



WESTERN RESOURCE
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Environmental Issues To Consider When Expanding Transmission Capacity

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Environmental Conundrum

Long-term vs. short term concerns

- Stave off a biodiversity disaster in the future from climate change by fast-tracking renewable-power development and transmission
- vs.
- Protect important habitat and landscapes now no matter the long term concerns
- Complicating Concerns
- Strong fear of unknown, undescribed impacts
- Human nature to focus on short term, tangible, impacts close to home
- Many rely on legal remedies first

Smart Line Transmission Planning Principles

- Efficiency first
- Maximize existing grid
- Connect to clean RE resources
- Ensure protection for public lands and wildlife resources

(www.westernresourceadvocates.org/energy/smartlines.php)

Ensure Protection for Public Lands and Wildlife Resources

- Incorporate environmental concerns and constraints throughout transmission planning
- Budget adequately for addressing environmental constraints

Early Incorporation of Environmental Constraints

Benefits

- Aid planning by increasing the likelihood that existing corridors are used and early routing options remain viable
- Reducing the need for mid-stream rerouting
- Inviting early participation and support from more diverse stakeholders

Deferred Incorporation of Environmental Constraints

Costs

- Deferring incorporation will:
 - Catalyze environmental fears
 - Guarantee delay
 - Cost regulatory agencies, stakeholders, customers, and transmission developers and operators additional time and money

Potential Impacts of Transmission Lines

(Unique due to linearity, height, wires)

- Habitat loss and degradation from road and ROW construction
- Habitat fragmentation
- Bird and bat collisions with towers and wires
- Increased predation from raptors

Major Siting Considerations

- Avoid sensitive public lands recognized for scenic, natural, recreational, cultural or historic resources
- Minimize impacts through adoption of BMPs for right-of-way siting, construction, maintenance
- Mitigate impacts

Siting BMPs: Preferred Areas

- Existing transmission line corridors and designated utility corridors
- Existing ROWs, degraded industrial and agricultural lands, and other already impaired areas
- Sites in close proximity to existing or approved industrial lands
- Areas with co-locating opportunities

Siting BMPs: Areas To Avoid

- Critical and core habitats for federal and state protected threatened, endangered, candidate species
- Important wildlife corridors and linkages
- Important wetlands and rivers like National Wild, Scenic, and Recreational Rivers, study rivers and segments
- Special Recreation Management Areas

Siting BMPs: Areas To Avoid

- National Parks, National Wildlife Refuges, National Monuments
- Wilderness Areas, Wilderness Study Areas and other areas with wilderness characteristics
- National Conservation Areas, Outstanding Natural Areas, Areas of Critical Environmental Concern and other lands within BLM National Landscape Conservation System
- National Historic and National Scenic Trails

BMPs - Construction

Major Issues:

- Sensitive Resources Management
- Land and Right-of- Way Management
- Environmental Compliance
- Storm Water Pollution Prevention
- Erosion and Sediment Control

BMPs - Construction

Sensitive Resources Management:

- Preconstruction surveys on right of way, substations, office sites, and storage yards
- Identification and confirmation of biological, cultural, and paleontological resources
- **Species-specific and site-specific plans to avoid, minimize or mitigate impacts to sensitive resources**

BMPs - Construction

Sensitive Resources Management:

- Use tower design that minimizes raptor perches
 - Note that such design does not reduce degradation of habitat for prairie grouse
- **Crews employ professional third-party monitors with authority to stop work where protections are violated**
- Use underground lines where overhead ones seriously conflict with sensitive biological resources or military activities
- Produce final report and resource cataloging

BMPs - Construction

Right-of-Way Management and Maintenance:

- Minimal construction of access roads and ROWs to reduce disturbance
- Establish speed limits on access roads
- Require stringent control of invasive species
 - require equipment washing before entry into sensitive areas
- Spill response and fire prevention materials located with construction crews
- Erosion and sediment control devices installed, maintained, and removed

Guidance for Mitigating Impacts

Major Considerations:

- First avoid, then minimize, then mitigate
- Mitigation should:
 - At a minimum, balance loss of habitat and biodiversity
 - Preferably enhance long-term health and viability of the populations
- May require additional research to determine effective mitigation, especially given unique nature of transmission impacts (linear and tall)

Guidance for Mitigating Impacts

Major Considerations:

- Protection at least throughout life of project
- May require establishment and enforcement of special regulations
- Potential use of an annual fee for life of project for acquisition, stewardship, and restoration

Guidance for Mitigating Impacts

Replacement habitat:

- At least acre for acre (ratios vary with habitat type and quality, geography, legal protection, direct vs. indirect, permanent vs. temporary)
- Equivalent type and quality of habitat (grassland for grassland)
- Same geographic area preferred
- Acquisition preferred (fee simple, easements)

To have your transmission vegetables consumed they have to be prepared right

- Incorporate environmental concerns and constraints throughout transmission planning
- Budget adequately for addressing environmental constraints



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