

Appendix C

National Forest System Status Information

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FOREST CARNIVORE DATA FROM NATIONAL FOREST SYSTEM LANDS IN THE WESTERN UNITED STATES

The information presented in this appendix was compiled from responses to two separate forest carnivore questionnaires distributed to Forest Service Regions 1, 2, 3, 4, 5, 6, and 10 in early 1993. Each region designated a primary contact to serve on the Habitat Conservation Assessment Management Team. It was the duty of each representative to provide and verify accuracy of data. Regional Management Team contacts queried National Forest wildlife biologists, state agency biologists, and various affiliated researchers to provide the data for the western Regions that are summarized in the following tables.

These data represent the management situation that existed during the spring of 1993. Because Forest Service habitat management is an ever-evolving process to keep pace with advances in scientific knowledge, portions of this information will be rapidly outdated. Any use or extrapolation of the information presented in this appendix requires subsequent data verification. Nonetheless, we believe this background information contributes to an understanding of the current management situation on lands of the National Forest System in the western United States.

Table 1 presents the status of marten, fisher, lynx, and wolverine on individual National Forests within each Region. A species is considered present if a professional biologist has evaluated the data base and found identification to be conclusive. Care should be exercised in interpreting negative responses. Since absence cannot be proven, the only valid conclusion one may draw is that presence has not been verified on the Forest as of spring 1993. Some Forests chose to respond with "possible" or "unknown at this time" regarding presence. This generally indicates that a Forest lacks verified sightings, although the Forest is within the historic or potential range of the species.

Many National Forests use forest carnivores to indicate how particular habitats respond to manage-

ment activities or lack thereof. The Forest Land and Resource Management Plan normally documents status as a Management Indicator Species (MIS). This is noted in the MIS? column. Not applicable (N/A) in the MIS? column is entered where a species has not been documented as present.

Tables 2a-d itemize studies that are complete but not published in the scientific literature or were underway during the spring of 1993. This unpublished "gray" literature has limited availability but still may provide information useful for habitat management. This literature may not have received the intensive peer review necessary to ensure that the conclusions and inferences are thoroughly supported by the data. Should the reader desire to make use of these studies, it is prudent to use only the empirical data provided. This is not to imply that the authors/researchers have erred in their discussion or conclusions in any way, but rather that a possibility exists for an hypothesis to have been overlooked or non-rigorously tested due to limited scientific exposure and scrutiny. Individuals that are familiar with the research listed are identified for the convenience of the reader.

Tables 3a-d summarize the level of public interest in each species within the various NFS Regions. Responses to this question can assist the manager in assessing the social implications of various habitat management approaches and strategies. This information should be weighed in addition to biological considerations when analyzing management effects and possible strategies for the conservation of marten, fisher, lynx, and wolverine.

Finally, Tables 4a-d summarize the administrative status of each of the four species in the western United States by Forest Service Region and state within region. Each species is identified as either Endangered, Threatened, or of Special Concern. The designation of Forest Service "Sensitive," as outlined in the National Forest Management Act, and "Furbearing" status are also included. The latter indicates that the species is commercially trapped. This table complements the tables on "current management status" that are included in each species chapter.

Table 1.-Forest carnivore occurrence (from 1982 to the present) and status on National Forest System lands in the western United States. (Y=Yes; N=No; P=Possible; MU=Management unit; MR=Management requirement species; U=Unknown; MIS=Management indicator species; N/A=Not applicable)

