

BMP	References	Socio (7.1)	Land-Based Econ (7.2)	Rec & Tourism (7.3)	Land Use (7.4)	Noise (7.5)	Visual Impacts (7.6)	Public Service & Infra. (7.7)	Public Health & Safety (7.8)	Haz. Mat. (7.9)	Soils & Topo (7.10)	Ground-water Resources (7.11)	Surface Water & Flood-plains (7.12)	Wetlands (7.13)	Veg. (7.14)	Wildlife (7.15)	Rare & Unique Natural Resources (7.16)	Cultural & Archae (7.17)	Air
Construction: Establish a controlled inspection and cleaning area for trucks and construction equipment are arriving from locations with known invasive vegetation problems. Visually inspect construction equipment arriving at the project area and remove and contain seeds that may be adhering to tires and other equipment surfaces.	ER-12, ERP 5-130														X	X			
Construction: Excess cut/fill materials shall be hauled in or out to minimize ground disturbance and impacts from fill piles.	VR-22, VRP 5-193						X				X				X				
Construction: Excess fill material shall not be disposed of downslope in order to avoid creating color contrast with existing vegetation/soils.	VR-21, VRP 5-193				X			X	X										
Construction: For road construction, excess fill shall be used to fill uphill-side swales to reduce slope interruption that would appear unnatural and to reduce fill piles.	VR-15, VRP 5-193				X		X				X								
Construction: If needed during construction, only use explosives within specified times and at specified distances from sensitive wildlife or surface waters as established by the appropriate Federal and State agencies.	ER-7, ERP 5-130					X			X				X			X			
Construction: In the unlikely event that blasting or pile driving would be needed during the construction period, notify nearby residents in advance.	NI-8, NIP 5-57				X			X	X										
Construction: Inspect and clean tires of construction-related vehicles, as necessary, so they are free of dirt prior to entering paved public roadways.	AQ-13, AQP 5-44						X	X											
Construction: Litter must be controlled and removed regularly during construction.	VR-30, VRP 5-194			X			X	X											
Construction: Locate stationary construction equipment (e.g., compressors or generators) as far as practical from nearby sensitive receptors.	NI-7, NIP 5-57						X									X			
Construction: Minimize the area disturbed during the installation of meteorological towers (i.e., the footprint needed for meteorological towers and associated laydown areas).	ER-2, ERP 5-129				X		X												
Construction: Schedule noisy activities to occur at the same time whenever feasible, since additional sources of noise generally do not greatly increase noise levels at the site boundary. Less frequent but noisy activities would generally be less annoying than lower-level noises occurring more frequently.	NI-3, NIP 5-57					X		X	X										
Construction: Schedule the installation of meteorological towers and other characterization activities to avoid disruption of wildlife reproductive activities or other important behaviors (e.g., do not install towers during periods of sage-grouse nesting).	ER-3, ERP 5-129															X			
Construction: Slash from vegetation removal shall be mulched and spread to cover fresh soil disturbances (preferred) or shall be buried. Slash piles shall not be left in sensitive viewing areas.	VR-13, VRP 5-193						X								X				

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General: Procedures shall be established for fuel storage and dispensing, including shutting off vehicle (equipment) engines; using only authorized hoses, pumps, and other equipment in good working order; maintaining appropriate fire and spill response materials at equipment-fueling stations; providing emergency shutoffs for fuel pumps; ensuring that fueling stations are paved; ensuring that both aboveground fuel tanks and fueling areas have adequate secondary containment; prohibiting smoking, welding, or open flames in fuel storage and dispensing areas; equipping the area with fire suppression devices, as appropriate; conducting routine inspections of fuel storage and dispensing areas; requiring prompt recovery and remediation of all spills, and providing for the prompt removal of all fuel and fuel tanks used to support construction vehicles and equipment at the completion of facility construction and decommissioning phases.	HM-11, HMP 5-248								X	X									
Haz. Materials: All site characterization, construction, operation, and decommissioning activities shall be conducted in compliance with applicable Federal and State laws and regulations, including the Toxic Substances Control Act of 1976, as amended (15 USC 2601, et seq.). In addition, any release of toxic substances (leaks, spills, and the like) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.	HM-4, HMP 5-247								X	X									
Haz. Materials: All vehicles and equipment shall be in proper working condition to ensure that there is no potential for leaks of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials.	HM-15, HMP 5-249								X	X									
Haz. Materials: Authorized users for each type of hazardous material shall be identified.	HM-10, HMP 5-248									X									
Haz. Materials: Dedicated areas with secondary containment shall be established for off-loading hazardous materials transport vehicles.	HM-7, HMP-5-248								X	X									
Haz. Materials: Design requirements shall be established for hazardous materials and waste storage areas that are consistent with accepted industry practices as well as applicable Federal, State, and local regulations and that include, at a minimum, containers constructed of compatible materials, properly labeled, and in good condition; secondary containment features for liquid hazardous materials and wastes; physical separation of incompatible chemicals; and fire-fighting capabilities when warranted.	HM-17, HMP 5-249								X	X									
Haz. Materials: Dispose of excess excavation materials in approved areas to control erosion and minimize leaching of hazardous materials.	SR-8, SRP 5-26									X	X		X	X					

