Wildlife and Fisheries Staff
Region 1
3/92

Interim Direction for the Management of TES Species

Threatened, endangered and sensitive species management will remain part of our day to day resource management work. Direction for the management of TES species, as outlined in FSM 2670, will continue to provide the national direction addressing conservation, recovery and consultation related to these species. Recovery plans, developed in cooperation with the USFWS, provide us the blueprint of specific recovery direction for some of our federally listed species. Long term management direction for our sensitive species will be provided in conservation strategies. These strategies will present direction on managing population viability throughout the range of the species (or for a specific population) as required by NFMA. The range of many of our sensitive species will require inter-regional conservation strategies, which are being initiated for the bull trout, forest owls, bank monkeyflowers to name a few. Prior to the completion of these strategies, interim direction (standards) are being be developed for many of our high priority species (relative to effects) in order to provide consistency between Forests and Regions. When appropriate species will be grouped together to address their shared ecological and management needs.

The relationship between the Regions TES and Sustaining Ecological Systems programs can be thought of as TES species providing the internal details of a sustained system. An example maybe where the distribution of a sensitive plant metapopulation or the plants dispersal mechanisms would define the geographic and temporal scale applied to the management of varying forest succesional stands over a landscape.

-Recommend road density less than 1 mi/sq mi (Naney).
-Maintain snags according to Forest Plan standards
-Control burns of relatively small sizes in lodgepole for prey habitat.
-Maintain contiguous cover over large areas. Connectivity between cover is important. Corridors should be at least 300 ft wide.
-Maintain all successional stages of lodgepole for lynx habitat.
-Openings should be less than 600 ft wide.
-Monitor to lynx by snow tracking and recording all observations reported.

References:

Brainerd, S.M. 1985. Reproductive ecology of bobcats and lynx in western Montana. MS thesis, Univ. of Montana, Missoula. 85 pp.

Brittell, Washington Dept. of Wildlife, Memorandum to B. McLauglin and R. Duff. May 24, 1984.

Hash, H. 1991. MDFWP. Lynx, Fisher, and Wolverine Coordination Meeting.

Koehler, G.M. et al. 1979. Lynx movements and habitat use in Montana. The Canadian Field-Naturalist, 93:441-442.

McCord, C.M. and J.E. Cardoza. pp. 728-766 *In* Chapman, J.A. and G.A. Feldhamer. (eds.) 1982. Wild Mammals of North America. John Hopkins Univ. Press, Baltimore and London. 1147 pp.

MDFWP. 1990. Montana Lynx population status and considerations.

Naney, R. 1991. USDA Forest Service. Lynx, Fisher, and Wolverine Coordination Meeting.

Nellis, C.H. Pp. 123-124 *In* Clark, T.W, A.H.Harvey, R.D.Dorn, D.L. Genter, and C. Groves, eds. 1989. Rare, sensitive and threatened species of the Greater Yellowstone Ecosystem. Northern Rockies Conservation Cooperative, Montana Natural Heritage Program, The Nature Conservancy, and Mountain West Environmental Services. 153 pp.

Roy, K. 1989. Formulation of a Montana lynx management plan. Dept. of Wildlife Biol., Univ. of Montana, Missoula. 13 pp.

Smith, D.S. 1984. Habitat use, home range, and movements of bobcats in western Montana. M.S. Thesis. Univ. of Montana, Missoula. 58 pp.

Stephenson, R.O. 1984. The relationship of fire history to furbearer populations and harvest. Alaska Dept. of Fish and Game. Final Report. Federal Aid in Wildlife Restoration. Project W-22-2, Job 7.13R.

Ward, R.M. and C.J. Krebs. 1985. Behavioral responses of lynx to declining snowshoe hare abundance. Can. J. Zool 63:2817-2824.

WOLVERINE *(Gulo gulo)*

Habitat Type: Wolverines best habitat is the tundra. Ranging over a variety of habitats and elevations in the Northern Rockies the wolverine does not appear to be affected by topography. Wolverines studied in Montana appeared to select *Abies* cover types. In winter months they can be found at low elevation along streams and associated with large ungulate concentrations such as found on winter ranges. Areas with abundant ungulate populations and low road densities provide good wolverine habitat. Wolverine have been

noted in low elevations along riparian areas in the winter. The Montana study found little sign of wolverine use in clearcuts other than straight-line movement through these large openings. Most animal locations (70% of 576 radio locations) were in large areas of medium or scattered mature timber. Resting locations were in ecotonal areas, small pockets of timber and rocky areas.

Unique Ecological/Biological Features: Primarily nocturnal, one is more likely to find sign than actually observe wolverine. Wolverine scent mark a lot leaving signs such as chewing, biting and rubbing on small trees and rocks. Their sign can be detected around tree wells appearing as if they are hunting for food using their keen sense of smell. Wolverine prey upon beaver, porcupine, other mustelids, birds, livestock and snowshoe hares. Deer and elk remains are important food items. Mostly thought of as a scavenger, they will also eat berries, mice and fish. As a scavenger they make long seasonal movements as a solitary traveler. This behavior of traveling widely in an area may give a false impression of abundance.

Sensitive Species Criteria: The wolverine is classified as a Category 2 species by the USFWS. It is managed as a furbearer in Montana, a non-game species in Idaho and a sensitive species by the Forest Service and Bureau of Land Management. Human induced mortality has had a significant impact on regional populations. Trapping of wolverine is permitted in Montana.

Demographics/Scale: Wolverine are nonmigratory though adults may wander long distances. Wolverines do not hibernate. Individuals have been documented at moving up to 100 miles in a few days. Males are thought to be the first animals to pioneer new areas. A home ranges have been estimated at 165 square miles for males and 140 square miles for females. Home ranges do overlap between individuals of the same and opposite sex. They are still very solitary in nature. One wolverine per 25 square miles is a good density and may be optimum (pers. comm. H.Hash, 1991). A population is made up of widely ranging individuals that show fidelity to a specific area that they will return to. The availability of denning sites and food are important determinants of territory size.

Wolverines have a low reproductive rate, with a mean litter size of 2.2 young. Females are subject to many problems and diseases that may affect their reproductive success. The young do not disperse far from their birth site. The average life span is 5-8 years.

Limiting Factors/Effects: Availability of denning sites and food appears to determine home range and traveling distances. Natal dens in Montana were most commonly found under snow-covered tree roots, logjams or rocks. Winter is the most stressful period on the animal.

Management Strategies: the difficulty in studying this species is reflected in the lack of information specifically on age and sex distribution, effects of trapping and population viability. Without concrete information these points are offered for consideration in project analysis:

-maintain low open road densities (>1 mile per square mile) will reduce easy access to trapping and thus reduce a significant impact to wolverine

-Management Situation I grizzly bear habitat guidelines are thought to provide appropriate management guidelines for wolverine in addressing clearcut sizes and road densities.

-because wolverine are susceptible to trapping, scent and bait trapping should be prohibited in areas where wolverine expansion is desired (Hash, 1988).

-maintain and enhance wintering ungulate populations in remote areas, inaccessible to trapping pressure or concentrated human use