

Notes: Locations courtesy of Maine Department of Inland Fisheries and Wildlife and the United States Fish and Wildlife Service

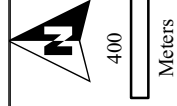
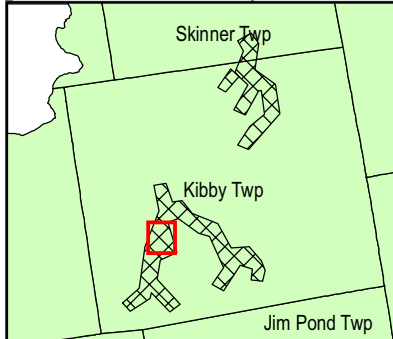


Figure 7-23
Kibby Wind Power Project
Rock Vole Locations



- Legend**
- Stream Identified in 2006 Field Survey
 - N. Bog Lemming Habitat
 - Wetland Boundary Identified in 2006 Field Survey
 - Watershed of Bog Lemming Habitat: 26 acres
 - Proposed Kibby Wind Power Project Area December 2006
 - Proposed Kibby Wind Power Project Area March 2006

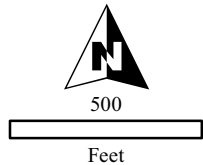


Figure 7-24

Kibby Wind Power Project
N. Bog Lemming Habitat

Notes: 2005 Orthophotography produced by James W. Sewall Company

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Figure 7-25: Photograph of Northern Bog Lemming Habitat



Figure 7-26: Photograph of Bog Lemming Runway



Figure 7-27: Photograph of Bog Lemming Runway and Feces

typically moist, wet meadows or boggy areas, found in conjunction with alpine tundra and spruce-fir forest. In Maine, they have been associated with deep, moist sphagnum, in both low- and high-elevation settings (MDIFW 2003).

Locations of proposed roadways and wind turbines have been adjusted to avoid impact to this habitat area. This will provide a habitat buffer and protect the wetland complex watershed (see Figure 7-24). Project disturbance has been designed to stay at least 250 feet (76 m) from the wetland boundaries and no clearing, soil disturbance or construction is proposed in the wetland complex watershed. Coordination is ongoing with MDIFW to ensure that appropriate protective measures are included in the final project design.

7.5.2 Potential Impacts to Rare, Threatened and Endangered Wildlife Species

7.5.2.1 Federally Listed Species

TransCanada has determined through extensive agency consultation with USFWS that no federally listed or proposed threatened or endangered species or their critical habitats will be affected by the proposed Kibby Wind Power Project. Federally listed species that may occur in the project area include the bald eagle and the Canada lynx.

Bald Eagles

Bald eagles have been observed during fall migration surveys in the project area in 1993 and 2005. However, as discussed in Section 7.4.1.2, bald eagles may nest on large waterbodies near the project area, but no active nests were observed within at least 5 miles (8 km) of any proposed project development areas (see Section 7.4.1.2 and Appendix 7-F). It is also unlikely that these birds would frequent the ridges during the breeding season (C. Todd, personal communication 2006).

Canada Lynx

Canada lynx may also be found in the project area, however, track surveys in the area in 2005 did not reveal their presence, indicating that their occurrence may only be infrequent. Although Canada lynx tracks have not been recorded in the project area (Skinner and Kibby Townships), they have been identified by MDIFW in the abutting Merrill Strip and Beattie Townships.

7.5.2.2 State-Listed Threatened or Endangered Species

Species listed as threatened or endangered by MDIFW have been identified in the vicinity of the project area. These include the bald eagle, golden eagle, peregrine falcon and northern bog lemming. All three of the raptors have been seen in the project area during fall migration surveys in at least two of the years surveys were performed, including 1992, 1993, and 2005 (see Table 7-2).

Bald Eagles

As discussed in the above, bald eagles are not likely to be found in the project area, except during migration (See Section 7.4.1.2 and Appendix 7-F).

Golden Eagles

Three historic golden eagle nests occur within a ten-mile (16-km) radius of the Kibby Wind Power Project area (Todd 2005); the closest of these sites is approximately 2 miles (3.2 km) from Kibby Range. None of these sites are known to have been occupied by golden eagles in recent years, and surveys of these sites performed in 2005 and 2006 did not identify use by golden eagles (see Section 7.4.1.2 and Appendix 7-F). Since these sites are not in the area of or potentially impacted by the project, it is unlikely that construction of the project will result in loss of this habitat.