Region	National Forest	MARTEN		FISHER		LYNX		WOLVERINE	
		Presence	MIS?	Presence	MIS?	Presence	MIS?	Presence	MIS?
1	Beaverhead	Y	Y	N	N/A	Y	N	Y	N
	Bitterroot	Y	Y	Y	N	Y	N	Y	N
	Clearwater	Y	Y	Y	N	Y	N	Y	N
	Custer	Y	Y	N	N/A	N	N/A	Y	N
	Deerlodge	Y	N	Y	N	Y	N	P	N
	Flathead	Y	Y	Y	N	Y	N	Y	N
	Gallatin	Y	N	N	N/A	Y	N	Y	N
	Helena	Y	N	P	N	Y	N	Y	N
	Idaho Panhandle	Y	Y	Y	N	Y	N	Y	N
	Kootenai	Y	N	Y	N	Y	N	Y	N
	Lewis and Clark	Y	N	Y	N	Y	Y	Y	Y
	Lolo	Y	N	Y	N	Y	N	Y	N
	Nez Perce	Y	Y	Y	Y	Y	N	Y	N
2	Arapaho-Roosevelt	Y	Y	N	N/A	N	N/A	N	N/A
	Bighorn	Y	Y	Y	N	N	N/A	N	N/A
	Black Hills	Y	N	N	N/A	N	N/A	N	N/A
	Grand Mesa	Y	Y	N	N/A	N	N/A	N	N/A
	Gunnison	Y	Y	N	N/A	N	N/A	N	N/A
	Medicine Bow	Y	Y	N	N/A	N	N/A	N	N/A
	Pike	Y	Y	N	N/A	N	N/A	N	N/A
	Rio Grande	Y	Y	N	N/A	N	N/A	N	N/A
	Routt	Y	Y	N	N/A	N	N/A	N	N/A
	San Isabel	Y	Y	N	N/A	N	N/A	N	N/A
	San Juan	Y	Y	N	N/A	N	N/A	N	N/A
	Shoshone	Y	Y	N	N/A	N	N/A	N	N/A
	Uncompahgre	Y	Y	N	N/A	N	N/A	N	N/A
	White River	Y	N	Y	N	N	N/A	N	N/A
3	Carson	Y	N	N	N/A	N	N/A	N	N/A
	Santa Fe	Y	N	N	N/A	N	N/A	N	N/A
4	Ashely	Y		N	N/A	N	N/A	N	N/A
	Boise	Y		N	N/A	N	N/A	Y	N
	Bridger-Teton	Y		N	N/A	N	N/A	Y	N
	Caribou	Y		N	N/A	Y	Y	Y	N
	Challis	Y		N	N/A	N	N/A	Y	N
	Dixie	N	N/A	N	N/A	N	N/A	N	N/A
	Fishlake	N	N/A	N	N/A	N	N/A	N	N/A
	Humboldt	N	N/A	N	N/A	N	N/A	N	N/A
	Manti-LaSal	N	N/A	N	N/A	N	N/A	N	N/A
	Payette	Y		Y		N	N/A	Y	N
	Salmon	Y	Y	N	N/A	Y	Y	Y	N
	Sawtooth	Y		N	N/A	N	N/A	Y	N
	Targhee	Y		Y		N	N/A	Y	N
	Toiyabe	Y		N	N/A	N	N/A	Y	N
Uinta	N	N/A	N	N/A	N	N/A	N	N/A	
Wasatch-Cache	Y		N	N/A	Y	N	Y	N	
5	Eldorado	Y	N	Y	N	N	N/A	N	N/A
	Inyo	Y	N	N	N/A	N	N/A	Y	N
	Klamath	Y	N	Y	N	N	N/A	Y	N
	Lk Tahoe Basin MU	Y	N	N	N/A	N	N/A	Y	N
	Lassen	Y	Y	N	N/A	N	N/A	Y	N
	Mendocino	Y	N	Y	N	N	N/A	N	N/A

(continued)

Table 1.-(continued)