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Haz. Materials: Hazardous materials and waste storage areas or facilities shall be formally designated and access to them restricted to authorized personnel. Construction debris, especially treated wood, shall not be disposed of or stored in areas where it could come in contact with aquatic habitats.	HM-16, HM 5-249									X		X	X	X					
Wildlife/Vegetation: If pesticides/herbicides are to be used on the site, develop an integrated pest and vegetation management plan to ensure that applications will be conducted within the framework of managing agencies and will entail the use of only EPA-registered pesticides/herbicides that are (1) nonpersistent and immobile and (2) applied by licensed applicators in accordance with label and application permit directions, following stipulations regarding suitability for terrestrial and aquatic applications.	HM-3, HMP 5-247								X						X	X			
Haz. Materials: In the event of an accidental release of hazardous substances to the environment, document the event, including a root cause analysis, a description of appropriate corrective actions taken, and a characterization of the resulting environmental or health and safety impacts. Documentation of the event shall be provided to permitting agencies and other appropriate Federal and State agencies within 30 days, as required.	HS-6, HSP 5-256								X	X									
Haz. Materials: Limit herbicide and pesticide use to nonpersistent, immobile compounds and apply them using a properly licensed applicator in accordance with label requirements.	WR-6, WRP 5-33								X					X	X				

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Invasive Species: Access roads, utility and transmission line corridors, and tower site areas shall be monitored regularly for the establishment of invasive species, and weed control measures should be initiated immediately upon evidence of the introduction of invasive species.	ER-17, ERP 5-131							X							X				X
Invasive Species: Develop a plan for control of noxious weeds and invasive plants that could occur as a result of new surface disturbance activities at the site. The plan shall address monitoring, weed identification, the manner in which weeds spread, and methods for treating infestations. Require the use of certified weed-free mulching.	ER-11, ERP 5-130								X						X				
Invasive species: Do not use fill materials that originate from areas with known invasive vegetation problems.	E-16, ERP 5-131														X				
Invasive species: Regularly monitor access roads and newly established utility and transmission line corridors for the establishment of invasive species. Initiate weed control measures immediately upon evidence of the introduction or establishment of invasive species.	ER-13, ERP 5-131														X				
Invasive species: Vehicles shall be washed outside of active agricultural areas to minimize the possibility of the spread of noxious weeds.	LU-5, LUP 5-14														X				
Maintenance: Promptly dispose of all garbage or human waste generated on site in order to avoid attracting nuisance wildlife.	ER-15, ERP 5-131								X							X			
Maintenance: Clean and maintain catch basins, drainage ditches, and culverts regularly.	WR-5, WRP 5-33							X					X	X					
Maintenance: Maintain all equipment in good working order in accordance with manufacturer specifications. Suitable mufflers and/or air-inlet silencers should be installed on all internal combustion engines and certain compressor components.	NIP 5-56					X	X												X
Maintenance: Maintenance activities shall include dust abatement (in arid environments), litter cleanup, and noxious weed control.	VR-36, VRP 5-195								X		X				X				X
Maintenance: Nacelles and towers shall be cleaned regularly (yearly, at minimum) to remove spilled or leaking fluids and the dirt and dust that accumulates, especially in seeping lubricants.	VR-34, VRP 5-194						X		X	X									
Maintenance: Refueling areas shall be located away from surface water locations and drainages and on paved surfaces; features shall be added to direct spilled materials to sumps or safe storage areas where they can be subsequently recovered.	HM-12, HMP 5-248									X	X	X	X	X					
Maintenance: Regularly inspect access roads, utility and transmission line corridors, and tower site areas for damage from erosion, washouts, and rutting. Initiate corrective measures immediately upon evidence of damage.	ER-18, ERP 5-131							X	X		X		X	X					
Maintenance: Restrict heavy vehicles and equipment to improved roads to the extent practicable.	SR-3, SRP 5-25							X			X								
Maintenance: Roads serving the site would need to be properly maintained to avoid erosion impacts.	LUP 5-13				X			X			X		X		X				