Peregrine Falcons

The historic golden eagle sites are also suitable nest sites for peregrine falcons. Peregrine falcons have not been observed at these sites during these recent surveys. Since these sites are not in the area of or potentially impacted by the project, it is unlikely that construction of the project will result in loss of this habitat.

Northern Bog Lemming

The northern bog lemming, a threatened state species, may occur in the project area. An area of suitable habitat has been identified on Kibby Range. This lemming species is known to occur in the Mt. Katahdin area of northern Maine (i.e., the Nesowadnehunk and Table Land areas), and has been found in at least one location in the nearby Longfellow mountains on Redington Mountain. Sphagnum bogs, damp weedy meadows, and mossy spruce, hemlock, and beech forests make up the habitat for this species. The suitable habitat identified on Kibby Range will be avoided to the extent possible, and project design has taken this habitat into consideration. When first identified as potential habitat, wetland delineation efforts were expanded in this area to survey and identify the entire extent of this habitat. As a result, one road segment that bisected the area and two turbine sites were abandoned in favor of avoiding impacts to the wetland and upland habitat within this subwatershed (see Figure 7-24). By avoiding construction activities within the watershed of this habitat, TransCanada is insuring that wetland hydrology and associated habitats will not be adversely impacted. This approach will help to maintain a significant area of both upland and wetland habitats. Consultation with MDIFW regarding this habitat has included a site visit and several discussions. MDIFW is satisfied with TransCanada's approach of avoiding the habitat (Cordes 2006).

7.5.2.3 State-Listed Special Concern Species

Several Maine "Special Concern Species" are known to occur in the project area. These include the Bicknell's thrush, rusty blackbird, rock vole (also known as the yellow-nosed vole).

Bicknell's Thrush

Bicknell's thrush breeds in high elevation, high density, complex, small diameter fir-spruce habitats that are somewhat disturbed. Dead standing snags, blown-down trees, and dense regeneration are typical components of this habitat (personal communication with Chris Rimmer, August 24, 2006). It is a montane forest specialist, and considered one of the most rare and range-restricted species of the Northeast (Rimmer and Faccio 2004). Breeding bird surveys in the project area detected a few occurrences of Bicknell's thrush in both 1992 and 2006. During 2006, Bicknell's thrush was observed along one of seven breeding bird survey transects during the first week of June. During several subsequent surveys, it was not observed within the project area again. Several individuals were observed in two separate areas outside of the project area during 2006 (see Section 7.5.3.5). It has been determined that suitable habitat for this species does not exist in the project area, and therefore, Bicknell's thrush habitat will not be impacted by the project (Cordes 2006).

Rusty Blackbird

The rusty blackbird has been observed along project access roads (Gold Brook Road, Wahl Road, etc.) during both migration and breeding season. It has also been observed at a fen on Kibby Range. The preferred habitat for this bird is forested wetlands, bogs, beaver ponds, and shrub thickets along streams. It is known to occupy a large territory during breeding season. The project will impact only a small area of forested wetland (see Section 8.5), and is unlikely to impact this species.

Rock Vole and Rock Shrew

The rock vole is known to inhabit coniferous and mixed forests at higher elevations, and MDIFW has two recent records of the rock vole on the lower slopes of Kibby Range (MDIFW 2005). These voles favor damp moss-covered rocks and talus slopes in the vicinity of streams (DeGraaf and Rudis 1986). Another small mammal that has similar habitat preferences is the rock shrew. Habitat for the rock shrew includes wet, moss-covered rocks or boulders along streams, among talus; rock slides; in deciduous, coniferous, and mixed forests. Based upon the surveys completed, no characteristic habitat areas for the rock vole or rock shrew were noted within the proposed project work areas. MDIFW has indicated that habitat avoidance is a good strategy to minimize impact to these species.