Region	National Forest	MARTEN		FISHER		LYNX		WOLVERINE	
		Presence	MIS?	Presence	MIS?	Presence	MIS?	Presence	MIS?
	Modoc	Y	Y	N	N/A	N	N/A	N	N/A
	Plumas	Y	Y	N	N/A	N	N/A	N	N/A
	Sequoia	Y	N	Y	N	N	N/A	Y	N
	Shasta-Trinity	Y	N	Y	N	N	N/A	Y	N
	Sierra	Y	N	Y	N	N	N/A	Y	N
	Six Rivers	Y	N	Y	N	N	N/A	Y	N
	Stanislaus	Y	N	Y	N	N	N/A	Y	N
	Tahoe	Y	Y	Y	N	N	N/A	Y	Y
6	Colville	Y	MR	N	N/A	Y	N	Y	N
	Deschutes	Y	MR	N	N/A	N	N/A	Y	N
	Fremont	Y	MR	N	N/A	N	N/A	N	N/A
	Gifford Pinchot	Y	MR	Y	N	Y	N	Y	N
	Mt.Baker/Snoqualmie	Y	MR	U	N	Y	N	P	N
	Mt. Hood	Y	MR	N	N/A	Y	N	Y	N
	Malheur	Y	MR	U	N	Y	N	Y	N
	Ochoco	Y	N	N	N/A	N	N/A	Y	N
	Okanogan	Y	MR	Y	N	Y	Y	Y	N
	Olympic	Y	MR	U	N	N	N/A	N	N/A
	Rogue River	Y	MR	Y	N	N	N/A	Y	N
	Siskiyou	Y	MR	Y	N	N	N/A	Y	N
	Siuslaw	Y	MR	N	N/A	N	N/A	N	N/A
	Umatilla	Y	MR	U	N	Y	N	Y	N
	Umpqua	Y	MR	Y	N	U	N	Y	N
	Wallowa Whitman	Y	MR	Y	N	Y	N	Y	N
	Wenatchee	Y	MR	Y	N	Y	N	Y	N
	Willamette	Y	MR	Y	N	U	N	Y	N
	Winema	Y	MR	Y	N	Y	N	Y	N
10	Chugach	Y	Y	N	N/A	Y (cyclic)	N	Y	N
	Tongass	Y	Y	N	N/A	Y (cyclic)	N	Y	N

Table 2a.-Unpublished studies conducted on marten.

Region	National Forest	Type of study	Contact person
1	Beaverhead & Gallatin	Habitat use	Jeff Jones or Marion Cherry
2	Black Hills	Introduction/life history	Barry Parrish
3		None	
4	Ashley	Presence/absence surveys	Kathy Paulin
5	Lassen	Habitat use patterns in patchy (logged) environment (1st yr)	Cindy Zabel
	Sierra	Habitat relationships	Steve Laymon
	Six Rivers	Habitat relationships & demographics (in progress)	Bill Zielinski
	Tahoe	Ecology (1980 MS thesis) Effects of salvage harvest (in progress)	Terry Simon-Jackson Sandy Martin
6	Mt. Baker/Snoqualmie Olympic Willamette	Status reports Long-term habitat ODFW ¹ - track, trap, photo	Charles Vandemoer PNW ² -Olympia, WA Cory Heath
10	Tongass	Habitat relationships, demographics, ecology	Chris Iverson

¹ ODFW = Oregon Department of Fish and Wildlife

² PNW = USDA Forest Service, Pacific Northwest Experiment Station

Table 2b.-Unpublished studies conducted on fisher.

Region	National Forest	Type of study	Contact person
1	Kootenai	Habitat use and dispersal Population augmentation	Bob Summerfield Jeff Jones
2		None	
3		Does not occur	
4		None	
5	Sequoia	Habitat relationships and competition with marten (in progress)	Bill Zielinski
	Shasta-Trinity	Habitat use-telemetry to test validity of R5 survey protocol	Rick Golightly
	Six Rivers	Habitat relationships-telemetry	Bill Zielinski
6	Mt. Baker-Snoqualmie	Status reports	Charles Vandemoer
10		Does not occur	

Table 2c.-Unpublished studies conducted on lynx.

Region	National Forest	Type of study	Contact person
1		None	
2		None	
3		Does not occur	
4		None	
5		Does not occur	
6	Mt. Baker-Snoqualmie Okanogan	Status reports 6-Year research	Charles Vandemoer Bob Naney
10		None	

Table 2d.-Unpublished studies conducted on wolverine.

Region	National Forest	Type of study	Contact person
1		None	
2		None	
3		Does not occur	
4	Boise	Ecology and demographics	John Erickson
	Challis	Ecology and demographics	Dave Reeder
	Sawtooth	Ecology and demographics	Howard Hudak
5		None	
6	Mt. Baker-Snoqualmie	Status reports	Charles Vandemoer
	Mt. Hood	Literature search	Barb Knott
10		None	

Table 3a.-Level of public interest in the Forest Service's management of marten habitat.

