CATEGORY: Preliminary Assessment and Site Evaluation

Element	Level of repetition among guidance (high, med, low)	Pros	Cons
Contact appropriate agencies			
Conduct a site visit			
Contact appropriate agencies: Candian Wildlife Service, Environment Canada EA office State and/or federal agencies Submit a complete plan of proposed site to state	HIGH Canada WA, NY, CA, AZ, CO, IA, KS, MD, NH, OH, OR, SD, PA, WV, WI NY		
Conduct a site visit by a qualified biologist	CA		
Consider preliminary questions of bird use (breeding, migration, wintering, at-risk species, colonies, raptors, shorebirds, spp with aerial displays, presence of migration staging areas or "commuter" routes)	Canada, MI {I think most states don't get to this till the pre-constr. Phase}		
Consider what landscape features and habitat types are present in the area: Do habitats support specialist species (forest-interior, grassland, shrubland species)? What birds are present in these habitats, what is relative density of birds, how much habitat will be lost or altered, what topographic features influence bird activity? Map key information about general vegetation & land cover, wildife habitat, habitat quality, invasive species, physical characteristics of area Use agricultural lands or disturbed areas if possible	 Canada Canada WA AZ, IA, KS, SD		
Consider non-wind meteorological data (eg number of days with fog or low visibility)	FWS, Canada, CA, IA		
Consult existing sources of information: appropriate government agencies (Fed, State/Provincial), Natural Heritage Program/ Information Centers,	**HIGH** Can., WA, NY, CA, PA Can., NY, MD (required),		

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	PA, VT		
websites of at-risk species information,	Can., WA,		
information from past surveys,	Can., CA		
presence of Migratory Bird Sanctuaries,	Can.		
presence of National Wildlife Areas,	Can.		
Bird Conservation Region Plans,	Can.		
existing environmental assessments,	Can., WA,		
"General Status of Species in Canada website,"	Can.		
Important Bird Areas website,	Can., PA		
scientific publications (refereed and non-refereed pubs),	Can.		
provincial or state natural history databases,	Can., CA		
local experts (eg, Audubon chapters, universities)	WA, NY, CA, KS, SD		
Bat Conservation International	NY		
National Agriculture Imagery Program	CA		
State Compehensive Wildlife Conservation strategy	PA		
Documentation of areas of concern (e.g., landscape features, wildlife presence, or habitat types):	HIGH		
Presence of "at risk" or listed species, or candidate spp.	FWS, Can., NY, CA, KS		
"special status" birds or bats, "fully protected" birds	CA, IA, KS, MI, OH, OR, VT		
Important bird colony (herons, etc) present or adjacent	Can., CA		
Significant staging or wintering area for waterfowl, shorebirds	Can., NY (2 miles), CA, KS, SD, WI		
In or adjacent to nationally important area for birds	Can.,		
Large concentrations of raptors, or raptor nesting or feeding (eg, prairie dog colonies)	FWS, Can., WA, NY (2 miles), CA		
Known migration corridor	FWS, Can., NY, IA, KS, SD, WI		
Area is near or between use areas (high crossing rate)	FWS, Can.		
Presence of landforms that concentrate birds or bats (eg,	FWS, Can., NY (shore 5		

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shore, ridge, riparian area, wetland, landfill)	miles), CA, IA, MI, SD, WI (other states too?)		
Contiguous habitats (forest, wetland, grassland, shrub steppe)	FWS, Can., WA (see mitigation), IA, KS, SD, PA		
Major bat hibernaculum	FWS, NY (10 miles), CA, IA , MI, PA		
Areas of bat use (feeding, migration, maternity/nursery)	FWS, IA, VT, WI		
Presence of birds with aerial displays or contour foraging	Can., CA		
Prairie grouse habitat/ leks within 5 miles	FWS, IA		
Lays out types of areas to avoid (NWRs,state preserves, parks, etc)	Several states mention this		
Natural Areas of proposed acquisition/restoration	WI		
Determine site sensitivity:			
Compare to a sensitive reference site using a Potential Impact Index of physical attributes, species occurrence and status, and ecological attractiveness.	FWS Canada,		
based on available preliminary information (or rank as "high" if little information is available)	CA		
based on available preliminary info, divide into 4 categories; consult with agencies and specialists based on concerns			
Categorize facility based on number of turbines	Canada	A very good idea	Might not take into account cumulative effects if other facilities are in the area
Assign a level of concern based on site sensitivity and facility size (this category informs the amount of additional baseline information needed)	Canada		
State has produced a map of areas of concern for wind siting	OK, KS, IA, SD		

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based on wildlife or habitat	OR lists excluded areas, PA mentions CWCS		
Reference to National Wind Coordinating Cmte Guidelines	IA, KS, MD, SD, WI		
Some states require baseline surveys and have recommendations for site development, design and operations, but don't explicitly describe a preliminary assessment process.	AZ, CO, HI, MI, NM (mentioned in resource document, not GLs)		
Several states don't explicitly describe a pre-assessment process but mention avoidance of the types of features that can be identified in such a process	IA, KS; OH & OR (general GLs/ permits for all energy)		
AFWA summary mentions "detailed overview of resource and social issues, including rare plants, natural communities, soils and topography, water and wetlands, wildlife" but I can't find the original guidelines to work from	NH		
Several states have adopted the FWS guidance	MT, NV, ND, OK WI mentions		
Consider cumulative impacts	KS, SD		

Generalizations. From the elements above, some categories of things pop out—

Exclusionary features. A number of states list the types of places that are instant red flags, not appropriate for wind (and at least one has a very detailed list of exclusions, including the names of certain experiment stations, etc). These tend to be National Wildlife Refuges, state wildlife preserves, wilderness areas, etc. I did not find a lot of agreement (or even discussion) of standard buffers for these kinds of areas.

Topographic features of proposed site: Many guidance documents suggest avoiding (or at least documenting) shorelines, ridges, wetlands (including prairie potholes), landfills, caves or mines that could be bat hibernacula, etc.

Vegetative features: various guidance documents recommend at least a cursory examination of the local habitat features, especially large or contiguous habitats like forests, grasslands or shrub steppes. Several suggested that that agricultural landscapes or already disturbed areas were preferable to intact habitats.

Wildlife features: This had the least amount of consensus between different guidances, with some (particularly Canada), giving detailed questions in the prelim assessment about bird use both on the site and in the surrounding area. Others seemed not to get into specific wildlife questions till the more formal pre-project survey stage. It was fairly rare to see a really well-guided process where the data collected (or determined to be absent) in the preliminary assessment feeds into the design & duration of the pre-construction surveys.

Consultation- most of the guidance documents recommended at least some level of contact with state or federal agencies, but there was a lot of variety about which agencies, what level of involvement was needed, and what the triggers were for contact—for instance, some guidance was based on the FWS guidelines, others only recommended contacting FWS if there was an endangered species issue. Some states were fairly formal, others pretty much just listed who could be contacted for data. Authority is also spread around among state energy agencies, wildlife agencies, departments of natural resources, and parks and recreation agencies.

Existing wildlife data and mapping resources: most guidance documents listed one or more sources of data, including:

State natural heritage data
local universities
state comprehensive wildlife strategies
conservation organizations (Audubon for Important Bird Areas, Breeding Bird Surveys and/or Christmas Bird Count Data; Nature Conservancy for preserve/habitat information, etc)
data from nearby existing or proposed wind facilities
federal listed species data (FWS Ecological Services Office)
and geographic and imagery data.

California and Canada probably had the most comprehensive lists of where to find data.