Special Concern Bat Species

Several Maine Special Concern Species of bats have the potential to occur in the project area. These include the silver-haired bat (*Lasiurus noctivagans*), eastern red bat (*Lasiurus borealis*), hoary bat (*L. cinereus*), big brown bat (*Eptesicus fuscus*), northern long-eared bat (*Myotis septentrionalis*), eastern pipistrelle (*Pipistrellus subflavus*), little brown myotis (*M. lucifugus*), and the eastern small-footed myotis (*M. leibii*). Silver-haired bats inhabit forested areas near lakes and streams. These bats are frequently found in mountain coniferous forests

(DeGraaf and Rudis 1986). The big brown bat frequents forested areas near human habitation (DeGraaf and Rudis 1986). The little brown bat inhabits caves, quarries, hollow trees and buildings, frequently near streams (DeGraaf and Rudis 1986). The potential for the project to impact both roosting and foraging habitat exists for these bat species. Bat surveys were conducted in the project area by placing bat detectors on three met towers in the project area. Three detectors were placed at approximately 148 to 164 feet (45 to 50 m) above the ground and one was placed at approximately 49 to 66 feet (15 to 20 m) above the ground. The detectors were in place from May 4 to June 7 and June 20 to October 25, 2006. Survey results indicated the presence of myotis and bats of the “big brown guild” (which includes both big brown, silver-haired, and hoary bats) during the spring and myotis, big brown guild bats, and red bat/eastern pipistrelle guild bats during the fall period. During the spring, between May 4 and June 7, a total of 31 bat call sequences were recorded, all at the 49 to 66 feet (15 to 20 m) height detector. The mean detector rate for the spring period was 0.3 calls/detector night. This is generally similar to other spring bat detector surveys conducted recently using similar techniques. Other spring studies ranged from 0.07 calls/detector night in Searsburg, Vermont, to 0.72 calls/detector night in Cohocton, New York. During the remainder of the survey period, from June 20 through October 25, 22 call sequences were recorded, and the mean detection rate was 0.1 calls/detector night. For comparison purposes, the detection rate between August 1 and October 25, the mean detector rate for the fall period was 0.22 calls/detector night. This is lower than any other comparable studies, which range from 0.52 calls/detector night for Searsburg, Vermont, to 34.92 calls/detector night in Sheldon, New York. Given the relatively low incidence of bat occurrence and the abundant available habitat, it is unlikely that the project will have a significant impact on these bat species (see Appendix 7-1)

Special Concern Amphibians

Two salamander species, the spring salamander and four-toed salamander are listed as Species of Special Concern in Maine. These species are discussed in Section 7.5.2.2.

7.6 Resident and Migratory Wildlife

TransCanada has developed a species matrix, listing all species potentially occurring within the project area adapted from DeGraaf and Rudis (1986) and DeGraaf et al. (1992) (see Table 7-3) A description of these species by order follows.

Table 7-3: Habitat Matrix and List of Potential Wildlife Species – Habitat

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Fir-Heartleaved Birch Subalpine	Regenerating Forest	
Amphibians								
Blue-spotted salamander	<i>Ambystoma laterale</i>	Y	X	X				X
Spotted salamander	<i>Ambystoma maculatum</i>	Y	X	X	X	X	X	X
Red-spotted (Eastern) newt	<i>Notophthalmus viridescens</i>	N	X	X	X	X	X	X
Northern dusky salamander	<i>Desmognathus fuscus</i>	N	X	X	X	X	X	X
Northern redback salamander	<i>Plethodon cinereus</i>	Y	X	X	X	X	X	X
Four-toed salamander	<i>Hemidactylium scutatum</i>	N	X	X	X	X	X	X
Northern spring salamander	<i>Gyrinophilus p. porphyriticus</i>	N	X	X	X	X	X	X
Northern two-lined salamander	<i>Eurycea b. bislineata</i>	Y	X	X	X	X	X	X
American toad	<i>Bufo americanus</i>	Y	X	X	X	X	X	X
Spring peeper	<i>Pseudacris crucifer</i>	Y	X	X	X	X	X	X
Gray treefrog	<i>Hyla versicolor</i>	Y	X	X	X	X	X	X
Bullfrog	<i>Rana catesbiana</i>	Y	X	X	X	X	X	X
Green frog	<i>Rana clamitans</i>	Y						X
Mink frog	<i>Rana septentrionalis</i>	N						X
Wood frog	<i>Rana sylvatica</i>	Y	X	X	X	X	X	X
Northern leopard frog	<i>Rana pipiens</i>	N						X
Pickereel frog	<i>Rana palustris</i>	Y	X	X	X	X	X	X
Reptiles								
Snapping turtle	<i>Chelydra serpentina</i>	N						X
Wood turtle	<i>Clemmys insculpta</i>	Y	X	X	X	X	X	X
Eastern painted turtle	<i>Chrysemys picta</i>	N						X