Region 1	Listing as Forest Service Sensitive has heightened public awareness, and marten are tied to the old-growth forest issue.
Region 2	Currently, marten are not a significant issue on any Forest in Region 2, It is often raised as an issue during public scoping at the project level for several Forests. Marten is generally included in a long list of species that may have connections with habitat fragmentation or forest practices. No appeals or litigations specific to marten have been recorded at this time.
Region 3	Marten habitat management is not a major issue in the Region. The species occurs on only 2 Forests --- the Carson and Santa Fe, It has not been an appeal issue. In the Forest Land and Resource Management Plans for these two Forests, marten was an issue as one of several sensitive species mentioned. It is occasionally mentioned in letters to these Forests and was raised as an issue in one timber sale on the Santa Fe that was eventually dropped from consideration.
Region 4	The Salmon National Forest has had one appeal on one timber sale, No other Forests have been appealed on marten-related issues,
Region 5	Within the last 7 years, there have been 45 appeals, one lawsuit, and 12 Freedom of Information Act (FOIA) requests for information that have dealt with marten. The concern of the public is evident by the high profile of this species in California as well as by the 58 actions listed above.
Region 6	The greatest point of contention appears to be the effectiveness of the "Management Requirement" concept with respect to maintaining population viability over time. The Natural Resources Defense Council takes issue with our approach. Many forest plan appeals were filed. Appeals challenged the marten population estimates as well as timber rotation lengths necessary to meet marten life history/habitat requirements. Many concerns were expressed regarding the effects of management on populations and distribution.
Region 10	Tongass National Forest - Timber harvest directly affects preferred habitats; open roads result in Increased trapping pressure, The issue has been raised consistently during Forest-wide and project-level planning for both subsistence and sport trapping. Chugach National Forest - Spruce bark beetle infestations have resulted in changing habitat composition and structure. The effects of the infestation and subsequent management practices may affect marten habitats and populations. The issue has been raised during project planning.

Table 3b.-Level of public interest in the Forest Service's management of fisher habitat.

Region 1	Listing the fisher as Forest Service Sensitive has heightened public awareness of this species.
Region 2	Occurring only in the state of Wyoming, the fisher does not seem to be much of an issue.
Region 3	Fisher do not occur in New Mexico or Arizona.
Region 4	There appears to be little concern for fisher. There have been neither appeals nor litigations at the project or Forest planning levels.
Region 5	Within the last 7 years, there have been 41 appeals, one lawsuit, and 12 Freedom of Information Act (FOIA) requests for information that have dealt with fisher. The concern of the public is evident by the high profile of this species in California, as well as by the 54 actions listed above, The Pacific subspecies was petitioned for federal listing under the Endangered Species Act, but the petition was denied largely due to lack of information.
Region 6	Fisher habitat has not been a MAJOR issue, with the limited exception of some southern Oregon Forests.
Region 10	Fisher do not occur in Alaska.

Table 3c.-Level of public interest in the Forest Service's management of lynx habitat.

Region 1	Listing the lynx as Forest Service Sensitive has heightened public awareness.
Region 2	Currently, lynx have not been a significant issue on any Forest. It has been raised as an issue during public scoping at the project level for several Forests: the Routt, San Juan, and White River. These were ski area development or expansion projects. Lynx habitat management was mentioned during pre-appeal discussions on the Lake Catamount Ski Area Environmental Impact Statement but was not included in the final appeal.
Region 3	Lynx do not occur in New Mexico or Arizona.
Region 4	There appears to be little public concern for lynx. There have been no appeals or litigation concerning this species during project National Environmental Policy Act (NEPA) analysis or Forest land management planning.
Region 5	Lynx do not occur in California.
Region 6	In north-central Washington, the issue of both federal and state status has been large. Effects of management in general, road construction in particular, and entry into roadless areas have been hotly debated.
Region 10	Formerly a U.S. Fish and Wildlife Service Category 2 species, there is currently an open trapping season on both Forests. Public concern appears limited.

Table 3d.-Level of public interest in the Forest Service's management of wolverine habitat.

