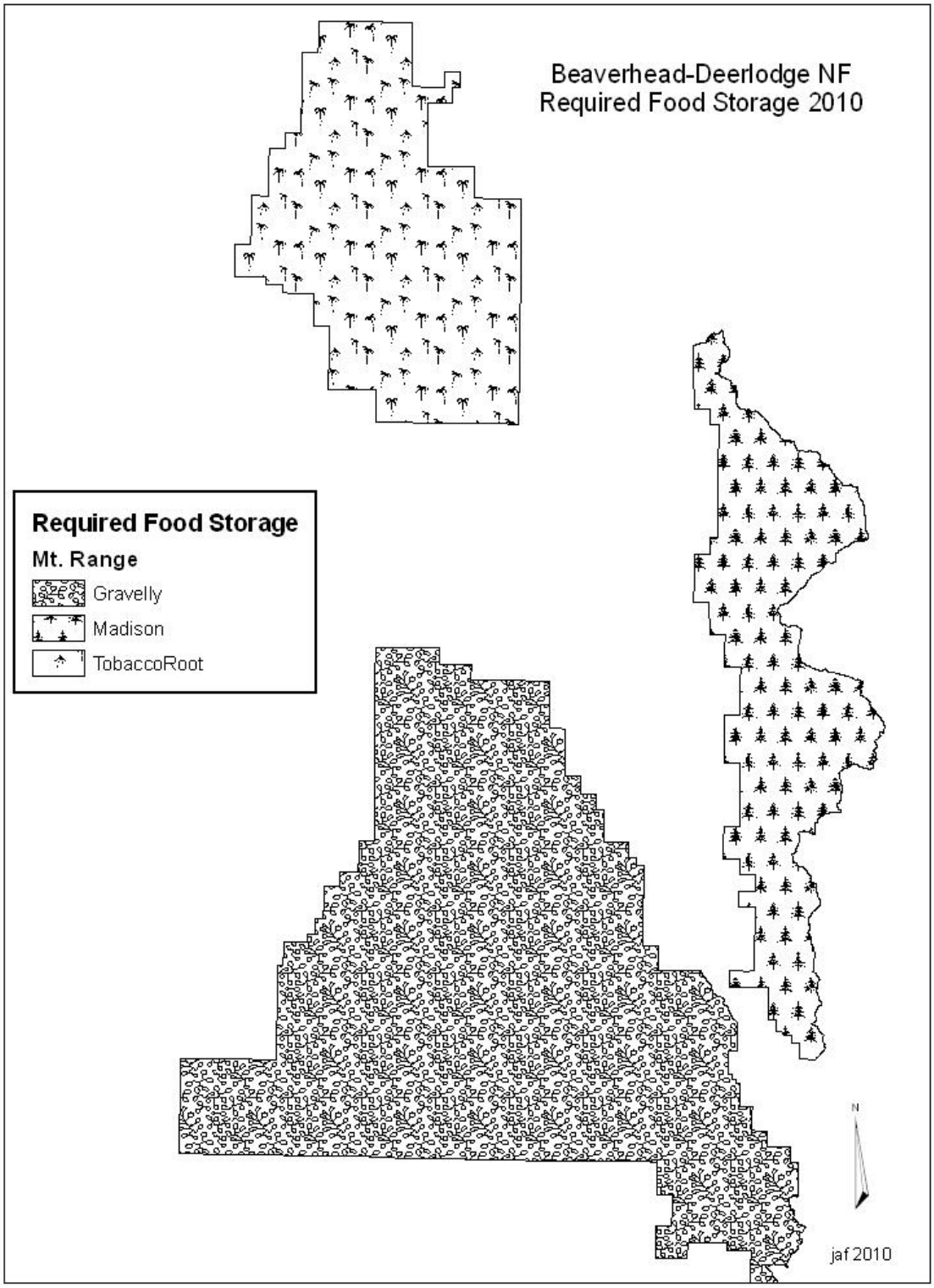

Beaverhead-Deerlodge NF
Required Food Storage 2010
Required Food Storage
Mt. Range
Gravelly
Madison
TobaccoRoot
N
jaf 2010

Exhibit 4: 1986 Interagency Grizzly Bear Guidelines.

Criteria For Determining Nuisance Grizzly Bear Status

II. Guidelines for Determining Grizzly Bear Nuisance Status

These guidelines apply to the Management Situation Areas defined in Interagency Grizzly Bear Guidelines. In Management Situations Areas 1 and 2, grizzlies must be determined to be a nuisance by specific criteria before they can be controlled. In Situation Areas 3 and 5, any grizzly involved in a grizzly-human conflict situation is considered a nuisance and will be controlled. Control must be compatible with Grizzly Bear Recovery Plan objectives for limiting man-caused grizzly mortality and with Federal and State laws and regulations.

A grizzly bear may be determined to be a nuisance if any or all of the following conditions apply:

Condition A. The bear causes significant depredation to lawfully present livestock or uses unnatural food materials (human and livestock foods, garbage, home gardens, livestock carrion, and game meat in possession of man) which have been reasonably secured from the bear resulting in conditioning of the bear or significant loss of property.

Condition B. The bear has displayed aggressive (not defensive) behavior toward humans which constitutes a demonstrable immediate or potential threat to human safety and/or a minor human injury resulted from a human/bear encounter.

Condition C. The bear has had an encounter with people resulting in a substantial human injury or loss of human life.

The following are considerations in determining grizzly nuisance status under Condition A:

Unnatural foods were reasonably secure from grizzlies. Reasonably secure means all steps were taken to comply with guideline objectives (a) Maintain and Improve Habitat and (b) Minimize Grizzly-Human Conflict Potential. The following are examples of reasonably secure conditions:

(1) sight and/or smell of edibles and/or garbage was not dominant (i.e., food was canned or in other sealed containers) and edibles and/or garbage was made unavailable (hung out of reach or secured in a solid-sided-bear-proof structure). Livestock use did not occur in habitat components critically important to grizzlies in time or space;

(2) livestock and wildlife carcasses were removed, destroyed or treated so that the material would not reasonably be expected to attract grizzlies.

(3) game meat was stored at least 100 yards from any sleeping area;

(4) no baits were placed for purposes of sport hunting black bears, nor did any artificial feeding of bears occur.