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Siting: Although wind turbines may sometimes be located on ridgelines, skylining of substations, transmission structures, communication towers, and other structures associated with wind energy developments should be avoided; that is, they should not be placed on ridgelines, summits, or other locations where they will be silhouetted against the sky from important viewing locations. Siting should avoid skylining by taking advantage of opportunities to use topography as a backdrop for views of facilities and structures. The presence of these structures should be concealed or made less conspicuous by siting and designing them to harmonize with desirable or acceptable characteristics of the surrounding environment.	VRP 5-188						X	X											
Siting: As feasible, siting of linear features (ROWs and roads) associated with wind energy developments should follow natural land contours rather than straight lines, particularly up slopes. Fall-line cuts should be avoided. Where it can be accomplished without introducing unacceptable impacts on other resources, following natural contours echoes the lines found in the landscape and often reduces cut-and-fill requirements; straight lines can introduce conspicuous linear contrasts that appear unnatural.	VRP 5-188						X	X			X								
Siting: Avoid altering existing drainage systems, especially in sensitive areas such as erodible soils or steep slopes.	WR-4, WRP 5-33										X	X	X	X					
Siting: Avoid locating wind energy developments in areas of unique or important recreation, wildlife, or visual resources. When feasible, a wind energy development should be sited on already altered landscapes.	LUP 5-14			X	X		X									X	X		
Siting: Avoid placement of wind energy facilities in areas with unsuitable seismic, liquefaction, slope, subsidence, settling, and flooding conditions.	SRP 5-25										X								
Siting: Because the landscape setting observed from national historic sites, national trails, and tribal cultural resources may be a part of the historic context contributing to the historic significance of the site or trail, project siting should avoid locating facilities that would alter the visual setting such as would reduce the historic significance or function.	VRP 5-187																	X	
Siting: Because visual impacts are usually lessened when vegetation and ground disturbances are minimized, where possible, in forested areas or shrublands, siting should take advantage of existing clearings to reduce vegetation clearing and ground disturbance.	VRP 5-189						X				X				X				
Siting: Consolidate infrastructure wherever possible to maximize efficient use of the land and minimize impacts. Existing transmission and market access should be evaluated and use of existing facilities should be maximized.	LUP 5-14							X			X		X	X					

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Siting: Structures, roads, and other project elements should be set as far back from road, trail, and river crossings as possible, and vegetation should be used to screen views from crossings, where feasible.	VRP 5-191			X			X	X					X	X					
Siting: Take advantage of topography and the distance to nearby sensitive receptors when positioning potential sources of noise.	NIP 5-56					X													
Siting: The eye is naturally drawn to prominent landscape features (e.g., knobs and waterfalls); thus, projects and their elements should not be sited next to such features, where possible.	VRP 5-187						X				X								
Siting: The eye naturally follows strong natural lines in the landscape, and these lines and associated landforms can “focus” views on particular landscape features. For this reason, linear facilities associated with a wind energy project, such as transmission lines and roads, generally should not be sited so that they bisect ridge tops or run down the center of valley bottoms.	VRP 5-187						X				X								
Siting: The only way to completely avoid any adverse impacts on radar involves methods that avoid locating turbines in the radar line of sight (e.g., achieved by distance, terrain masking, or terrain relief; DOD 2006). An additional solution could be to replace aging radar equipment with modern and flexible equipment that can better distinguish wind farm clutter from aircraft or weather (Brenner et al. 2008). Turbine operations could also be curtailed during significant weather events. Western generally advises developers submitting interconnection requests to avoid areas that would potentially conflict with radar facilities.	LUP 5-15				X				X										
Siting: The siting and design of facilities, structures, roads, and other project elements should match and repeat the form, line, color, and texture of the existing landscape.	VRP 5-190						X				X								
Siting: Through site design, the number of structures required should be minimized. Activities should be combined and carried out in one structure, or structures should be collocated to share pads, fences, access roads, lighting, etc.	VRP 5-190				X		X												
Siting: To the extent possible, given the terrain of a site, wind turbines should be clustered or grouped when placed in large numbers, but a cluttering effect should be avoided by separating otherwise overly long lines of turbines or large arrays, and breaks or open zones should be inserted to create distinct visual units or groups of turbines.	VRP 5-189						X				X								
Siting: To the extent possible, transmission lines and roads associated with wind energy facilities should be collocated within a corridor to use existing/shared ROWs, existing/shared access and maintenance roads, and other infrastructure in order to reduce visual impacts associated with new construction.	VRP 5-189						X	X											
Siting: Use existing roads and disturbed areas to the extent possible.	SRP 5-25, WRP 5-33				X		X				X		X	X	X	X		X	