Region 1	Listing as Forest Service Sensitive has heightened public awareness.
Region 2	Currently, the wolverine has not been a significant issue on any Forest. It has been raised as an issue during public scoping at the project level for several Forests: the Routt, San Juan, and White River. These were ski area development or expansion projects. Wolverine habitat management was mentioned during pre-appeal discussions on the Lake Catamount Ski Area EIS but was not included in the final appeal.
Region 3	Wolverine do not occur in Arizona or New Mexico.
Region 4	The Sawtooth National Forest Land and Resource Management Plan was appealed based on failure to display the effects of off-road vehicle (ORV) use and timber management activities on wolverine. No other Forest in Region 4 has been appealed concerning this species.
Region 5	<p>Within the last 7 years, the Region has had 14 appeals and 6 Freedom of Information Act (FOIA) requests for information that have dealt with wolverine. The concern of the public is evident by the 20 actions listed above. Although maintaining a lower profile than either fisher or marten, the wolverine has the potential to become a major issue once presence can be verified on Forests in the Region.</p> <p>The Region also invested roughly \$40,000 in the California Cooperative Wolverine Study over the last two years. This study employs remote infra-red triggered cameras placed over bait in the winter to obtain photo documentation of species' presence,</p>
Region 6	Wolverine have been an appeal point on several environmental assessments. Concerns included maintaining population viability, entering roadless areas (reducing refugia), lack of information (especially population and distribution), habitat use, and lack of conservation measures.
Region 10	Wolverine habitat management is not an issue.

Table 4a.-Status of marten in the western United States. ^R= Reintroduced population; MR = Management requirement species; S = Forest Service sensitive.

Region	State	FS	State endangered	State threatened	State Species of special concern	Furbearing
1	Idaho					X
	Montana					X
2	Colorado	S				X
	South Dakota	S				X ^R
	Wyoming	S				X
3	New Mexico	S	X			X
4	Idaho	S				X
	Nevada	S			No Season	X
	Utah	S			X	
	Wyoming	S				X
5	California	S				
6	Oregon	MR			Sensitive	
	Washington	MR				X
10	Alaska					X

Table 4b.-Status of fisher in the western United States. The Pacific fisher is a federal C2 species in California, Oregon, and Washington. A C2 designation indicates that more information is necessary before a listing decision can be made by USFWS. RH = Restricted Harvest; S = Forest Service Sensitive; N/A = Not Applicable.

Region	State	FS	State endangered	State threatened	State species of special concern	Furbearing
1	Idaho	S			X	
	Montana	S				X, RH
2	Colorado	S	No records			
	South Dakota	S	No records			
	Wyoming	S			"Protected"	
4	Idaho	S			X	
	Nevada	N/A				
	Utah	S		X(Extirpated)		
	Wyoming	S			X	
5	California	S			X	
6	Oregon				Sensitive	
	Washington		Candidate	Candidate		Candidate Sensitive

Table 4c.-Status of lynx in the western United States. The lynx is a federal C2 species in AK, CO, ID, MT, NV, OR, UT, WA, and WY. A C2 designation indicates that more information is necessary before a listing decision can be made by USFWS. RH = Restricted Harvest; S = Forest Service Sensitive.

Region	State	FS	State endangered	State threatened	State species of special concern	Furbearing
1	Idaho	S			X	
	Montana	S				X, RH
2	Colorado	S	X			
	South Dakota	N/A				
	Wyoming	S			"Protected"	
4	Idaho	S			X	
	Nevada		No records			
	Utah	S			X	
	Wyoming	S			X	
6	Oregon	S				
	Washington	S		X		
10	Alaska					X

Table 4d.-Status of wolverine in the western United States. *Gulo gulo luscus* is a federal C2 species in CO, ID, MT, NV, UT, and WY. *Gulo gulo luteus* is a federal C2 species in CA, OR, and WA. A C2 designation indicates that more information is required by USFWS prior to a listing decision. RH = Restricted Harvest; S = Forest Service Sensitive.

Region	State	FS	State endangered	State threatened	State species of special concern	Furbearing
1	Idaho	S			X	
	Montana					X, RH
2	Colorado	S	X			
	South Dakota	N/A				
	Wyoming	S			"Protected"	
4	Idaho	S			X	
	Nevada	S	Old records	No status		
	Utah	S			X	
	Wyoming	S			X	
5	California			X		
6	Oregon	S		X		
	Washington	S				X
10	Alaska					X