The following are considerations in determining grizzly nuisance status under Condition B:

The bear has displayed aggression toward man. Sound evidence must be available to establish that the bear acted aggressively without provocation (not defensively), and that such behavior constituted a threat to human safety and/or a minor human injury occurred as a result of a nondefensive grizzly attack.

The following are considerations in determining grizzy nuisance status under Condition C:

An encounter with people which resulted in a serious human injury or loss of human life. A bear that is involved in an accidental encounter with people, defense of young, or in a provoked attack (the bear acted defensively not aggressively) which results in a minor human injury should not be considered a nuisance under this condition.

If information is insufficient to clearly establish the above requisites under Conditions A, B, and C, then the involved bear(s) probably should not be determined a nuisance under that condition. The criteria in Table 1 should be used to guide control actions.

Preventive Action

Certain specific grizzlies have known behavioral patterns, which, when combined with location, time and other factors, indicate that an incident is highly probable. In such situations, direct preventive action designed to safely remove the bear(s) from the situation (prior to an occurrence which would result in nuisance status and possible loss of the bear(s) to the ecosystem) can be implemented regardless of the Management Situation involved. Human activities must be in compliance with applicable guidelines to minimize potential for grizzly-human conflicts for that Management Situation. Control actions should be designed to capture and remove the specific target bear(s).

In other situations, a bear may move into a visitor use or residential area without causing an incident, but there is indication that due to its persistent use of the area, it may become overly-familiar with humans and may become habituated. The animal may be relocated if a suitable release site (free of circumstances similar to the capture site) is available. This is an action to prevent a possible incident or habituation of the bear. It does not count as an offense when determining the disposition of the bear (using Table 1), should the bear be recaptured in a future control action.

III. Grizzly Bear Control Action

1. If a grizzly bear is not determined to be a nuisance after consideration of criteria in Section II, no control action will be initiated.

2. Capture of nuisance grizzly bears outside National Parks is the primary responsibility of the State Fish and Game Agency in conjunction with the U.S. Fish and Wildlife Service. The National Park Service is responsible for bear capture within National Parks. Figure 1 is a schematic diagram showing the sequence of notification and the decision process which will be used in all grizzly control actions. Data forms for recording information about the captured bear(s) and the control action are provided in the Appendix. Nuisance bear forms should be completed by the on-site official and forwarded to the Grizzly Bear Recovery Coordinator for subsequent distribution.

3. Nuisance grizzlies that are sick or injured beyond a point where natural recovery is likely will be removed from the population. Other nuisance grizzlies will be controlled according to the guidelines in Table 1.

4. After a bear has been captured during a control action, the decision on where to relocate the bear or whether to kill it must be made within 24 hours of its capture. The relocation must be made as expeditiously as possible after the disposition of the bear is determined. Bears will not be held in a snare but will be immobilized, marked, and placed in an appropriate holding facility (can be a culvert trap).

   With due consideration of mortality risk associated with immobilization, grizzly bears released should be marked with numbered ear tags, lip tatoo, and functioning radio transmitters. Monitoring will be a cooperative effort between State and Federal agencies. On-site release may be

accomplished if the bear taken is: (a) determined not to be a nuisance bear or; (b) on a first offense when the bear cannot be relocated because of terrain, weather, or inaccessibility to a relocation site. Females with cubs, where relocation is identified in the above table, will be released on-site if relocation is not feasible for previously stated reasons or if the cubs cannot also be caught and relocated with the female. An on-site release will not be conducted in developed areas. On-site releases will be accomplished after approval of the land management agency if the release is monitored in such a way to determine its success or failure with respect to bear survival and conflict resolution.

5. If a bear is to be killed, the action will be completed only by authorized State or Federal or Tribal employees. A grizzly bear mortality report form should be completed and the carcass forwarded to the Montana Department of Fish, Wildlife and Parks lab in Bozeman, Montana, for examination and subsequent disposition.

6. The initiating agency may "take back" a relocated bear, according to case-by-case agreements.

7. The State Fish and Game Regional Office will be the principal coordination point for all control actions, unless specified otherwise in the initial discussions on a particular incident.

The public and news media are extremely interested in all operations involving grizzly bears. To insure that they receive the proper information, it is critical that information be shared between all involved agencies in an accurate and timely manner. Planned news releases will be the responsibility of the State Fish and Game agency in close consultation with the administering land management agency (or Tribe) and the Grizzly Bear Recovery Coordinator.

Table 1. GUIDELINES FOR GRIZZLY BEAR CONTROL ACTION
(See Footnotes)

TYPE OF GRIZZLY	NO OFFENSE OFFENSE	TYPE OF PROBLEM CONDITION A 1st	2nd	3rd	CONDITION B 1st	2nd	CONDITION C 1st
Females							
Orphaned Cub	***RLS/REL*						
Cub		REL	REL	REM**	REL	REM	REM
Yearling		REL	REL	REM	REL	REM	REM
Subadult		REL	REL	REM	REL	REM	REM
Prime Adult with Young		REL	REL	REM (Adult)	REL	REM (Adult)	REM (Adult)
Old Adult***		REL	REM	--	REM	--	REM
Old Adult with Young		REL	REL	REM (Adult)	REL	REM (Adult)	REM (Adult)
Males							
Orphaned Cub	***RLS/REL*						
Cub		REL	REL	REM	REL	REM	REM
Yearling		REL	REM	--	REM	--	REM
Subadult		REL	REM	--	REM	--	REM
Prime Adult		REL	REM	--	REM	--	REM
Old Adult		REM		--	REM	--	REM