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Fir-Heartleaved Birch-Subalpine	Regenerating Forest	
Northern water snake	<i>Nerodia sipedon</i>	N						X
Brown snake	<i>Storeria dekayi</i>	N	X	X				
Redbelly snake	<i>Storeria occipitomaculata</i>	Y	X	X			X	
Eastern garter snake	<i>Thamnophis sirtalis</i>	Y	X	X			X	
Ringneck snake	<i>Diadophis punctatus</i>	N	X	X	X		X	
Smooth green snake	<i>Ophiodrys vernalis</i>	N	X	X			X	
Milk snake	<i>Lampropeltis triangulum</i>	N	X	X				
Birds								
Common Loon	<i>Gavia immer</i>	Y						X
Pied-billed Grebe	<i>Podilymbus podiceps</i>	N						X
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	Y						X
Great Blue Heron	<i>Ardea herodias</i>	Y						X
Green Heron	<i>Butorides virescens</i>	N						X
American Bittern	<i>Botaurus lentiginosus</i>	N						X
Canada Goose	<i>Branta canadensis</i>	Y						X
Wood Duck	<i>Aix sponsa</i>	N						X
Green-winged Teal	<i>Anas carolinensis</i>	N						X
Mallard	<i>Anas platyrhynchos</i>	N						X
American Black Duck	<i>Anas rubripes</i>	Y						X
Northern Pintail	<i>Anas acuta</i>	N						X
Blue-winged Teal	<i>Anas discors</i>	N						X
Ring-necked Duck	<i>Aythya collaris</i>	N						X
Common Goldeneye	<i>Bucephala clangula</i>	Y						X
Bufflehead	<i>Bucephala albeola</i>	N						X
Hooded Merganser	<i>Lophodytes cucullatus</i>	N						X
Red-breasted Merganser	<i>Mergus serrator</i>	N						X
Common Merganser	<i>Mergus merganser</i>	N						X

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Spruce-Fir-Wood Sorrel-Feathermoss	Fir-Heartleaved Birch-Subalpine	
Turkey Vulture	<i>Cathartes aura</i>	Y	X	X				X
Osprey	<i>Pandion haliaetus</i>	Y						X
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Y						X
Northern Harrier	<i>Circus cyaneus</i>	Y						X
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Y	X	X	X	X	X	X
Cooper's Hawk	<i>Accipiter cooperii</i>	Y	X	X	X	X	X	X
Northern Goshawk	<i>Accipiter gentilis</i>	Y	X	X	X	X	X	X
Red-shouldered Hawk	<i>Buteo lineatus</i>	N	X	X				X
Broad-winged Hawk	<i>Buteo platypterus</i>	Y	X	X				X
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Y	X	X				X
Golden Eagle	<i>Aquila chrysaetos</i>	Y	X	X	X	X	X	X
American Kestrel	<i>Falco sparverius</i>	Y						X
Merlin	<i>Falco columbarius</i>	Y			X	X	X	X
Peregrine Falcon	<i>Falco peregrinus</i>	Y	X	X	X	X	X	X
Spruce Grouse	<i>Falcapennis canadensis</i>	Y			X	X	X	
Ruffed Grouse	<i>Bonasa umbellus</i>	Y	X	X	X	X	X	
Wild Turkey	<i>Meleagris gallopavo</i>	Y	X	X				
American Woodcock	<i>Scolopax minor</i>	Y	X	X	X	X	X	
Common Snipe	<i>Gallinago gallinago</i>	Y						X
Solitary Sandpiper	<i>Tringa solitaria</i>	Y						X
Spotted Sandpiper	<i>Actitis macularia</i>	Y						X
Ring-billed Gull	<i>Larus delawarensis</i>	Y						
Mourning Dove	<i>Zenaidura macroura</i>	Y	X	X				
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	N	X	X	X	X	X	
Great Horned Owl	<i>Bubo virginianus</i>	Y	X	X	X	X	X	X
Northern Hawk Owl	<i>Surnia ulula</i>	N			X	X	X	
Barred Owl	<i>Strix varia</i>	Y	X	X	X	X	X	X
Great Gray Owl	<i>Strix nebulosa</i>	N	X	X	X	X	X	X