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Transportation: A traffic management plan shall be prepared for the site access roads to ensure that no hazards would result from increased truck traffic and that traffic flow would not be adversely impacted. This plan shall identify measures that will be implemented to comply with any State or Federal DOT requirements, such as informational signs, flaggers when equipment may result in blocked throughways, and traffic cones to identify any necessary changes in temporary lane configurations. Signs shall be placed along roads to identify speed limits, travel restrictions, and other standard traffic control information. To minimize impacts on local communities, consideration shall be given to limiting construction vehicles on public roadways during the morning and late afternoon commute times.	HS-8, HSP 5-256							X	X										X
Transportation: A transportation plan shall be prepared that identifies measures the developer will implement to comply with State or Federal requirements and to obtain the necessary permits. This will address the transport of turbine components, main assembly crane, and other large pieces of equipment. The plan shall consider specific object size, weight, origin, destination, and unique handling requirements and shall evaluate alternative means of transportation (e.g., rail or barge).	LU-11, LUP 5-15				X			X	X										
Transportation: Access roads shall be designed and constructed to the appropriate standard necessary to accommodate their intended function (e.g., traffic volume and weight of vehicles) and minimize erosion. Access roads that are no longer needed should be recontoured and revegetated.	LU-10, LUP 5-15				X			X			X				X				X
Transportation: Develop a traffic management plan for the site access roads to control hazards that could result from increased truck traffic (most likely during construction or decommissioning), ensuring that traffic flow would not be adversely affected and that specific issues of concern (e.g., the locations of school bus routes and stops) are identified and addressed. This plan shall incorporate measures such as informational signs, flaggers (when equipment may result in blocked throughways), and traffic cones to identify any necessary changes in temporary lane configurations. The plan shall be developed in coordination with local planning authorities.	HS-8, HSP 5-256						X	X	X										
Vegetation: Planting pockets shall be left on slopes, where feasible.	VR-18, VRP 5-193						X								X				
Vegetation: Reduce habitat disturbance by keeping vehicles on access roads and minimizing foot and vehicle traffic through undisturbed areas.	ER-4, ERP 5-130															X			
Vegetation: Road maintenance activities shall avoid blading of existing forbs and grasses in ditches and adjacent to roads; however, any invasive or noxious weeds shall be controlled as needed.	VR-37, VRP 5-195						X	X							X				