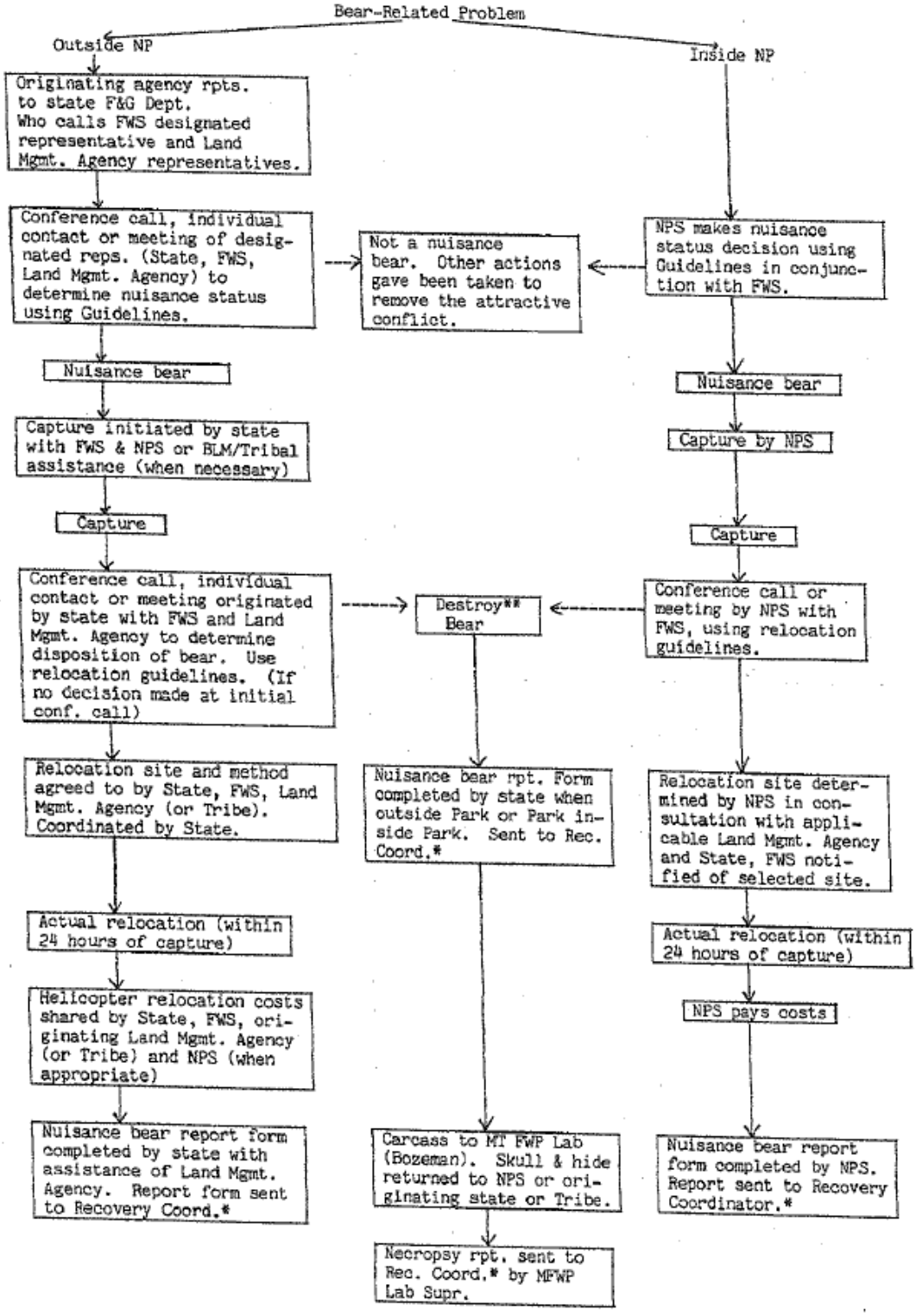
*REL - RELOCATE **REM - REMOVE FROM POPULATION ***RLS - RELEASE ON SITE
(Nuisance grizzlies that are sick or injured beyond a point where natural recovery is likely will be removed.)

Cub - Young of the Year
Yearling - 12 to 24 months old
Subadult - 24 to 48 months old
Young - Cub, yearling, or subadult accompanying mother
Old - Indicates advanced age and deteriorated physical state, indicators are tooth wear and physical appearance

*Grizzly Bear Recovery Coordinator, USFWS, HS 105D, University of Montana, Missoula, MT 59812

FIGURE 1

ACTION PROCEDURES FOR DETERMINING BEAR NUISANCE STATUS AND MANAGEMENT ACTION



*Recovery Coordinator distributes report to agency representatives in Ecosystem.

**Alternative may include transport to a zoo or research. Decision made at second phone call.

*Grizzly Bear Recovery Coordinator, USFWS, US 10SD, University of MT, Missoula, MT 59812

FIGURE 2

ACTION PROCEDURES IN CASES OF GRIZZLY-HUMAN CONFLICT

All grizzly bear habitat

1. All incidents of grizzly-human conflict will be investigated immediately and a factual and detailed report (answering who, what, when, why, where and how) submitted to the line officer. In case of human death, notify the County Sheriff and County Coroner. In case of grizzly death, notify the U.S. Fish and Wildlife Service and the appropriate State wildlife management agency.

2. State wildlife management agencies and/or the U.S. Fish and Wildlife Service, National Park Service, Tribe will handle nuisance grizzlies.

3. County sheriffs will have primary responsibility for backcountry rescue outside National Parks and Indian Reservations.

4. The site of an incident will be closed immediately to human use until the investigation is complete and the problem solved or corrected. This closure is the responsibility of the managing agency.

5. All incidents resulting in serious human injury or death will be investigated by an interagency team with members from the county law enforcement agency, State wildlife management agency, land management agency, U.S. Fish and Wildlife Service, NPS and appropriate outside experts as necessary.