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Spruce-Fir-Wood Sorrel-Feathermoss	Fir-Heartleaved Birch Subalpine	
Long-eared Owl	<i>Asio otus</i>	N	X	X	X	X	X	X
Boreal Owl	<i>Aegolius funereus</i>	N			X	X	X	
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	N	X	X	X	X	X	X
Common Nighthawk	<i>Chordeiles minor</i>	N	X	X	X	X	X	X
Whip-poor-will	<i>Caprimulgus vociferus</i>	N	X	X				
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Y	X	X	X	X	X	X
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Y	X	X	X	X	X	X
Downy Woodpecker	<i>Picoides pubescens</i>	Y	X	X	X	X	X	X
Hairy Woodpecker	<i>Picoides villosus</i>	Y	X	X	X	X	X	X
American Three-toed Woodpecker	<i>Picoides dorsalis</i>	N			X	X	X	
Black-backed Woodpecker	<i>Picoides arcticus</i>	Y			X	X	X	
Northern Flicker	<i>Colaptes auratus</i>	Y	X	X	X	X	X	
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Y	X	X	X	X	X	
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Y			X	X	X	X
Eastern Wood-Pewee	<i>Contopus virens</i>	Y	X	X	X	X	X	
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	Y			X	X	X	X
Alder Flycatcher	<i>Empidonax alnorum</i>	Y	X	X	X	X	X	
Willow Flycatcher	<i>Empidonax traillii</i>	N	X	X				
Least Flycatcher	<i>Empidonax minimus</i>	Y	X	X	X	X	X	
Eastern Phoebe	<i>Sayornis phoebe</i>	N	X	X	X	X	X	X
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	N	X	X	X	X	X	
Eastern Kingbird	<i>Tyrannus tyrannus</i>	N	X	X				X
Purple Martin	<i>Progne subis</i>	N	X	X	X	X	X	X
Tree Swallow	<i>Tachycineta bicolor</i>	Y	X	X	X	X	X	X
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	N	X	X	X	X	X	X

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Spruce-Fir-Wood Sorrel-Feathermoss	Fir-Heartleaved Birch Subalpine	
Bank Swallow	<i>Riparia riparia</i>	N	X	X	X	X	X	X
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	N	X	X	X	X	X	X
Barn Swallow	<i>Hirundo rustica</i>	N	X	X	X	X	X	X
Gray Jay	<i>Perisoreus canadensis</i>	Y	X	X	X	X	X	
Blue Jay	<i>Cyanocitta cristata</i>	Y	X	X	X	X	X	
American Crow	<i>Corvus brachyrhynchos</i>	Y	X	X	X	X	X	
Common Raven	<i>Corvus corax</i>	Y	X	X	X	X	X	
Black-capped Chickadee	<i>Poecile atricapilla</i>	Y	X	X	X	X	X	
Boreal Chickadee	<i>Poecile hudsonica</i>	Y	X	X	X	X	X	
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Y	X	X	X	X	X	
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Y	X	X				
Brown Creeper	<i>Certhia americana</i>	Y	X	X	X	X	X	
Winter Wren	<i>Troglodytes troglodytes</i>	Y	X	X	X	X	X	X
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Y	X	X	X	X	X	X
Ruby-crowned Kinglet	<i>Regulus calendula</i>	Y			X	X	X	
Eastern Bluebird	<i>Sialia sialis</i>	N	X	X				
Veery	<i>Catharus fuscescens</i>	Y	X	X	X	X	X	X
Gray-cheeked Thrush	<i>Catharus minimus</i>	?			X	X	X	
Bicknell's Thrush	<i>Catharus bicknelli</i>	Y			X	X	X	
Swainson's Thrush	<i>Catharus ustulatus</i>	Y	X	X	X	X	X	
Hermit Thrush	<i>Catharus guttatus</i>	Y	X	X	X	X	X	
Wood Thrush	<i>Hylocichla mustelina</i>	Y	X	X	X	X	X	X
American Robin	<i>Turdus migratorius</i>	Y	X	X	X	X	X	
Gray Catbird	<i>Dumetella carolinensis</i>	Y	X	X			X	
Northern Mockingbird	<i>Mimus polyglottos</i>	N						
Brown Thrasher	<i>Toxostoma rufum</i>	N	X	X			X	
Bohemian Waxwing	<i>Bombycilla garrulus</i>	N	X	X	X	X	X	X
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Y	X	X	X	X	X	X

