Mr. Kevin Kliethermes
Construction and Contract Administration Engineer
Federal Highway Administration
Galtier Plaza, Box 75
380 Jackson Street, Suite 500
St. Paul, Minnesota 55101-2904

Reply Ref.: S.P. 3807-44, and S.P. 3805-70, Minnesota

Dear Mr. Kliethermes:

This responds to your July 17, 2003, letter regarding the proposed reconstruction of the two segments of Trunk Highway (TH) 61, between Silver Cliff Tunnel and the Town of Silver Bay, in Lake County, Minnesota. By your letter you requested to enter into formal consultation with the U.S. Fish and Wildlife Service (Service), under section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq*.), following your determination that the proposed project may affect the Canada lynx (*Lynx canadensis*), a federally-listed threatened species in Minnesota.

The bald eagle (*Haliaeetus leucocephalus*) and the gray wolf (*Canis lupus*), both federally-listed threatened species, are also present in the project area. However, the Federal Highway Administration (FHWA) has made the determination that the proposed action may affect but is not likely to adversely affect either the bald eagle or the gray wolf. The U.S. Fish and Wildlife Service (Service) concurs with that determination. This precludes further action as required under section 7 of the Act for the bald eagle and the gray wolf. However, if new information indicates that the bald eagle or the gray wolf may be affected, consultation must be reinitiated.

The District Court for the District of Columbia issued an order on December 26, 2002, that enjoins the Service from issuing any written concurrence[s] that actions proposed by any Federal agencies may affect, but are not likely to adversely affect the Canada lynx. Therefore, until further notice, all consultations concerning effects to Canada lynx must be conducted in accordance with the direction of the Court. Specifically, any actions subject to consultation that may affect Canada lynx require formal consultation as described in 50 CFR 402.14. This requires the preparation of a biological opinion that addresses how the proposed action is

expected to affect Canada lynx in order to complete the procedural requirements of section 7 of the Act, as amended.

Consultation History

On May 9, 2003, Service biologist Paul Burke, and biologists Jason Alcott and Howard Maki, of the Minnesota Department of Transportation (MN/DOT), conducted a field review of the proposed projects. A list of species present in the project areas was provided and potential impacts were discussed. On June 23, 2003, the sites were again visited and further project details were discussed, including the above described legal action. On July 22, 2003, the Service received the FHWA letter of July 17 requesting the initiation of formal consultation. Several telephone conversations and electronic communications occurred between July 22 and the date of this transmittal in an effort to secure a better understanding of the scope and nature of the proposed action.

In compliance with the Court order, this document transmits the Service's final biological opinion (enclosed) based on our review of the Trunk Highway 61 project and its effects on the threatened Canada lynx in accordance with section 7 of the Act. A complete administrative record of this consultation is on file in this office.

After reviewing the current status of Canada lynx, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the proposed reconstruction of two segments of Trunk Highway 61, between Silver Cliff Tunnel and Silver Bay, Minnesota, is not likely to jeopardize the continued existence of the Canada lynx. No critical habitat has been designated for this species; therefore, none will be affected. Further, the Service does not anticipate the proposed action will result in the incidental take of Canada lynx.

DESCRIPTION OF THE PROPOSED ACTIONS

The Minnesota Department of Transportation is proposing to reconstruct a segment of TH 61 in the vicinity Silver Cliff Tunnel and the Town of Silver Bay, in Lake County, Minnesota. The termini of the proposed project will be from reference point 053+00.657 to 057+00.636, a length of approximately 4.0 miles. The project will involve some grading and surfacing on new alignment to correct substandard horizontal and vertical alignments to provide better stopping distances. This project will require additional right-of-way.

Alignment shifts will vary throughout the project. Portions of the reconstruction will involve shifting the roadway inland up to approximately 95 feet while in other areas the roadway will be shifted lakeside up to approximately 113 feet. The project will be designed using both urban and rural highway sections.