6. News releases involving grizzly-human conflict incidents will be coordinated through all concerned agencies.

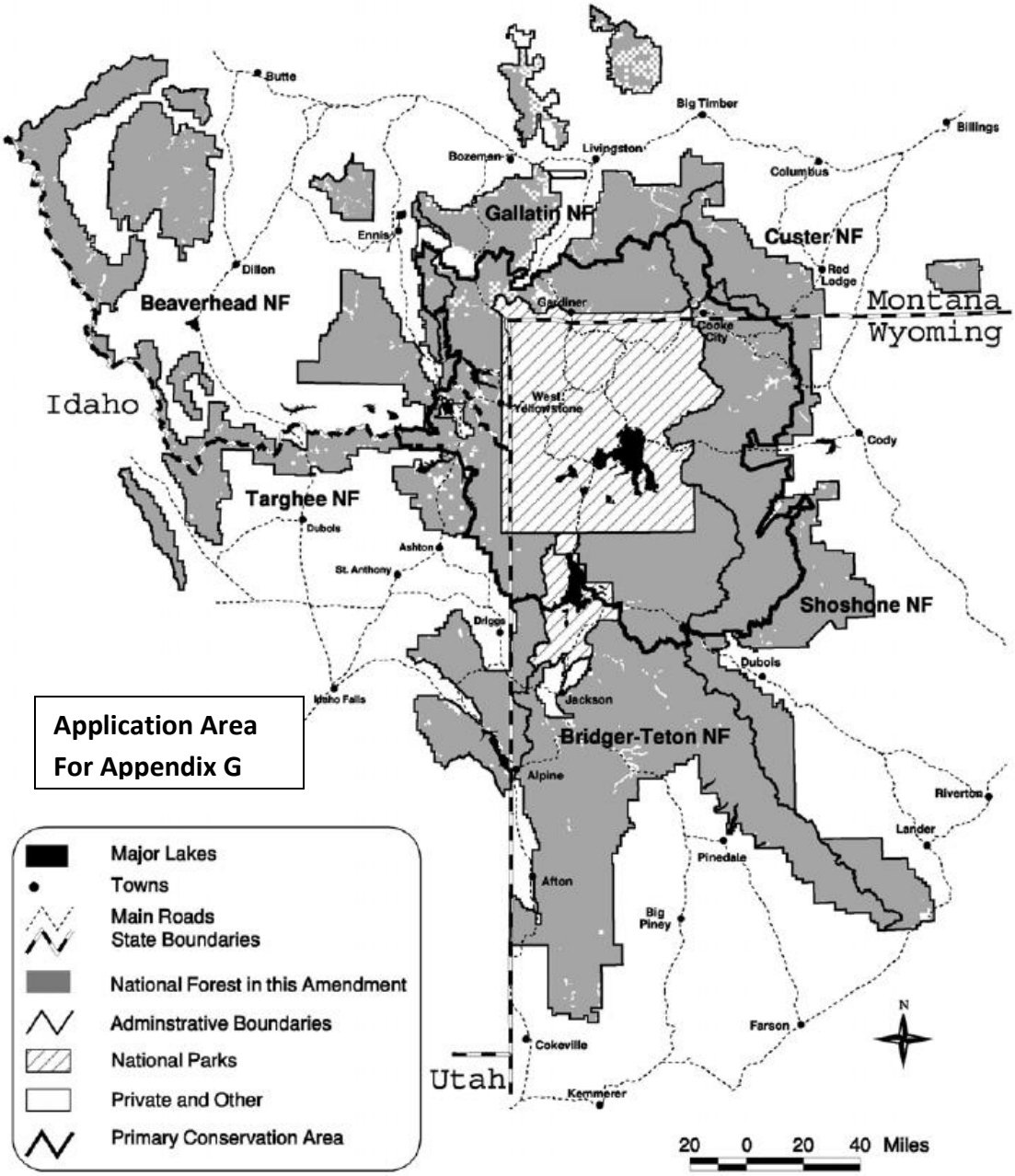
Further, in National Parks,

7. All grizzly-human conflicts will be investigated and a factual and detailed bear incident report submitted to the Superintendent's Office. In incidents where injury and/or property damage have occurred, the investigating officer's report will be supplemented when possible by the statements of witnesses to the incident. All incidents of grizzly inflicted human death will be investigated by an interagency investigation team (as in No. 5).

8. All management actions involving bears will be reported by telephone to the Bear Management Office/Resource Management Office.

9. All grizzly bear sightings will be recorded in the station log and telephoned daily to the Bear Management Office/Resource Management Specialist. Information shall include observer, data, location, time, number, activity, and if possible, sex, age class, and individual description.

EXHIBIT 5 : 2009 Beaverhead-Deerlodge NF Revised Forest Plan Appendix G - Grizzly Bear Management Direction



Goal, standards, guidelines, and monitoring

Within the Primary Conservation Area, there are 18 Bear Management Units and 40 Bear Management Unit subunits totaling 5,894,000 acres (Figures A-2, A-3, and A-4). The major land management agencies include six national forests and two national parks.

Grizzly bear habitat conservation goal
Manage grizzly bear habitat within the Primary Conservation Area to sustain the recovered Yellowstone grizzly bear population. Outside the Primary Conservation Area in areas identified in state grizzly bear management plans as biologically suitable and socially acceptable for grizzly bear occupancy, accommodate grizzly bear populations to the extent that accommodation is compatible with the goals and objectives of other uses.

Grizzly bear habitat conservation standard for secure habitat
Inside the Primary Conservation Area, maintain the percent of secure habitat in Bear Management Unit subunits at or above 1998 levels. Projects that change secure habitat must follow the Application Rules.

Application Rules for changes in secure habitat
Permanent changes to secure habitat.
A project may permanently change secure habitat if secure habitat if equivalent habitat quality (as measured by the Cumulative Effects Model or equivalent technology) is replaced in the same Bear Management Unit subunit. The replacement habitat must be maintained for a minimum of 10 years and be either in place before project implementation or concurrent with project development. Increases in secure habitat may be banked to offset the impacts of future projects of that administrative unit within that subunit.

Temporary changes to secure habitat.
Projects can occur with temporary reductions in secure habitat if all the following conditions are met:
• Only one active project per Bear Management Unit subunit can occur at any one time.
• The total acreage of active projects within a given Bear Management Unit does not exceed 1 percent of the acreage in the largest subunit within that Bear Management Unit (Figure A-6). The acreage of a project that counts against the 1 percent limit is the acreage associated with the 500-meter buffer around any gated or open motorized access route or recurring low level helicopter flight line, where the buffer extends into secure habitat.
• To qualify as a temporary project, implementation will last no longer than three years.
• Secure habitat must be restored within one year after completion of the project.
• Project activities should be concentrated in time and space to the extent feasible.

Acceptable activities in secure habitat. Activities that do not require road construction, reconstruction, opening a permanently restricted road, or recurring helicopter flight lines at low elevation do not detract from secure habitat. Examples of such activities include thinning, tree planting, prescribed fire, trail maintenance, and administrative studies/monitoring. Activities should be concentrated in time and space to the extent feasible to minimize disturbance. Effects of such projects will be analyzed in the National Environmental Policy Act process.
• Helicopter use for short-term activities such as prescribed fire ignition/management, periodic administrative flights, fire suppression, search and rescue, and other similar activities do not constitute a project and do not detract from secure habitat.

• Motorized access routes with permanent barriers, decommissioned or obliterated roads, nonmotorized trails, winter snow machine trails, and other motorized winter activities do not count against secure habitat.
• Project activities occurring between December 1 and February 28 do not count against secure habitat.
• Minimize effects on grizzly habitat from activities based in statutory rights, such as access to private lands under the Alaska National Interest Lands Conservation Act and the 1872 General Mining Law. Where the mitigated effects exceed the 1998 baseline within the affected subunit, compensate secure habitat to levels at or above the 1998 baseline, in this order: 1) in adjacent subunits, or 2) nearest subunits, or 3) in areas outside the Primary Conservation Area adjacent to the subunit impacted.
• Honor existing oil and gas and other mineral leases. Proposed Applications for Permit to Drill and operating plans within those leases should meet the Application Rules for changes in secure habitat. New leases, Applications for Permit to Drill, and operating plans must meet the secure habitat and developed site standards.