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Fir-Heartleaved Birch Subalpine	Regenerating Forest	
Northern Shrike	<i>Lanius excubitor</i>	N	X	X	X	X	X	
Loggerhead Shrike	<i>Lanius ludovicianus</i>	N						
European Starling	<i>Sturnus vulgaris</i>	Y	X	X				
Blue-headed (Solitary) Vireo	<i>Vireo solitarius</i>	Y	X	X	X	X	X	
Yellow-throated Vireo	<i>Vireo flavifrons</i>	N	X	X				
Warbling Vireo	<i>Vireo gilvus</i>	N	X	X				
Philadelphia Vireo	<i>Vireo philadelphicus</i>	Y	X	X				
Red-eyed Vireo	<i>Vireo olivaceus</i>	Y	X	X	X	X	X	
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Y	X	X				
Tennessee Warbler	<i>Vermivora peregrina</i>	Y	X	X	X	X	X	
Nashville Warbler	<i>Vermivora ruficapilla</i>	Y	X	X	X	X	X	
Northern Parula	<i>Parula americana</i>	Y	X	X	X	X	X	
Yellow Warbler	<i>Dendroica petechia</i>	Y	X	X	X	X	X	X
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Y	X	X				
Magnolia Warbler	<i>Dendroica magnaolia</i>	Y			X	X	X	
Cape May Warbler	<i>Dendroica tigrina</i>	Y			X	X	X	
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	Y	X	X	X	X	X	
Yellow-rumped Warbler	<i>Dendroica coronata</i>	Y	X	X	X	X	X	
Black-throated Green Warbler	<i>Dendroica virens</i>	Y	X	X	X	X	X	
Blackburnian Warbler	<i>Dendroica fusca</i>	Y	X	X	X	X	X	
Pine Warbler	<i>Dendroica pinus</i>	Y		X				
Palm Warbler	<i>Dendroica palmarum</i>	Y			X	X	X	X
Bay-breasted Warbler	<i>Dendroica castanea</i>	Y			X	X	X	
Blackpoll Warbler	<i>Dendroica striata</i>	Y	X	X	X	X	X	
Black-and-white Warbler	<i>Mniotilta varia</i>	Y	X	X	X	X	X	
American Redstart	<i>Setophaga ruticilla</i>	Y	X	X	X	X	X	

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Spruce-Fir-Wood Sorrel-Feathermoss	Fir-Heartleaved Birch-Subalpine	
Ovenbird	<i>Seiurus aurocapilla</i>	Y	X	X	X	X	X	
Northern Waterthrush	<i>Seiurus noveboracensis</i>	Y	X	X	X	X	X	X
Mourning Warbler	<i>Oporornis philadelphia</i>	Y	X	X	X	X	X	
Connecticut Warbler	<i>Oporornis agilis</i>	Y			X	X	X	
Common Yellowthroat	<i>Geothlypis trichas</i>	Y	X	X	X	X	X	
Wilson's Warbler	<i>Wilsonia pusilla</i>	N	X	X	X	X	X	X
Canada Warbler	<i>Wilsonia canadensis</i>	Y	X	X	X	X	X	
Scarlet Tanager	<i>Piranga olivacea</i>	N	X	X				
Northern Cardinal	<i>Cardinalis cardinalis</i>	Y	X	X				
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Y	X	X	X	X	X	
Indigo Bunting	<i>Passerina cyanea</i>	N	X	X			X	
Rufous-sided (Eastern) Towhee	<i>Pipilo erythrophthalmus</i>	N	X	X			X	
American Tree Sparrow	<i>Spizella arborea</i>	Y	X	X	X	X	X	
Chipping Sparrow	<i>Spizella passerina</i>	Y	X	X	X	X	X	
Field Sparrow	<i>Spizella pusilla</i>	N	X	X			X	
Fox Sparrow	<i>Passerella iliaca</i>	Y			X	X	X	
Song Sparrow	<i>Melospiza melodia</i>	Y	X	X	X	X	X	
Lincoln's Sparrow	<i>Melospiza lincolni</i>	Y	X	X	X	X	X	
Swamp Sparrow	<i>Melospiza georgiana</i>	N						X
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Y	X	X	X	X	X	
Dark-eyed Junco	<i>Junco hyemalis</i>	Y	X	X	X	X	X	
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Y						X
Rusty Blackbird	<i>Euphagus carolinus</i>	Y			X	X	X	X
Common Grackle	<i>Quiscalus quiscula</i>	Y	X	X				X
Brown-headed Cowbird	<i>Molothrus ater</i>	N	X	X	X	X	X	
Northern (Baltimore) Oriole	<i>Icterus galbula</i>	N	X	X				
Pine Grosbeak	<i>Pinicola enucleator</i>	Y	X	X	X	X	X	