The urban section will consist of two 16 ft. driving lanes and 10 ft. paved shoulders (this includes 1.5 ft. gravel shoulders resulting in a total shoulder width of 11.5 ft.). In-slopes will be constructed at 1:4 and back-slopes will vary from 1:3 in cut areas to vertical in rock excavation

areas. Ditches will be as shallow as possible but of sufficient depth and gradients to provide adequate drainage.

The rural section will consist of two 12 ft. driving lanes and 10 ft. paved shoulders plus 1.5 ft. gravel shoulders resulting in a total shoulder length of 11.5 ft. In-slopes will be 1:4 and back-slopes will vary from 1:3 in cut areas to vertical in rock excavation areas. Ditches will be as shallow as possible but of sufficient depth and gradients to provide adequate drainage.

Bridge Number 3887 over Palisade Creek will be replaced. The existing concrete arch structure will be replaced with a single span bridge. The slopes have been reduced to 1:2 as a means to lessen impacts to the creek. There will be multiple culvert replacements/extensions throughout the project.

An underpass will be constructed for the connection of the Gitchi-Gami Trail and the Superior National Forest. This underpass will be used for bicyclists and pedestrians during the summer months and snowmobile traffic in the winter months.

The Minnesota Department of Transportation is proposing to reconstruct a segment of TH 61 between Silver Creek Cliff and the Lafayette Bluff tunnels in Lake County, Minnesota. The termini of this west segment of the project will be from reference point 031+00.018 to 033+00.616, a length of approximately 2.6 miles. The project will involve some grading and surfacing with portions along new alignment to correct substandard horizontal and vertical alignments to provide better stopping sight distances. This project also includes the extension of Bridge Number 5916, a concrete arch structure over the Encampment River. The bridge will be extended inland under the new alignment to correct a substandard horizontal curve. The project will require additional right-of-way.

Portions of this project will involve shifting the roadway inland while in other areas, the existing alignment will be used. The new alignment segments will meet or exceed the chosen 60-mph design speed criteria. This project will be built utilizing New Construction/Reconstruction Standards for a rural principal arterial having an Average Daily Traffic greater than 3000.

The rural design will consist of two 12 ft. driving lanes and 11.5 ft. shoulders (10.0 ft. paved). In-slopes vary from 1:4 normally to 1:2 in the area of the Encampment River to minimize impacts to that area. Ditches will be as shallow as possible, but of sufficient depth and gradients as to provide adequate roadway drainage and minimize impacts.

A southbound and northbound concrete lane will be constructed to provide passing opportunities. Each will be approximately one mile in length and have width of 12 ft.. Right and left turn lanes will be constructed at five locations to provide safer passing opportunities.

Temporary bypasses will be constructed as part of the proposed project. A temporary bypass near the Silver Creek tunnel will remain inplace after the project is completed to serve as a frontage road for residents living lakeside of TH 61.

STATUS OF THE SPECIES

Species Description

The Canada lynx is a medium-sized cat with long legs; large, well-furred paws; long tufts on the ears; and a short tail whose tip is entirely surrounded by black (McCord and Cardoza 1982, the tips of bobcat tails are black only on the upperside). The lynx's long legs and large, well-furred paws make it highly adapted for hunting in deep snow.

The winter pelage of the lynx is dense and has a grizzled appearance with grayish-brown mixed with buff or pale brown fur on the back and grayish-white or buff-white fur on the belly, legs and feet. Summer pelage of the lynx is more reddish to gray-brown (Koehler and Aubry 1994). Adult males average 10 kilograms (22 pounds) in weight and 85 centimeters (33.5 inches) in length (head to tail), and females average 8.5 kilograms (19 pounds) and 82 centimeters (32 inches) (Quinn and Parker 1987).

Classification of the Canada lynx (also called the North American lynx) has been subject to revision. In accordance with Wilson and Reeder (1993), the lynx in North America is *Lynx canadensis*. Previously the Latin name *L. lynx canadensis* was used for lynx (S. Williams, Texas Tech University, pers. comm. 1994). Other scientific names still in use include *Felis lynx* or *F. lynx canadensis* (Jones et al. 1986; Tumlison 1987).