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Visual: Turbines, visible ancillary structures, and other equipment shall be painted before or immediately after installation.	VR-6, VRP 5-191						X												
Visual: Valuable trees and other scenic elements can be protected by clearing only to the edge of the designed grade manipulation and not beyond through the use of retaining walls, and by protecting tree roots and stems from construction activities. Brush-beating or mowing rather than vegetation removal should be done, where feasible.	VRP 5-193						X								X				
Visual: Visual impact mitigation objectives and activities shall be discussed with equipment operators before construction activities begin.	VR-11, VRP 5-192						X												
Visual: Where possible, projects should be sited outside the viewsheds of key observation points (KOPs), highly sensitive viewing locations, and/or areas with limited visual absorption capability and/or high scenic integrity. When wind energy developments and associated facilities must be sited within view of KOPs, they should be sited as far away as possible, since visual impacts generally diminish as viewing distance increases.	VRP 5-187			X			X												
Visual: Where possible, staging and laydown areas should be sited outside the viewsheds of KOPs and not in visually sensitive areas; they should be sited in swales, around bends, and behind ridges and vegetative screens, where these screening opportunities exist.	VRP 5-192			X			X				X								
Visual: Where screening topography and vegetation are absent, natural-looking earthwork berms and vegetative or architectural screening should be used to minimize visual impacts associated with ancillary facilities. Vegetative screening can be particularly effective along roadways.	VRP 5-190						X				X				X				
Visual: Wind turbines should exhibit visual uniformity in the shape, color, and size of rotor blades, nacelles, and towers.	VRP 5-190						X												
Water Resources: Avoid creating hydrologic conduits between two aquifers (e.g., upper and lower).	WRP 5-33											X	X	X					
Water Resources: Identify areas of groundwater recharge and discharge and evaluate their potential relationship with surface water bodies and groundwater quality.	WRP 5-33											X	X	X					
Water resources: Isolate excavation areas (and soil piles) from surface water bodies using silt fencing, bales, or other accepted appropriate methods to prevent sediment transport by surface runoff.	SR-9, SRP 5-26						X				X								
Water resources: Use earth dikes, swales, and lined ditches to divert local runoff around the work site.	SR-10, SRP 5-26										X		X	X					
Wetlands/Vegetation: For wetland and grassland easements, coordinate closely with the USFWS or USDA during initial project planning to ensure that wetland and grassland easements are avoided to the extent practicable.	LUP 5-15						X							X	X				

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Wildlife/Vegetation: Contact appropriate Federal and State agencies (including State entities responsible for permitting energy development projects) early in the planning process to identify potentially sensitive ecological resources known to be present or likely to be present in the vicinity of the wind energy development.	WRP 5-128							X			X								
Wildlife/Vegetation: Do not locate individual meteorological towers in or adjacent to sensitive habitats or in areas where ecological resources known to be sensitive to human activities are present.	WRP 5-129			X	X										X	X			
Wildlife/Vegetation: Review existing information on species and habitats in the project area. Identify important, sensitive, or unique habitat (including large contiguous tracts of grassland habitat) and biota in the project site and vicinity, and design the project to avoid, minimize, or mitigate potential impacts on these resources. Avoidance is the typically the most effective, and therefore preferred, choice for minimizing impacts. The design and siting of the facility should follow appropriate guidance and requirements from Western and the USFWS (as specified for each species in the selected alternative in the Final PEIS) as well as those required by State permitting agencies, and other resource agencies, as available and applicable. For birds specifically, attention should be given to project placement that may be within or near Important Bird Areas (http://netapp.audubon.org/iba) or Hemispheric or Regional Western Hemisphere Shorebird Reserve Network sites (http://www.whsrn.org/whsrn-sites), or where bird species or habitats of conservation concern are known to occur. The IBA Program has identified the most essential areas for birds, and conservation of these areas will provide for long-term protection of biodiversity. Sources of information on these important habitats can be found at http://ecos.fws.gov/ipac , http://www.avianknowledge.net , and http://web4.audubon.org/bird/iba .	WRP 5-127															X			
Wildlife: Avoid constructing turbines in areas of concentrated prey base for raptors (e.g., prairie dog towns).	ERP 5-130															X			
Wildlife: Consult with the appropriate natural resource agencies to avoid scheduling construction activities during important periods for wildlife courtship, breeding, nesting, lambing, or calving that are applicable to sensitive species within the project area.	ERP 5-130				X											X			
Wildlife: Establish buffer zones around known raptor nests, bat roosts, and biota and habitats of concern if site evaluations show that proposed construction activities would pose a significant risk to avian or bat species of concern.	ER-6, ERP 5-130															X			
Wildlife: Evaluate potential avian and bat use (including the locations of active nest sites, colonies, roosts, and migration corridors) of the project and use data to plan turbine (and other structure/infrastructure) locations to minimize impacts.	ERP 5-128															X			

