

Wildlife & Wind Power Guidance Document: Submitted by Maine Audubon Stakeholder Committee – October 2007

Wildlife Themes	Description	Significance of “Theme”	Maine Data Sources ¹	Data Gaps/Limits	Issues or Potential Conflicts
Unique Natural Communities	Rare natural communities and outstanding examples of common natural communities.	Plants and animal habitats in this category are specialized to a given area and cannot exist anywhere else.	<i>Beginning with Habitat</i> maps. <i>Natural Areas Program</i> : Database. Good data on Alpine communities. <i>Important Bird Areas</i> : DIFW	<i>Beginning with Habitat</i> : LURC areas planned, not yet available. <i>Ecoregional Surveys</i> : (DIFW, NAP) Eastern Lowlands and Central Mountains available in next 3 years.	Forest clearing and road construction and resulting habitat fragmentation – <i>Edge effect</i> : increase in nest predation, transfer of invasive species, noise; avoidance by some species due to roads, etc. Direct mortality from roads (e.g. lynx) Alpine/subalpine environments unique vegetation on thin soils which could be eliminated or damaged; erosion a significant concern.
Large Blocks of Interior Forest Habitat	<ul style="list-style-type: none"> • Use <i>Beginning with Habitat</i> wherever available • LURC jurisdiction criteria <ol style="list-style-type: none"> 1. 5000 or more acres of forested land 2. Low road density (USFS = less than ½ mi of interior improved road/ 1000 acres) 3. Majority in semi-mature or mature forests. 4. High conservation value 	Certain wildlife dependant on larger blocks of mature interior forest (e.g. marten, Northern parula and black-throated blue warblers in northern forests); Large grasslands: Upland Sandpipers	DeLorme Atlas <i>Beginning with Habitat</i> database AMC: mapped roadless areas.	Poor info on location of private roads for identifying blocks of “unfragmented” habitat. DOC Maine Backcountry Project : currently mapping existing and potential recreational resources	South and central Maine has few unfragmented blocks left (e.g. Mount Agamenticus and Unity Wetlands). Certain wildlife extremely susceptible to any additional fragmentation (e.g. turtles). Northern sites may offer more flexibility if we can plan for cumulative impacts. Currently, large blocks at higher elevations may be less impacted by fragmentation due to operability limits. Fragmenting due to harvesting is transitory.
Significant wildlife habitat	Land and water areas critical for the survival of populations of native fish or wildlife during one or more life stages: <ul style="list-style-type: none"> • Endangered and threatened species habitats • deer wintering areas and travel corridors (high & moderate value), • critical Atlantic salmon spawning and nursery areas, • wading bird and waterfowl habitats, seabird nesting islands (H & M value) • significant vernal pools • shorebird nesting, feeding and staging areas 	Habitats of plants and animals are specialized and require specific areas for some or all of their life cycle.	DIFW <i>Beginning with Habitat</i> maps. <i>Natural Areas Program</i> : Database.	<i>Beginning with Habitat</i> : LURC areas planned, not yet available. <i>Ecoregional Surveys</i> : (DIFW, NAP) Eastern Lowlands Central Mountains available in next 3 years. Vernal Pools not mapped (similar to wetlands)	Forest clearing and road construction and resulting habitat fragmentation – <i>Edge effect</i> : increase in nest predation, transfer of invasive species, noise; avoidance by some species due to roads, etc. Direct mortality from roads (e.g. lynx) Alpine/subalpine environments unique vegetation on thin soils which could be eliminated or damaged; erosion a significant concern. Changes in thermal regimes for Atlantic salmon spawning areas.
Endangered and threatened animals or other special concern species	Habitats associated with specific species that have been formally designated as at risk of extinction. <ul style="list-style-type: none"> • These include (1) species designated as threatened or endangered under the federal Endangered Species Act, (2) species designated under the Maine Endangered Species Act, and (3) species identified as NatureServe’s Natural Heritage Database as globally imperiled 4) Grasslands/barrens of 250-500 acres or more. 	Habitats are rare and/or declining and species depend on these habitats for their continued existence.	DIFW’s state listed species, <i>Essential Habitat</i> maps, <i>Comprehensive Wildlife Conservation Strategy</i> . <i>Beginning with Habitat</i> maps. <i>Important Bird Areas</i> Natural Areas Program maps.	Invertebrates and small mammals. Data geographically uneven: Less info for LURC jurisdiction	Collision for avian and bat species, habitat destruction due to road building or vegetation clearing.
Bird and bat migration	Migratory Concentrations of native birds and bats. <ul style="list-style-type: none"> • Bats • Raptors • Neotropical migrants 	Wide variability in mortality associated with wind power sites indicates need to site wind power facilities away from migratory concentrations.	1994 Radar Studies in Boundary Mountains. Mars Hill: available soon.	<ul style="list-style-type: none"> • Regional data on migration patterns • Interactions between turbines and bats • Risk Assessments 	Some migratory animals may be uniquely subject to risks associated with wind turbines due to the fact that they travel at night and use the same wind resource for migration. Migrating bats have low reproductive rates and unique risks associated with wind power. Nocturnal migrants (birds) facing significant declines (risk may not be as high as bats). Cumulative impacts contribute to further declines.

¹ Studies in other eastern states (New York, Pennsylvania, etc.) rapidly becoming available and should be consulted as they become available.