

5.9 Upland Deciduous Forest

Area: 900,000 acres

Description and Overall Condition: This landscape component includes the larger tracts of native upland deciduous forest which occur scattered throughout the state. Representative upland deciduous forest constitutes approximately 2.2% of North Dakota. The larger tracts of forest have been identified as focus areas and include the Pembina Hills, Turtle Mountains, Devils Lake Mountains, and the Killdeer Mountains, although the term “mountain” is only relative to the rather level topography of North Dakota. Smaller, scattered tracts of deciduous forest occur on the Sheyenne River (see section 5.7.c for information on this focus area) bluffs and north- and east-facing slopes of the badlands (see section 5.8). These natural upland tracts of deciduous trees in North Dakota represent a unique community rare to the state. Most forested areas are under private ownership and are used primarily for cattle grazing. Over-harvest for wood products does not appear to be of concern but the possible lack of forest regeneration may be of concern. Clearing of trees for farming or other development has occurred.

Predominant Natural Vegetation:

Trees and Shrubs: bur oak, green ash, quaking aspen, balsam poplar, paper birch, American hazelnut, black currant, Missouri gooseberry, red raspberry, Saskatoon serviceberry, hawthorn, prickly rose, pin cherry, choke cherry

Forbs: false lily-of-the valley, early meadowrue, yellow avens, pink wood violet, wild sarsaparilla, dwarf cornel, pink wintergreen, arrowleaf aster

Associated Species of Conservation Priority:

Birds	Mammals	Reptiles/Amphibians
Golden Eagle Bald Eagle Swainson’s Hawk Black-billed Cuckoo Red-headed Woodpecker	Arctic Shrew Pygmy Shrew Western Small-footed Myotis Long-eared Myotis Long-legged Myotis	Northern Redbelly Snake

Other Characteristic Wildlife:

Birds: turkey vulture, sharp-shinned hawk, Cooper’s hawk, broad-winged hawk (Turtle Mountains), red-tailed hawk, American kestrel, merlin, ruffed grouse, wild turkey, mourning dove, great horned owl, Eastern screech owl, long-eared owl, common nighthawk, ruby-throated hummingbird, yellow-bellied sapsucker, downy woodpecker, hairy woodpecker, yellow-shafted flicker, Western wood pewee, Eastern wood-pewee, yellow-bellied flycatcher, willow flycatcher, least flycatcher, great crested flycatcher, purple martin, tree swallow, blue jay, black-billed magpie, common crow, black-capped chickadee, white-breasted nuthatch, brown creeper, house wren, golden-crowned kinglet, ruby-crowned kinglet, Eastern bluebird, veery, wood thrush, American robin, gray catbird, brown thrasher, cedar waxwing, yellow-throated vireo, warbling vireo, Philadelphia vireo, red-eyed vireo, yellow warbler, chestnut-sided warbler, yellow-rumped warbler, American redstart, black-and-white warbler, ovenbird, Northern waterthrush, mourning warbler, common yellowthroat, migratory warblers, scarlet tanager, rose-breasted grosbeak, black-headed grosbeak, lazuli bunting, indigo bunting, spotted towhee, Eastern towhee, chipping sparrow, lark sparrow, clay-colored sparrow, song sparrow, common grackle, brown-headed cowbird, orchard oriole, Bullock’s oriole, Baltimore oriole, pine siskin, American goldfinch, evening grosbeak

Mammals: little brown bat, silver-haired bat, big brown bat, Eastern red bat, hoary bat, Eastern cottontail, woodchuck, Eastern chipmunk, gray squirrel, fox squirrel, Northern flying squirrel, beaver, white-footed mouse, southern red-backed vole, meadow vole, meadow jumping mouse, Western jumping mouse, porcupine, coyote, red fox, gray fox, raccoon, American marten, ermine, long-tailed weasel, least weasel, bobcat, elk, mule deer, white-tailed deer

Reptiles and Amphibians: American toad, gray tree frog, wood frog, common garter snake, plains garter snake

5.9.a Focus Area: Pembina Hills

Area: 168,000 acres (68,000 ha)

Description and Condition: The Pembina Hills is a rather small piece of steep, dissected escarpment on the edge of the Drift Prairie and bordering the Red River Valley and Canada. Bur oak, quaking aspen, green ash, cottonwood, and American elm are the dominant deciduous forest components. The steep slopes maintain the natural woodland community, but cattle grazing occurs. Flatter areas have been cleared for cropland of small grains, sunflowers, and flax.