In 1998, the lynx was proposed for listing as a threatened species under the Act (63 FR, July 8, 1998). The lynx in the contiguous U.S. were listed as threatened effective April 23, 2000 (65 FR 16052, March 24, 2000). The Service identified one distinct population segment in the lower 48 states. No critical habitat has been designated for the threatened population of Canada lynx in the contiguous United States. As explained in the final rule (65 FR 16052, March 24, 2000), designation of critical habitat would be prudent, but has been deferred until other higher priority work can be completed within the Service's current budget.

Life History

Lynx evidently require large areas containing boreal forest[1] habitat. In the northeastern U.S., lynx were most likely to occur in areas containing suitable habitat that were greater than 100 square kilometers (km^2) (40 square miles) (Hoving 2001). The requirement for large areas also is demonstrated by home ranges that encompass many square miles. The size of lynx home ranges varies with sex, age, abundance of prey, season, and the density of lynx populations (Hatler 1988; Koehler 1990; Poole 1994; Slough and Mowat 1996; Aubry et al. 2000; Mowat et al. 2000). Based on a limited number of studies in southern boreal forest, the average home range is 151 km^2 (58 mi^2) and 72 km^2 (28 mi^2) for males and females, respectively (Aubry et al. 2000). Recent home range estimates from Maine are 70 km^2 (27 mi^2) for males and 52 km^2 (20 mi^2) for females (G. Matula, in litt. 2003). Documented home ranges in both the southern

[1] The term ''boreal forest'' broadly encompasses most of the vegetative descriptions of this transitional forest type that makes up lynx habitat in the contiguous U.S. (Agee 2000).

and northern boreal forest, however, vary widely from 8 to 800 km ^{2} (3 to 300 mi ^{2}) (Saunders 1963; Brand et al. 1976; Mech 1980; Parker et al. 1983; Koehler and Aubry 1994; Apps 2000; Mowat et al. 2000; Squires and Laurion 2000; Squires et al. 2001; G. Matula, in litt. 2003). Generally, it is believed that larger home ranges, such as have been documented in some areas in the southern extent of the species' range in the West, are a response to lower-density snowshoe hare populations (Koehler and Aubry 1994; Apps 2000; Squires and Laurion 2000).

Long-distance movements greater than 100 kilometers (km) (62 miles) are characteristic of lynx (Mowat et al. 2000). Lynx disperse primarily when snowshoe hare populations decline (Ward and Krebs 1985; Koehler and Aubry 1994; O'Donoghue et al. 1997; Poole 1997). Subadult lynx also disperse even when prey is abundant (Poole 1997), presumably as an innate response to establish home ranges. Lynx also make exploratory movements outside their home ranges (Squires et al. 2001). Lynx are capable of moving extremely long distances greater than 500 km (310 mi) (Mech 1977; Brainerd 1985; Washington Department of Wildlife 1993; Poole 1997; Mowat et al. 2000; Squires et al. 2001).

Snowshoe hares are the primary prey of lynx, especially in the winter when they comprise 35-97 percent of the diet throughout the range of the lynx (Koehler and Aubry 1994). Other prey species include red squirrel (*Tamiasciurus hudsonicus*), other small mammals, and birds; lynx also eat carrion and, uncommonly, large mammals such as deer (*Odocoileus virginianus*), moose (*Alces alces*), and caribou (*Rangifer tarandus*) (Saunders 1963; van Zyll de Jong 1966; Nellis et al. 1972; Brand et al. 1976; Brand and Keith 1979; Quinn & Parker 1987; Koehler 1990; Staples 1995; O'Donoghue et al. 1998a,b). Where hare populations are cyclic, their densities decline due to reduced availability of high-quality food, increased predation, or both. When this occurs, birthrates and litter sizes of female lynx and survival of their kittens decreases (Nellis et al. 1972; Brand et al. 1976; Brand and Keith 1979; Poole 1994; Slough and Mowat 1996; O'Donoghue et al. 1997). The reduction in production and survival of young is the primary cause of population declines in lynx; reproduction "virtually ceases at the low point of the cycle" (Quinn & Parker 1987). Population dynamics of southern populations of snowshoe hare are poorly understood relative to those in northern latitudes (Hodges 2000b, Murray 2000). There is some evidence that populations in Minnesota also undergo distinct fluctuations over a 10-15 year period (Fuller & Heisey 1986), although it is not yet clear whether snowshoe hare populations in Minnesota are able to reproduce at rates sufficient to support persistent lynx populations in the state.