Grizzly bear habitat conservation standard for developed sites
Inside the Primary Conservation Area, maintain the number and capacity of developed sites at or below 1998 levels, with the following exceptions: any proposed increase, expansion, or change of use of developed sites from the 1998 baseline in the Primary Conservation Area (Figure A-7) will be analyzed and potential detrimental and positive impacts on grizzly bears will be documented through biological evaluation or assessment. Projects that change the number or capacity of developed sites must follow the Application Rules.

Application Rules for developed sites
Mitigation of detrimental impacts must occur within the affected subunit and be equivalent to the type and extent of impact. Mitigation measures must be in place before implementation of the project or included as an integral part of the completion of the project.
• New sites must be mitigated within that subunit to offset any increases in human capacity, habitat loss, and increased access to surrounding habitats. Consolidation and/or elimination of dispersed campsites is adequate mitigation for increases in human capacity at developed campgrounds if the new site capacity is equivalent to the dispersed camping eliminated. • Administrative site expansions are exempt from human capacity mitigation expansion if such developments are necessary for enhancement of management of public lands and other viable alternatives are not available. Temporary construction work camps for highway construction or other major maintenance projects are exempt from human capacity mitigation if other viable alternatives are not available. Food storage facilities and management, including camp monitors, must be in place to ensure food storage compliance. All other factors resulting in potential detrimental impacts to grizzly bears must be mitigated as identified for other developed sites.
• To benefit the grizzly bear, capacity, season of use, and access to surrounding habitats of existing developed sites may be adjusted. The improvements may then be banked to mitigate equivalent impacts of future developed sites within that subunit.
• Minimize effects on grizzly habitat from activities based in statutory rights, such as the 1872 General Mining Law. Where the mitigated effects exceed the 1998 baseline within that subunit, provide mitigation to levels at or below the 1998 baseline in this order: 1) adjacent subunits, or 2) the nearest subunit, or 3) in areas outside the Primary Conservation Area adjacent to the

subunit impacted. Mitigation for Mining Law site impacts must follow standard developed site mitigation to offset any increases in human capacity, habitat loss, and increased access to surrounding habitats.
• Honor existing oil and gas and other mineral leases. Proposed Applications for Permit to Drill and operating plans within those leases should meet the developed site standard. New leases, Applications for Permit to Drill, and operating plans must meet the developed site standard.
• Developments on private land are not counted against this standard.

Grizzly bear habitat conservation standard for livestock grazing
Inside the Primary Conservation Area, do not create new active commercial livestock grazing allotments, do not increase permitted sheep animal months from the 1998 baseline (Figure A-9), and phase out existing sheep allotments as opportunities arise with willing permittees.

Application Rule for livestock grazing standard
Allotments include both vacant and active commercial grazing allotments. Reissuance of permits for vacant cattle allotments may result in an increase in the number of permitted cattle, but the number of allotments must remain at or below the 1998 baseline. Allow combining or dividing existing allotments as long as acreage in allotments does not increase. Any such use of vacant cattle allotments resulting in an increase in permitted cattle numbers could be allowed only after an analysis to evaluate impacts on grizzly bears.

Grizzly bear habitat conservation guideline for livestock grazing
Inside the Primary Conservation Area, cattle allotments or portions of cattle allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, livestock allotments or portions of allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees.

Application Rule for livestock grazing guideline
Permittees with allotments with recurring conflicts will be given the opportunity to place livestock in a vacant allotment outside the Primary Conservation Area where there is less likelihood for conflicts with grizzly bears as these allotments become available.

Grizzly bear habitat conservation standard for nuisance bears
Coordinate with state wildlife management agencies to apply Conservation Strategy nuisance bear standards.

Grizzly bear habitat conservation standard for food storage
Inside the Primary Conservation Area, minimize grizzly bear/human conflicts using food storage, information and education, and other management tools.

Grizzly bear habitat conservation guideline for food storage
Outside the Primary Conservation Area in areas identified in state management plans as biologically

suitable and socially acceptable for grizzly bear occupancy, emphasize proper sanitation techniques, including food storage orders, and information and education, while working with local governments and other agencies.

Grizzly bear habitat conservation guideline for winter motorized access
Inside the Primary Conservation Area, use localized area restrictions to address conflicts with winter use activities, where conflicts occur during denning or after bear emergence in the spring.

Grizzly bear habitat conservation guideline for food sources
Inside and outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, maintain the productivity, to the extent feasible, of the four key grizzly bear food sources as identified in the Conservation Strategy. Emphasize maintaining and restoring whitebark pine stands inside and outside the Primary Conservation Area.

Grizzly bear habitat conservation monitoring for secure habitat and motorized access
Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: secure habitat, open motorized access route density (OMARD) greater than one mile per square mile, and total motorized access route density (TMARD) greater than two miles per square mile in each subunit on the national forest. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, monitor, and submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in secure habitat by national forest every two years.

Grizzly bear habitat conservation monitoring for developed sites
Inside the Primary Conservation Area, monitor, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in the number and capacity of developed sites on the national forest, and compare with the 1998 baseline.

Grizzly bear habitat conservation monitoring for livestock grazing
Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: the number of commercial livestock grazing allotments on the national forest and the number of permitted domestic sheep animal months. Inside and outside the Primary Conservation Area, monitor and evaluate allotments for recurring conflicts with grizzly bears.

Grizzly bear habitat conservation monitoring for habitat effectiveness
Inside the Primary Conservation Area, monitor, and every five years submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in seasonal habitat effectiveness in each Bear Management Unit and subunit on the national forest through the application of the Cumulative Effects Model or the best available system and compare outputs to the 1998 baseline. Annually review Cumulative Effects Model databases and update as needed. When funding is available, monitor representative non-motorized trails or access points where risk of grizzly bear mortality is highest.

Grizzly bear habitat conservation monitoring for whitebark pine

Monitor whitebark pine occurrence, productivity, and health inside and outside the Primary Conservation Area in cooperation with other agencies. Annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: results of whitebark pine cone production from transects or other appropriate methods, and results of other whitebark pine monitoring.