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<p>Wildlife: Evaluate the potential for the wind energy project to adversely affect bald and golden eagles in a manner consistent with the Eagle Conservation Plan Guidance (USFWS 2013a). Early in the planning of transmission interconnection and wind farm location, coordination with USFWS Field Offices regarding the guidance is highly recommended. Documented occurrence of eagles can be acquired from the local USFWS Ecological Services office, State wildlife agencies, or State natural heritage databases in some cases, although on-site surveys may be needed. In accordance with the USFWS's Land-Based Wind Energy Guidelines (USFWS 2012b), surveys during early project development should identify all important eagle use areas (nesting, foraging, and winter roost areas) within the project's footprint. If recent data are available on the spacing of occupied eagle nests for the project-area nesting population, these data can be used to delineate an appropriate boundary for the project area. If appropriate survey data are unavailable, the USFWS suggests that the project area, for the purpose of evaluating potential effects on eagles, be defined as the project footprint together with areas within 10 mi (16 km) of the footprint boundary. As described in the USFWS's Land-Based Wind Energy Guidelines (USFWS 2012b), project developers should evaluate the need to develop an ECP.</p>	ERP 5-128															X			
<p>Wildlife: Follow the recommendations provided in the USFWS's Land-Based Wind Energy Guideline (USFWS 2012b) and, as appropriate, the Eagle Conservation Plan Guidance (USFWS 2013a). In addition, follow guidelines or recommendations developed by individual States (e.g., IDNR 2011; Kempema 2009; Nebraska Wind and Wildlife Working Group 2011) to address potential effects of wind energy development on ecological resources.</p>	WRP 5-126				X											X			
<p>Wildlife: If appropriate, conduct surveys for presence of Federal- and State-protected species and other species of concern and the habitats for such species that have a reasonable potential to occur within the project area based on habitat characteristics. Consult with the USFWS and/or appropriate State agency to identify species likely to be present and appropriate survey techniques, determine permit needs, and identify/apply species-specific avoidance and minimization measures.</p>	WRP 5-128															X	X		
<p>Wildlife: If significant impacts on Important Bird Areas (IBAs) or similar ecologically important avian areas are not avoided, minimized, or mitigated, then this Final PEIS would not apply and a separate project specific NEPA evaluation must be developed and approved by the appropriate responsible federal agency prior to project construction.</p>	WRP 5-128															X			

BMP	References	Socio (7.1)	Land- Based Econ (7.2)	Rec & Tourism (7.3)	Land Use (7.4)	Noise (7.5)	Visual Impacts (7.6)	Public Service & Infra. (7.7)	Public Health & Safety (7.8)	Haz. Mat. (7.9)	Soils & Topo (7.10)	Ground- water Resources (7.11)	Surface Water & Flood- plains (7.12)	Wetlands (7.13)	Veg. (7.14)	Wildlife (7.15)	Rare & Unique Natural Resources (7.16)	Cultural & Archae (7.17)	Air
Wildlife: In the absence of long-term mortality studies, monitor regularly for potential wildlife problems including wildlife mortality. Report observations of potential wildlife problems, including wildlife mortality, to the appropriate State or Federal agency in a timely manner, and work with the agencies to utilize this information to avoid/minimize/offset impacts. The Ecological Services Division of the USFWS shall be contacted. Development of additional mitigation measures may be necessary.	ER-22, ERP 5-131															X			
Wildlife: Increasing turbine cut-in speeds (i.e., prevent turbine rotation at lower wind velocity) in areas of bat conservation concern during times when active bats may be at particular risk from turbines.	ER-20, ERP 5-131															X			
Wildlife: Instruct employees, contractors, and site visitors to avoid harassment and disturbance of wildlife, especially during reproductive (e.g., courtship and nesting) seasons. Pets shall not be allowed on the project area.	ER-21, ERP 5-131															X			
Wildlife: Place marking devices on any newly constructed or upgraded transmission lines, where appropriate, within suitable habitats for sensitive bird species.	ER-14, ERP 5-131															X			