Lynx populations are closely tied to snowshoe hare distribution and density. Snowshoe hares have evolved to survive in areas that receive deep snow (Bittner and Rongstad 1982) and prefer conifer habitats with dense shrub understories that provide food, cover to escape predators, and thermal protection during extreme weather (Wolfe et al. 1982; Pietz & Tester 1983; Fuller & Heisey 1986; Pietz & Tester 1983; Monthey 1986; Koehler and Aubrey 1994; Wirsing et al. 2002). Early successional forest stages generally have greater understory structure than do mature forests and therefore support higher hare densities (Pietz & Tester 1983; Hodges 2000a, b). Openings in mature forests with dense understory (e.g., some fens in north-central Minnesota, (Pietz & Tester 1983) also provide high-quality hare habitat (Buskirk et al. 2000).

Lynx use coarse woody debris, such as downed logs, root wads, and windfalls, to provide denning sites with security and thermal cover for kittens (McCord and Cardoza 1982; Koehler 1990; Koehler and Brittell 1990; Mowat et al. 2000; Squires and Laurion 2000). Mowat et al. (2000) summarized lynx selection of den sites in northern Canada and Alaska: "…."female lynx appear to select den sites in a number of forest types in the North. Lynx do not appear constrained to select specific stand types; rather, the feature that was consistently chosen was the structure at the site itself. Wind-felled trees were the most common form of protection selected by female lynx, although other structures such as roots and dense live vegetation were also used." In Maine, 17 den sites have been located in a variety of stand types, including 10- to 20-year-old clear-cut and adjacent residual stands (J. Organ, U.S. Fish and Wildlife Service, in litt. 1999; G. Matula, Maine Department Inland Fisheries and Wildlife in litt. 2003). Maine den sites are characterized by regenerating hardwoods and softwoods, dense understory, and abundant coarse woody debris (J. Organ, in litt. 1999, 2003). In Washington, lynx denned in lodgepole pine (*Pinus contorta*), spruce (*Picea* spp.), and subalpine fir (*Abies lasiocarpa*) forests older than 200 years with an abundance of downed woody debris (Koehler 1990). A den site in Wyoming was located in a mature subalpine fir/lodgepole pine forest with abundant downed logs and dense understory (Squires and Laurion 2000). Downed logs and overhead cover must be available throughout the home range of females with kittens to provide alternative den and nursery sites and security when lynx kittens are old enough to travel (Bailey 1974).

Lynx breed in spring and females give birth in late May to early June to litters of up to five kittens; hare densities are positively correlated with litter size and age at first breeding is lower when hare populations are high. During the low phase of the hare cycle, few if any kittens are born (Brand and Keith 1979; Poole 1994; Slough and Mowat 1996). Litter sizes may be smaller in the southern lynx range due to lower peak hare densities (Koehler 1990; Squires and Laurion 2000). Kittens wean at about 12 weeks after birth and stay with females during their first winter when they may hunt cooperatively (Quinn & Parker 1987); family units break up at the onset of breeding (about mid-March) (Quinn & Parker 1987).