3—Nuisance bear standards

Nuisance bear standards from the 2003 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area

The focus and intent of nuisance grizzly bear management inside and outside the Primary Conservation Area are predicated on strategies and actions to prevent grizzly bear/human conflicts. It is recognized that active management aimed at individual nuisance bears will be required in both areas (inside and outside the Primary Conservation Area). Management actions outside the Primary Conservation Area will be implemented according to state management plans in coordination with landowners and land management agencies. These actions will be compatible with grizzly bear population management objectives for each state for the areas outside the Primary Conservation Area.

General criteria

Location, cause of incident, severity of incident, history of bear, health/age/sex of bear, and the demographic characteristics of animals involved will all be considered in any relocation or removal. Removal of nuisance bears will be carefully considered and consistent with mortality limits for the Greater Yellowstone Area as described in the Conservation Strategy. Recognizing that conservation of female bears is essential to maintenance of a grizzly population, removal of nuisance females will be minimized.

Within the Primary Conservation Area

Within the Primary Conservation Area, management of nuisance bears will be addressed according to the following standards:

- Bears displaying food conditioning and/or habituation behaviors may be either relocated or removed based on specific details of the incident. State wildlife agencies, following consultation with other appropriate management authorities, and national parks will make this judgment after considering the cause, location, and severity of the incident or incidents.
- Bears may be relocated as many times as judged prudent by management authorities. No bear may be removed for any offense, other than unnatural aggression, without at least one relocation unless representatives of affected agencies document the reason in writing. All relocations outside the Primary Conservation Area will be governed by state management plans.
- Bears may be preemptively moved when they are in areas where they are likely to come into conflicts with site-specific human activities, but only as a last resort. Such preemptive moves will not count against the bear as nuisance moves.
- Bears preying on lawfully present livestock (cows, domestic sheep, horses, goats, llamas, etc.) on public lands will be managed according to the following criteria:
  - No grizzly bear involved in livestock depredations inside the Primary Conservation Area shall be removed unless it has been relocated at least one time and continues to cause livestock depredations. This does not apply to depredations occurring in sheep allotments inside the Primary Conservation Area in areas that were designated Management Situation 1 under the 1986 Interagency Grizzly Bear Guidelines.

EXHIBIT 6: FALL ROAD DENSITY and SECURE HABITAT			
Hunting Unit	1986 Plan FALL Road Density Condition / % Secure Habitat	2009 Plan Desired FALL Road Density / % Secure Habitat	
210	0.9 mi-sq mi/ 56%	0.9 mi-sq mi / 56%	
211	0.6 / 72	0.5 / 73	
212	1.3 / 44	1.4 / 45	
213	1.5 / 38	1.4 / 41	
214	1.6 / 50	1.6 / 50	
215	1.9 / 29	1.5 / 29	
216	0.9 / 59	0.8 / 63	
300	0.7 / 66	0.6 / 66	
302	1.2 / 36	1.0 / 41	
311	0.0 / 93	0.0 / 93	
318	1.9 / 32	1.8 / 32	
319	0.7 / 67	0.6 / 69	
320	0.7 / 61	0.8 / 61	
321	1.1 / 52	1.1 / 60	
323	0.5 / 73	0.5 / 73	
324	0.5 / 72	0.4 / 75	
327	0.8 / 54	0.8 / 54	
328	1.0 / 50	0.8 / 58	
329	1.0 / 52	1.1 / 55	
330	0.7 / 63	0.7 / 63	
331	1.4 / 49	1.5 / 53	
332	0.8 / 62	0.8 / 63	
333	1.0 / 50	0.9 / 50	
340	1.5 / 42	1.4 / 43	
341	0.6 / 61	0.5 / 61	
350	1.5 / 51	1.3 / 55	
360	0.0 / 96	0.0 / 96	
362	0.0 / 97	0.0 / 97	
370	0.9 / 54	1.0 / 55	
Forest Wide Average Secure Habitat	57%	59%	