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Spruce-Fir-Wood Sorrel-Feathermoss	Fir-Heartleaved Birch-Subalpine	
Purple Finch	<i>Carpodacus purpureus</i>	Y	X	X	X	X	X	
House Finch	<i>Carpodacus mexicanus</i>	N						
Red Crossbill	<i>Loxia curvirostra</i>	Y	X	X	X	X	X	
White-winged Crossbill	<i>Loxia leucoptera</i>	Y	X	X	X	X	X	
Common Redpoll	<i>Carduelis flammea</i>	Y	X	X	X	X	X	
Hoary Redpoll	<i>Carduelis hornemanni</i>	N	X	X	X	X	X	
Pine Siskin	<i>Carduelis pinus</i>	Y	X	X	X	X	X	
American Goldfinch	<i>Carduelis tristis</i>	Y	X	X	X	X	X	
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Y	X	X	X	X	X	
Mammals								
Masked Shrew	<i>Sorex cinereus</i>	N	X	X	X	X	X	X
Water Shrew	<i>Sorex palustris</i>	N	X	X	X	X	X	X
Smoky Shrew	<i>Sorex fumeus</i>	N	X	X	X	X	X	X
Long-tailed Shrew	<i>Sorex dispar</i>	N	X	X	X	X	X	
Pygmy Shrew	<i>Sorex hoyi</i>	Y	X	X	X	X	X	X
Northern Short-tailed Shrew	<i>Blarina brevicauda</i>	N	X	X	X	X	X	X
Hairy-tailed Mole	<i>Parascalops breweri</i>	N	X	X	X	X	X	X
Star-nosed Mole	<i>Condylura cristata</i>	N			X			X
<i>Myotis Bats</i>		Y						
Little Brown Bat	<i>Myotis lucifugus</i>	?	X	X	X	X	X	X
Eastern Small-footed Bat	<i>Myotis leibii</i>	?			X	X	X	X
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	?			X	X	X	X
<i>Big Brown Guild</i>		Y						
Big Brown Bat	<i>Eptesicus fuscus</i>	?	X	X	X	X	X	X
Hoary Bat	<i>Lasiurus cinereus</i>	Y	X	X	X	X	X	X
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Y	X	X	X	X	X	X
Eastern Pipistrelle	<i>Pipistrellus subflavus</i>	N	X	X				X

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Spruce-Fir-Wood Sorrel-Feathermoss	Fir-Heartleaved Birch-Subalpine	
Eastern Red Bat	<i>Lasiurus borealis</i>	Y	X	X	X	X	X	X
Snowshoe Hare	<i>Lepus americanus</i>	Y	X	X	X	X	X	
Eastern Chipmunk	<i>Tamias striatus</i>	Y	X	X	X	X	X	
Woodchuck	<i>Marmota monax</i>	Y	X	X	X	X	X	
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	Y	X	X				
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	Y	X	X	X	X	X	
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	N	X	X	X	X	X	
American Beaver	<i>Castor canadensis</i>	Y	X	X	X	X	X	X
Deer Mouse	<i>Peromyscus maniculatus</i>	Y	X	X	X	X	X	
White-footed Mouse	<i>Peromyscus leucopus</i>	N	X	X	X	X	X	
Southern Red-backed Vole	<i>Clethrionomys gapperi</i>	Y	X	X	X	X	X	X
Meadow Vole	<i>Microtus pennsylvanicus</i>	Y	X	X	X	X	X	
Rock Vole	<i>Microtus chrotorrhinus</i>	N	X	X	X	X	X	X
Common Muskrat	<i>Ondatra zibethicus</i>	N						X
Southern Bog Lemming	<i>Synaptomys cooperi</i>	N	X	X	X	X	X	X
Northern Bog Lemming	<i>Synaptomys borealis</i>	N			X	X	X	X
Meadow Jumping Mouse	<i>Zapus hudsonius</i>	N	X	X	X	X	X	X
Woodland Jumping Mouse	<i>Napaeozapus insignis</i>	Y	X	X	X	X	X	
Common Porcupine	<i>Erethizon dorsatum</i>	Y	X	X	X	X	X	
Coyote	<i>Canis latrans</i>	Y	X	X	X	X	X	
Red Fox	<i>Vulpes vulpes</i>	Y	X	X	X	X	X	
Black Bear	<i>Ursus americanus</i>	Y	X	X	X	X	X	X
Common Raccoon	<i>Procyon lotor</i>	Y	X	X	X	X	X	X
American Marten	<i>Martes americana</i>	Y	X	X	X	X	X	
Fisher	<i>Martes pennanti</i>	Y	X	X	X	X	X	
Ermine	<i>Mustela erminea</i>	Y	X	X	X	X	X	
Long-tailed Weasel	<i>Mustela frenata</i>	Y	X	X	X	X	X	