The most commonly reported causes of lynx mortality include starvation of kittens (Quinn and Parker 1987; Koehler 1990) and human-caused mortality, mostly fur trapping (Ward and Krebs 1985; Bailey et al. 1986). Significant lynx mortality due to starvation (up to two-thirds of deaths) has been demonstrated in cyclic populations of the northern taiga during the first 2 years of hare scarcity (Poole 1994; Slough and Mowat 1996). Lynx are also killed by automobiles and other predators (see below), although the significance of these factors to lynx populations is unknown (Brand and Keith 1979; Carbyn and Patriquin 1983; Ward and Krebs 1985; Bailey et al. 1986).

Buskirk et al. (2000) suggested that when other hare predators, particularly coyotes (*Canis latrans*), can access lynx winter hunting areas via compacted snow they may compete for prey sufficiently to affect local lynx populations. Buskirk et al. (2000) also suggested that direct killing by coyotes, bobcats, and mountain lions (*Puma concolor*) could affect lynx numbers where these competitors' ranges overlap substantially with lynx; in addition, Quinn & Parker (1987) stated that "(g)ray wolves (*Canis lupus*) will kill lynx that they catch in the open. The paws of lynx support twice as much weight on snow as do the paws of bobcats (Parker et al.

1983; Quinn & Parker 1987). Therefore, lynx are likely to occur in areas with deep snow where bobcats cannot efficiently travel and hunt. Canada lynx may occasionally kill bobcats (Giddings et al. 1998), although the opposite has also been reported.

Hybridization of lynx with bobcats has been confirmed in both Maine and Minnesota with DNA analysis. In Minnesota, three of 19 animals analyzed were lynx-bobcat hybrids, whereas the remaining 16 were confirmed as lynx (U.S. Fish and Wildlife Service and U.S. Forest Service, *in litt.* 2003). Of the three hybrids in Minnesota, biologists possessed entire carcasses of two and only a hair sample of the third. All three were from male bobcats mating with female lynx. This constituted the first confirmed evidence of hybridization between the two species. In Maine, tests of hair and tissue from 31 individual animals identified two as hybrids – one male and one female – and 29 as lynx (Maine Department of Inland Fisheries and Wildlife, *in litt.* 2003). The female hybrid in Maine was accompanied by kittens. In both states, the hybrid animals had external physical characteristics of both species.

In Canada and Alaska, lynx populations generally undergo marked and regular fluctuations in response to similar changes in snowshoe hare populations (Mowat et al. 2000). A lack of accurate data limits our understanding of lynx population dynamics in the contiguous United States at the southern periphery of their range and a better understanding of lynx population dynamics in the southern boreal forest "is a critical research need" (Aubry et al. 2000). Southern lynx populations may be limited naturally by the availability of snowshoe hares, as suggested by large home range size, high kitten mortality due to starvation, and greater reliance on alternate prey.

Status and Distribution

Canada lynx range is associated closely with the distribution of North American boreal forest inhabited by snowshoe hares (Agee 2000) and extends from Alaska, the Yukon Territories, and Northwest Territories south across the United States border in the Cascades Range and northern Rocky Mountains, through the central Canada provinces and down into the western Great Lakes region, and east to New Brunswick and Nova Scotia, Canada, and south into the northeastern United States from Maine to New York (McCord and Cardoza 1982; Quinn and Parker 1987). In the western Great Lakes region, lynx range extends south from the classic boreal forest zone into the boreal/hardwood forest ecotone (Agee 2000; McKelvey et al. 2000). At its southern margins in the contiguous United States, forests with boreal features become fragmented naturally as they transition into other vegetation types, and many patches cannot support resident populations of lynx and their primary prey species.