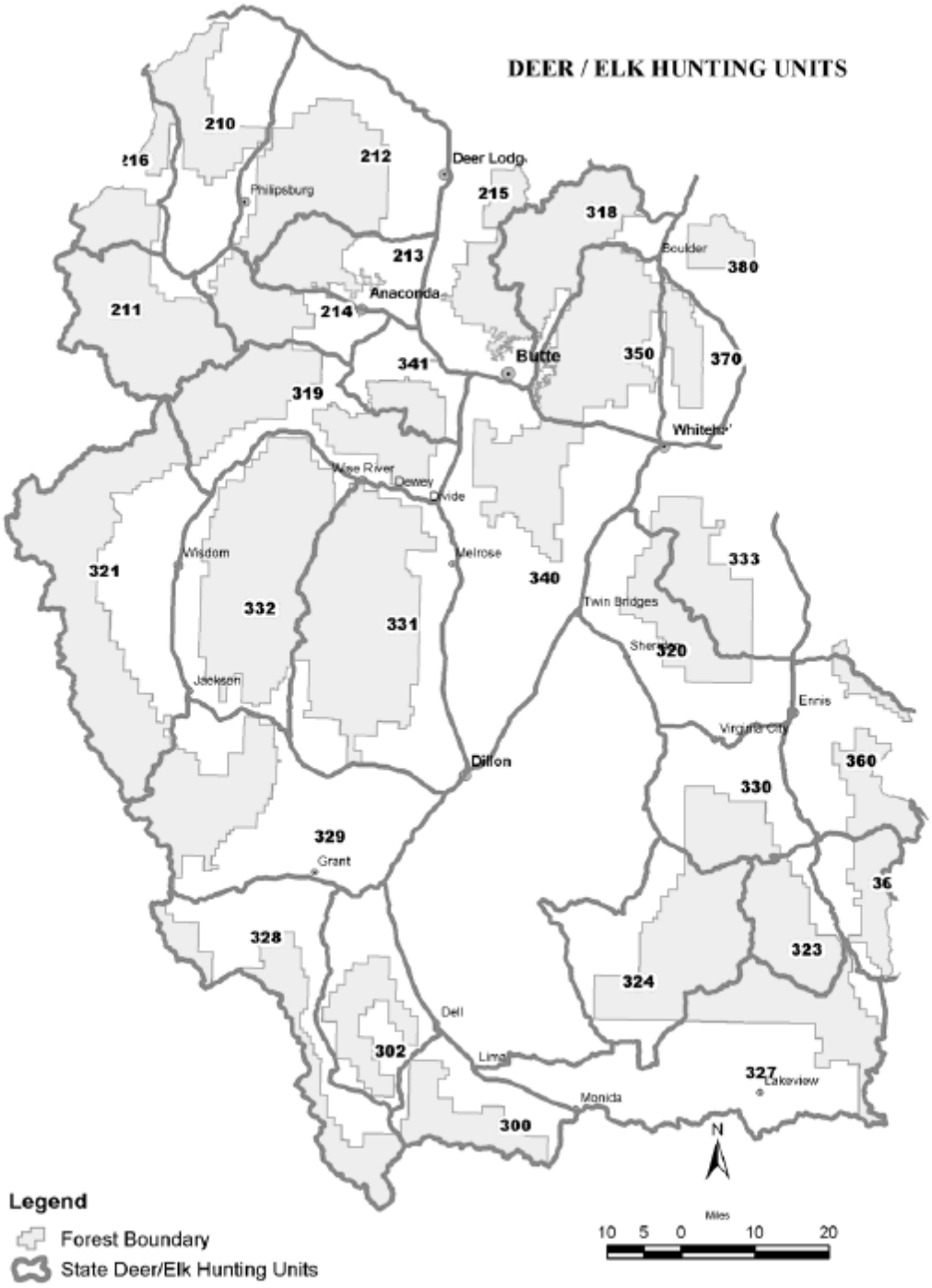

DEER / ELK HUNTING UNITS
210
216
212
Deer Lodge
Philipsburg
215
318
Boulder
380
213
Anaconda
211
214
Butte
350
370
341
319
Whitehall
Wise River
Dewey
Divide
Wisdom
Melrose
321
340
333
332
331
Twin Bridges
Sheridan
320
Jackson
Ennis
Virginia City
Dillon
360
330
329
Grant
36
328
323
324
Dell
302
Lima
327
Lakeview
Monida
300
N
Legend
Forest Boundary
State Deer/Elk Hunting Units
Miles
10 5 0 10 20

EXHIBIT 7: SUMMER ROAD DENSITY and SECURE HABITAT			
Landscape	1986 Plan Road Density Condition	2009 Plan Desired Summer Road Density	2009 Plan Summer Secure Habitat by Hunt Unit
Big Hole	1.3 mi-sq mi	1.2 mi-sq mi	Unit 319 – 59% 321 - 56
Boulder River	2.0	1.9	318 – 24
Clark-Fork - Flints	1.8	1.9	210 - 37 212 – 40 213 – 40 214 – 49 215 - 19
Gravelly	0.7	0.7	323 – 62 324 – 74 327 – 54 330 - 60
Jefferson River	1.8	1.6	340 – 38 350 – 46 370 - 53
Lima Tendoy	1.1	1.0	300 – 65 302 – 41 328 – 56 329 – 47
Madison	0.0	0.0	311 – 93 360 – 96 362 – 97
Pioneer	1.3	1.5	331 – 47 332 – 59
Tobacco Roots	1.2	1.3	320 – 47 333 – 44
Upper Clark Fork	2.0	2.0	341 - 25
Upper Rock Creek	0.9	0.9	211 – 65 216 – 56


LANDSCAPES
Deer Lodge
Philipsburg
Clark Fork - Flints
Upper Rock Creek
Anaconda
Boulder River
Boulder
Elkhorn
Upper Clark Fork
Whitehall
Wise River
Dewey
Divide
Jefferson River
Wisdom
Melrose
Twin Bridges
Tobacco Roots
Pioneer
Sheridan
Jackson
Ennis
Virginia City
Big Hole
Dillon
Madison
Grant
Gravelly
Lima Tendoy
Dell
Lima
Lakeview
Monida
N
Legend
Forest Boundary
Landscape Boundary
Miles
10 5 0 10 20

Exhibit 8: 2009 Beaverhead-Deerlodge NF Revised Forest Plan Standards, Guidelines, & Objectives

The following direction in the revised Forest Plan (USDA 2009a) is compatible with grizzly bear conservation

Forest Plan Recreation and Travel Management

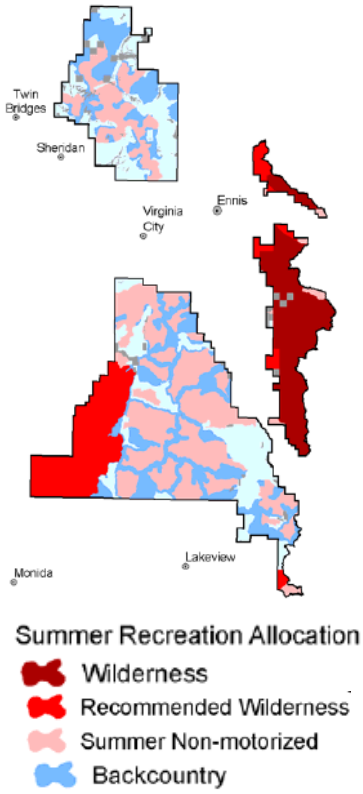
- **Standard 1:** Permanent road construction is not allowed in summer non-motorized allocations or in areas evaluated for wilderness potential.

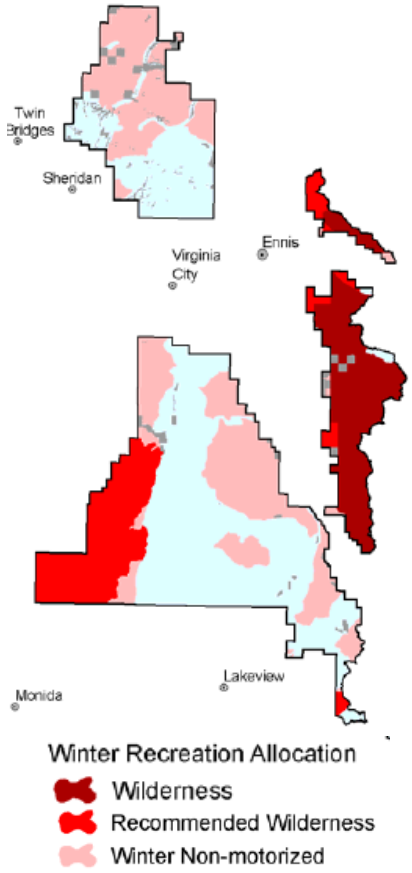
- **Standard 2:** Motorized vehicles are not allowed in summer or winter non-motorized allocations except for permitted or administrative use.