Species		Observed in Project Vicinity (Y/N)	Northern Hardwood		Red Spruce-Balsam Fir	Balsam Fir		Wetlands and Waterbodies
Common Name	Binomial Nomenclature		Beech-Birch-Maple	Spruce-Northern hardwoods		Spruce-Fir-Wood Sorrel-Feathermoss	Fir-Heartleaved Birch Subalpine	
American Mink	<i>Mustela vison</i>	Y	X	X	X	X	X	X
Striped Skunk	<i>Mephitis mephitis</i>	Y	X	X	X	X	X	
Northern River Otter	<i>Lutra canadensis</i>	Y						X
Canada Lynx	<i>Lynx canadensis</i>	N	X	X	X	X	X	
Bobcat	<i>Lynx rufus</i>	Y	X	X	X	X	X	X
White-tailed Deer	<i>Odocoileus virginianus</i>	Y	X	X	X	X	X	X
Moose	<i>Alces alces</i>	Y	X	X	X	X	X	X

7.6.1 Mammals

7.6.1.1 Existing Resources

There are 49 mammal species that potentially occur in the project area. Of these species, 30 were identified in the project area by tracks, sign, calls, or direct observation while traveling in the project area (see Table 7-3). Most of the potential species are relatively common, with the exception of Canada lynx, and several of the small mammals, as discussed in the previous section (Section 7.4). TransCanada performed track surveys (as described in Section 7.4.1) and surveys for rare small mammal habitat in the project area. Additionally, while performing other natural resource surveys, incidental observations of wildlife and wildlife sign were noted. Similar surveys were also performed by Kenetech in 1992 and 1993, and TransCanada's findings are consistent with the results of these previous surveys.

The large mammals observed during summer field investigations are typical of the northwest mountain region of the state. Moose (*Alces alces*) were the most commonly seen large mammal. Every part of the project area had some form of moose sign occurring in it. Habitats used by moose included roadways, regenerating forest, streams and ponds low in the valleys, mid-slope hardwood forests, and high-elevation softwood dominated ridgelines. Evidence of winter moose activity was seen on the ridgelines as intense browsing of balsam fir saplings and de-barking of mountain ash (see Figure 7-28). All other observations or sign of other mammals were much less abundant than that of moose.

Use of the ridgelines by white-tailed deer (*Odocoileus virginianus*) and black bear (*Ursus americanus*) seems to be limited to summer use only. This is obvious for bear, which hibernate during winter, though bear tracks were seen in the snow both during early spring and late fall. Deer may use the ridgelines in early winter, when snow depths are not too deep to hinder travel. As snow depths increase, however, deer move to traditional winter yards lower in the valleys. Deer yards in the project vicinity were noted by MDIFW during consultation, and the project will not impact any of these areas. Deer yards are discussed in greater detail in Section 7.2. Deer use of the lower elevations in the project area (e.g., collector lines, proposed 115 kV transmission line) is higher than that of the ridgelines due to more suitable habitats associated with those locations.

Red squirrels (*Tamiasciurus hudsonicus*) were also a common species, and were observed in all areas of the project. Eastern chipmunks (*Tamias striatus*) were common on side slopes and in the valleys. Snowshoe hare (*Lepus americanus*) sign was present in much of the project area, but was patchy in distribution, with abundance variable. Coyote (*Canis latrans*), red fox (*Vulpes vulpes*), short-tailed weasel (*Mustela erminea*), and marten (*Martes americana*) also appear to be common and present throughout much of the project area in Kibby and Skinner Townships. Sightings or sign of bobcat (*Lynx rufus*), skunk (*Mephitis mephitis*), mink (*Mustela vison*), fisher (*Martes pennanti*), long-tailed weasel (*Mustela frenata*), river otter (*Lutra canadensis*), raccoon (*Procyon lotor*), and woodchuck (*Marmota monax*) occurred in the vicinity of the project but were observed much less frequently than other species.



Figure 7-28: Moose debarking