In response to the emerging awareness of the uncertain status of Canada lynx populations and habitat in the conterminous United States and the onset of the listing process, an interagency Canada lynx coordination effort was initiated in March 1998. The Service, Forest Service, Bureau of Land Management, and National Park Service have participated in this effort. Three products important to the conservation of Canada lynx on federally managed lands have been produced: "The Scientific Basis for Lynx Conservation" (Ruggiero et al. 1999); the Lynx Conservation Assessment and Strategy (LCAS; U.S. Forest Service 1999); and Lynx

Conservation Agreements (CA) among the Service and various land management agencies. The CA promotes the conservation of Canada lynx and its habitat on federal lands and identifies actions the federal agencies agree to take to reduce or eliminate potential adverse effects or risks to Canada lynx and their habitat. The LCAS was produced in 1999 to provide a consistent and effective approach to conservation of Canada lynx on federal lands and was used as a basis for assessing the effects of the preferred alternative on Canada lynx.

Status of the Species in Minnesota

As was true historically, northeastern Minnesota supports a substantial amount of boreal forest roughly estimated at 12,500 km^2 (4,800 mi^2) (Great Lakes Ecological Assessment, in litt, undated). In Minnesota, the deepest snows occur in the northeast corner of the state (Minnesota Department Natural Resources in litt. 1998). Unlike elsewhere within the Great Lakes and Northeast regions, most lynx habitat in northeastern Minnesota is on public lands, particularly the Superior National Forest. Mixed deciduous-boreal forest suitable for lynx habitat encompasses most of the Superior National Forest, which has been mapped into Lynx Analysis Units to promote lynx management under the LCAS.

Although Minnesota may support a resident population of lynx, the abundance of the species in the state appears to be highly influenced by population levels in Ontario. Minnesota has a substantial number of historic lynx reports, primarily trapping records (McKelvey et al. 2000). Harvest and bounty records for Minnesota, which are available since 1930 indicate approximate 10-year population cycles, with highs in 1940, 1952, 1962, and 1973 (Henderson 1978; McKelvey et al. 2000). Because lynx numbers did not increase in the early 1980s on the expected 10-year cycle (very few were harvested or reported observed), Minnesota closed its lynx season in 1984. During a 47-year period (1930–1976), the Minnesota lynx harvest was substantial, ranging from 0 to 400 per year (Henderson 1978) and lynx were trapped in the state through periods presumed to represent both population highs and lows. Minnesota harvest levels have been consistent with cyclical patterns in Ontario. Ontario harvests were highest in 1926-27, 1962-63, and 1972-73 (Neil Dawson, personal communication 2002) and especially low during the presumed time of the 1990s "peak" (only one-fifth the 1972-73 harvest). In the 1990s there were only four verified records of lynx in Minnesota (Minnesota Department of Natural Resources in litt. 2003).

Beginning in about 2000, Minnesota lynx numbers evidently began to rebound. Since 2000, there have been 88 verified[2] reports of lynx in Minnesota (Fig. 1), 18 of which included evidence of reproduction (Minnesota Department of Natural Resources, in litt. 2003; S. Loch, in litt. 2003). This marked increase in reports corresponds with a cyclic population high directly

[2] Because of the possibility of misidentification (e.g., overlap in the ranges of Canada lynx and bobcat within Minnesota), the following criteria were used to "verify" a sighting as a lynx: a photo showing distinguishing characteristics was provided; conclusive behavioral observations were provided (e.g., lynx demonstrate curiosity and little fear of humans while bobcats are very secretive & elusive); DNA analysis of a tissue sample confirmed the identification; the observer is a known expert or otherwise has considerable experience with lynx; a detailed description of physical characteristics (e.g. very big feet, long hind legs, flat face, black tip of tail, etc.) was provided.