- **Standard 7:** Manage summer non-motorized allocations for either a primitive or semi primitive non-motorized setting from May 16 thru December 1.

- **Standard 8:** Manage winter non-motorized allocations for a primitive or semi-primitive nonmotorized setting from December 2 thru May 15.

- **Standard 10:** Manage recommended Wilderness for primitive or semi-primitive nonmotorized settings and protect Wilderness character.





Winter Recreation Allocations

Forest Plan Timber Management Goal

- Lands Not Suitable for Timber Production but Timber Harvest is Permitted to Meet Other Resource Objectives: Manage lands where timber harvest is allowed to protect other resource values. Resource objectives may include, but are not limited to, protection of wildland urban interface, protection of improvements, aquatic system restoration, fuel reduction, wildlife habitat enhancement, fisheries habitat enhancement, range improvement, and grass and shrub land maintenance.

  Salvage activities are allowed on these lands.

  The type, size, and extent of harvest will be determined through site specific analysis.

Forest Plan Timber Management Standard

- **Standard 6:** The following Timber Harvest Classification Protocol establishes where timber harvest is not allowed and where timber harvest is permitted to meet other resource objectives. Figure 9. (See Appendix A – Step 2 for application to all of the Gravelly Landscape and the vast majority of the Tobacco Roots Landscape)

Forest Plan Vegetation Objectives & Standards

Forested Vegetation
Resiliency: (See Glossary) Reduce forest density in the large size classes of dry forest communities and some lodgepole pine communities to maintain or improve resilient forest conditions.
Douglas-fir Type: Increase the number of acres in the 0 to 5 inch DBH class on approximately 20,000 acres, where one or more of the following circumstances occurs:
· Where burned or insect infested stands are dead or dying (see Glossary)
· Where needed to reduce the risk from wildfire for public and firefighter health and safety, or to protect structures, infrastructure, and municipal watersheds.
· Where needed to meet objectives for lands suitable for timber production.
· Douglas-fir which has established itself in former grasslands/shrublands (colonization) is not considered part of the Douglas-fir base described above.

Lodgepole Pine Type: Increase the number of acres in the 0 to 5 inch DBH class by approximately 74,000 acres, where one or more of the following circumstances occurs:
· Where burned or insect infested stands are dead or dying (see Glossary)
· Where needed to reduce the risk from wildfire for public and firefighter health and safety, or to protect structures, infrastructure and municipal watersheds
· Where needed to meet objectives for lands suitable for timber production.
Aspen Component: Increase the aspen component within lodgepole pine and other vegetation types, on 67,000 acres.
Whitebark Pine/Sub-Alpine Fir Type: Promote regeneration of whitebark pine on approximately 45,000 acres, largely through the use of fire.
All Other Forested Vegetation Types: Manage within the historic range of variability.

Grassland/Shrubland/Riparian: Reduce conifer encroachment on 74,000 acres of riparian areas, shrublands, and grasslands.

Standard 1: Mechanical vegetation treatments and prescribed fire in old growth stands (see Glossary) do not reduce the age and number of large trees and basal area below the 'minimum criteria' required for Eastern Montana old growth in Green et al, Table 3. Removing hazardous fuels within old growth stands is allowed if conducted in a manner that meets this requirement. This requirement does not apply to hazard tree removal and other public safety needs.

Standard 2: Silvicultural examinations and prescriptions will be required prior to timber manipulation or silvicultural treatment. Exceptions are allowed for removal of trees that block vision along roads, removal of hazard trees, clearing of rights-of-way, clearing for

mineral development, Christmas tree sales in encroachment areas, and removal of firewood.

Forest Plan Wildlife Goals

- Grizzly Bear Conflicts**:** Conflicts between grizzly bears and humans or human activities in occupied grizzly bear habitat, are managed such that the removal of a bear is not necessary.

- Wildlife Security**:** Secure areas and connectivity for ungulates and large carnivores are provided, while recognizing the variety of recreational opportunities.

- Grizzly Bear Security: The Gravelly Landscape is maintained to achieve 60% or greater secure areas (Scale - Gravelly Landscape).

- Wildlife Secure Areas and Connectivity: Manage density of open motorized roads and trails by landscape year-round, except fall rifle big game season, to achieve levels at or below the following (Scale - Landscapes):

Forest Plan Landscape Summer road density			
Landscape	2009 Revised Plan Desired Summer Open Motorized Road and Trail Density. Miles/sq. mi		*1986 Forest Plan Condition*
Madison	0.0		*0.0*
Gravelly	0.7		*0.8*
Tobacco Roots	1.3		*1.2*

- Manage open motorized road and trail density by MTFWP hunting units as of 2006 - on National Forest lands during the fall rifle big game season, to achieve levels at or below the following: (Scale - Hunting Unit) See exhibit 6 for entire Beaverhead-Deerlodge NF

Hunting Unit In Grizzly Bear DPS	2009 Revised Plan Desired Fall Open Motorized Road and Trail Density (10/15 – 12/1) Miles/sq. mi.		*1986 Plan Condition*
311	0.0		*0.0*
320	0.8		*0.8*
323	0.5		*0.7*
324	0.4		*0.5*
327	0.8		*0.9*
330	0.7		*0.7*
333	0.9		*1.1*
360	0.0		*0.0*
362	0.0		*0.0*

Forest Plan Wildlife Objectives

- Grizzly Bear Conflicts**:** Implement food storage and sanitation orders in areas classified as occupied grizzly bear habitat.

Forest Plan Wildlife Standards

- Standard 1**:** From October 15 to December 1 Hunting Units that exceed the open motorized road and trail density objective will have no net increase in designated open motorized road and trail mileage (Scale - Hunting Units on National Forest lands).

- Standard 2: Landscapes that exceed the open motorized road and trail objective will have no net increase in designated open motorized road and trail mileage (Scale – Landscapes on National Forest System Lands).

- Standard 5: Sheep allotments in the Gravelly Landscape which become vacant will be closed to sheep grazing or the vacant allotment may be used by an existing Gravelly Landscape sheep permittee, with no increase in permitted use (Scale - Gravelly Landscape).

- Standard 6: The Grizzly Bear Amendment applies to only the Beaverhead-portion of the BDNF and is incorporated as Appendix G (USDA 2006b).