Key Species of Conservation Priority

Birds: black-billed cuckoo

Reptiles and Amphibians: Northern redbelly snake



Deciduous trees and forest understory.

5.9.b Focus Area: Turtle Mountains

Area: 262,000 acres (106,000 ha)

Description and Condition: Set in the northern Drift Prairie, the rolling topography and extra 10 inches of precipitation per year supports deciduous forest cover of bur oak, aspen, green ash, paper birch, boxelder, sumac, serviceberry, and snowberry. The Turtle Mountains rise 600 to 800 feet above the surrounding prairie/wetland landscape. The soil is rather erodible and poorly suited for farming, although some occurs. Native woodland clearings have made way for pastureland. Hundreds of large, deep ponds and lakes are present throughout.

Key Species of Conservation Priority

Birds: horned grebe, possibly bald eagle

Reptiles and Amphibians: Northern redbelly snake



Woodland-bordered wetland of the Turtle Mountains.

5.9.c Focus Area: Devils Lake Mountains

Area: 3,500 acres

Description and Condition: The deciduous forest bordering Devils Lake is similar to that of the Pembina Hills. Much of the natural forest along the shorelines of the lake has largely been inundated by recent rising water levels. Bald eagles now nest in the large, dead flooded trees.

Key Species of Conservation Priority

Birds: bald eagle

Reptiles and Amphibians: Northern redbelly snake



Deciduous woodland bordering the rising Devils Lake.

5.9.d Focus Area: Killdeer Mountains

Area: 15,000 acres (6,000 ha)

Description and Condition: Slightly set aside from the main stem of the badlands, the Killdeer Mountains rise 700-1,000 feet above the surrounding prairie landscape. The highest elevation is 3,314 feet, or about 200 feet lower than the highest point in the state, White Butte. Bur oak, quaking

aspen, green ash, paper birch, Western black birch and American elm are the dominant deciduous vegetation. Grazing occurs on private land.

Key Species of Conservation Priority

Birds: golden eagle



Looking up at the east end of Killdeer Mountains.



View from on top of the Killdeer mountains looking down at a deciduous woodland area.

5.9.e Conservation Problems and Actions for Upland Deciduous Forest

UPLAND DECIDUOUS FOREST		
CONSERVATION PROBLEM	CONSERVATION ACTION	POTENTIAL PARTNERS
Direct Loss of Habitat		
Loss due to farming activities (e.g. tillage).	Develop and promote incentive programs to restore woodlands. Work with partners to implement easements.	NDGF NDFS NRCS USFWS NGPJV NDNRT RMEF Private Landowners County Zoning Officials
Loss due to development (e.g. ranchettes).	Work with county zoning planning officials to designate areas in need of protective covenants. Work with partners to implement easements or land acquisition.	
Habitat Degradation		
Degradation due to improper grazing.	Develop and promote incentive programs to enhance or restore woodlands.	NDGF NDFS USFWS NRCS
Fire suppression.	Develop prescribed burn plans and initiate.	
Climax communities.	Identify areas in need of clear-cutting and conduct.	
Invasive and Introduced Species		
Noxious weeds (i.e. leafy spurge).	Control noxious weeds through biological and chemical methods.	NDGFD USFWS USFS NRCS Private Landowners NDSUEXT NDWCA
Industrial Development		
Wind energy potential is excellent in the Turtle Mountains and Killdeer Mountains, and good in the Pembina Hills.	Coordinate with wind energy companies to minimize impacts.	NDGFD USFWS
Human Impacts		
Off-road vehicle or ATV use and creation of trails.	Work to minimize additional trail development on public lands.	NDGFD NDFS CVB/CC Recreational user groups
Data Gaps		
Lack of baseline information on SoCP.	Survey areas of data gaps. Conduct research/surveys to establish baseline information on SoCP.	NDGFD NPWRC

UPLAND DECIDUOUS FOREST				
CONSERVATION PROBLEM	CONSERVATION ACTION	POTENTIAL PARTNERS		
Conservation Awareness				
Level of knowledge on the value of forest ecosystems.	Continue to work with partners in promoting and distributing educational materials related to forests and good stewardship.	NDGFD NDFS	RMEF NWTF	CVB/CC Recreational user groups