BMP	References	Socio (7.1)	Land- Based Econ (7.2)	Rec & Tourism (7.3)	Land Use (7.4)	Noise (7.5)	Visual Impacts (7.6)	Public Service & Infra. (7.7)	Public Health & Safety (7.8)	Haz. Mat. (7.9)	Soils & Topo (7.10)	Ground- water Resources (7.11)	Surface Water & Flood- plains (7.12)	Wetlands (7.13)	Veg. (7.14)	Wildlife (7.15)	Rare & Unique Natural Resources (7.16)	Cultural & Archae (7.17)	Air
<p>goal of such a plan is to reduce or eliminate avian and bat mortality; implementation of a BPCS builds support for a FONSI when projects tier from the PEIS. The wind energy facility developer should work closely with the USFWS and the appropriate State wildlife agencies to identify protective measures to include in the plan. These would include project design measures, construction phase measures, operational phase measures, and decommissioning phase measures. A minimum of 1 yr of post-construction monitoring is needed to validate the preconstruction risk assessment and allow the facility owner to adjust operations based on identified problems. Based on project location in proximity to occupancy, habitat, and other attributes that may increase the risk to birds and bats, multiyear post-construction monitoring may be necessary at some project sites. It is of paramount importance that post-construction surveys are accurate estimates of fatality at wind power facilities. Simple carcass counts at wind energy facilities are inaccurate and underestimate the total number of fatalities because not all carcasses are found due to factors such as unsearchable terrain, carcass removal by scavengers, and less than perfect searcher efficiency. Post-construction surveys for mortality must be robust and standardized to provide reliable results upon which to base adaptive management decisions. For these reasons, using a fatality estimator model is critical. The USFWS recommends a model like the Evidence of Absence model developed by Huso et al. (2014). The user's guide and software developed to estimate bird and bat fatalities at wind-power facilities (Dalthorp et al. 2014) can be found at http://pubs.usgs.gov/ds/0881. The Evidence of Absence software provides for comparison of various combinations of search coverage, search interval, and searcher efficiency that all produce the same overall level of carcass detection probability. Results of monitoring activities shall be reported to the appropriate State or Federal agencies in a timely manner. If bat monitoring is appropriate for the site, installation of bat acoustic monitors should be considered at the time meteorological towers are installed to reduce costs and minimize delays by collecting data early</p>	WRP 5-126															X			
<p>Wildlife: The transmission lines shall be designed and constructed with regard to the recommendations in Avian Protection Plan Guidelines (APLIC and USFWS 2005), in conjunction with Suggested Practices for Avian Protection on Power Lines (APLIC 2006) and Reducing Avian Collisions with Power Lines (APLIC 2012), to reduce the operational and avian risks that result from avian interactions with electric utility facilities.</p>	ER-1, ERP 5-128															X			

BMP	References	Socio (7.1)	Land- Based Econ (7.2)	Rec & Tourism (7.3)	Land Use (7.4)	Noise (7.5)	Visual Impacts (7.6)	Public Service & Infra. (7.7)	Public Health & Safety (7.8)	Haz. Mat. (7.9)	Soils & Topo (7.10)	Ground- water Resources (7.11)	Surface Water & Flood- plains (7.12)	Wetlands (7.13)	Veg. (7.14)	Wildlife (7.15)	Rare & Unique Natural Resources (7.16)	Cultural & Archae (7.17)	Air
<p>Wildlife: Tier to the Final Programmatic EIS. The responsible federal agency will use a tiered NEPA evaluation to document avoidance, minimization, or mitigation of impacts to important bird habitat (e.g., established private, State, or federal special management areas for birds, IBAs, Regional Western Hemisphere Shorebird Reserve Network, [http://www.whsrn.org/whsrn-sites], etc.) to achieve no significant impact to avian resources. On a project-by-project basis, developers should contact local USFWS offices early in the planning process to identify areas of conflict with specific avian species or important bird habitat. Developers shall work with USFWS and Western to develop avoidance, minimization, or mitigation measures to adequately demonstrate their project will have no significant impact on avian resources. In these cases, individual projects determined to be consistent with the selected alternative in the Final PEIS will require a FONSI to document consistency.</p>	ER 5-127															X			
<p>Wildlife: Turn off unnecessary lighting at night to limit attraction of migratory birds. Follow lighting guidelines, where applicable, from the Wind Energy Guidelines Handbook. This includes using lights with timed shutoff, downward-directed lighting to minimize horizontal or skyward illumination, and avoidance of steady-burning, high-intensity lights.</p>	ER-19, ERP 5-131															X			