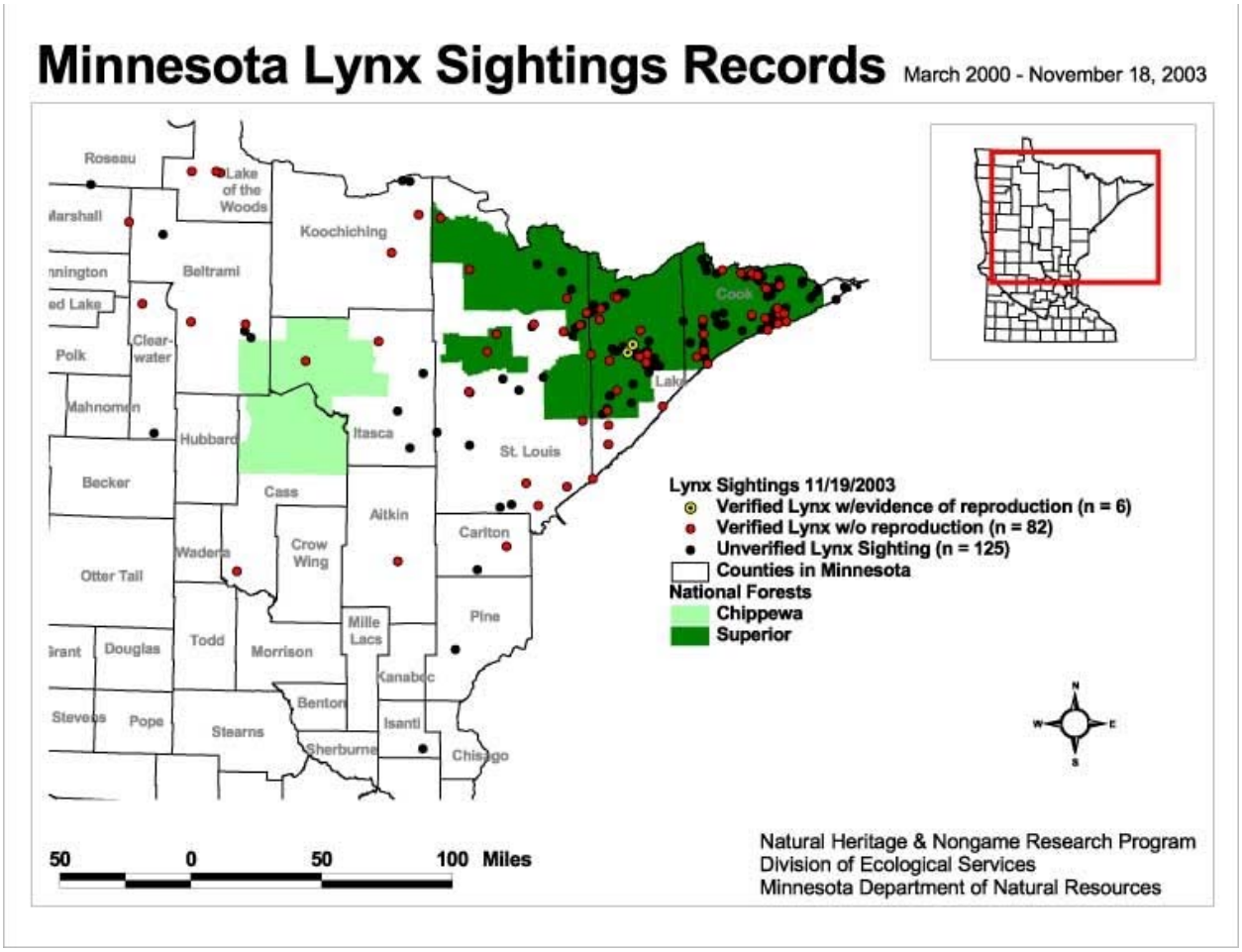

Fig. 1. Lynx records in Minnesota Department of Natural Resources database as of November 19, 2003.

adjacent in Ontario (S. Loch, in litt. 2003). Research has been initiated that will help determine whether these animals are members of an established resident population in Minnesota or if these animals fail to persist when the cyclic population declines (University of Minnesota, in litt. 2002). Four radio-collared animals are currently being monitored.

Snowshoe hare harvest in Minnesota (the only available long-term index to hare abundance in the state) shows a very inconsistent pattern from 1941-2000. Hare abundance, as indicated by harvest, peaked in the early 1940s and 1950s along with lynx harvest, but not in the early 1950s or 1960s. In contrast, hare harvest was double any previous year from 1977-1980, yet lynx harvest sighting reports did not increase. Hares remained at relatively low densities through the 1990s (S. Loch, in litt. 2003). Based on surveys in northern Minnesota, snowshoe hare numbers are currently high (J. Erb, Minnesota Department of Natural Resources, in litt.)

ENVIRONMENTAL BASELINE

Status of the Species Within the Action Area

The Minnesota Department of Natural Resources and Forest Service records show Canada lynx on all landward sides of the project area. We can assume that, given the species penchant for wide-ranging movements, individual animals may have recently crossed through habitat immediately adjacent to this portion of TH 61 (Action Area) particularly along stream corridors. However, as yet, no lynx records have been confirmed within the project impact zone.

Factors Affecting the Species Environment Within the Action Area

In the LCAS, the Lynx Biology Team identified potential risk factors to lynx that are within the authority and jurisdiction of the federal land management agencies. These risk factors include management of timber, wildland fire, recreation, roads and trails, grazing, and other human developments. Roads, railroads, utility corridors, land ownership patterns, and developments may affect lynx movements. Risks of direct lynx mortality come from trapping, shooting, predator control, vehicle strikes, and competition or predation as influenced by human activities. Other large-scale risk factors are fragmentation and degradation of lynx habitat. Each of these potential risk factors may occur in the action area except livestock grazing and railroads; predator control is unlikely and restricted. Timber management, wildland fire, recreational use, roads and trails, and developments on private land inholdings are most likely to affect lynx in this area. The Superior National Forest is implementing the LCAS and Canada Lynx Conservation Agreement (CA) between the Service and the Forest Service (February 2000) during all forest activities that occur within Lynx Analysis Units. Thus, the aforementioned risk factors are being minimized and managed appropriately to promote the conservation of lynx within the action area.

EFFECTS OF THE ACTION

Direct and Indirect Effects

The proposed project may affect lynx by temporarily disturbing any animals that are traveling near the project sites during road reconstruction activities or continuing use of existing, permitted roads and trails. No new road or trail construction and no new over-the-snow recreational trails are proposed. Thus, the greatest level of effect anticipated is that animals would temporarily move away from the impact zone when it is being used or maintained . The project proposal includes mitigation measures that require notification of the District Biologist (H. Maki) to avoid effects in the unlikely event that lynx den sites are subsequently established or identified in the action area. Thus, we believe that effects on the lynx in the action area are likely to be insignificant.

Cumulative Effects

Cumulative effects include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

CONCLUSIONS

After reviewing the current status of Canada lynx, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the proposed Trunk Highway 61 projects (S.P.3807-44 and S.P.3805-70) are not likely to jeopardize the continued existence of the lynx. No critical habitat has been designated for this species; therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

Due to the scope and nature of the proposed action, the reconstruction of an existing highway principally along existing alignment, the Service does not anticipate the proposed action will incidentally take any Canada lynx.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act requires federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

We recommend that MN DOT and FHWA join with the Service, the Forest Service, and the MN DNR in monitoring the status and distribution of Canada lynx in the northwoods of Minnesota by promptly recording and reporting all lynx sightings made by personnel in the field. The local point of contact for this project is biologist Ed Lindquist of the Superior National Forest, who can be reached by telephone at (218) 626-4380.

REINITIATION-CLOSING STATEMENT

This concludes consultation on the actions outlined in your July17, 2003, request for consultation for TH 61 projects (S.P.3805-70 and S.P.3807-44). As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions or comments on this biological opinion, please contact Mr. Paul Burke, of this office, by calling (612)-725-3548, at extension 205.

Sincerely,

Dan P. Stinnett
Field Supervisor

CC:

D. Holmbeck
MN DNR
Grand Rapids, MN

J. Alcott
MN DOT
St. Paul, MN

H. Maki
MN DOT
Duluth, MN

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