Wind Power and Birds: Conservation Considerations, Challenges, and the Role of the USFWS

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Outline

• Migratory Bird Treaty Act & Enforcement
• FWS siting guidelines
• Wind v. other sources of mortality
• PIF trend data and cumulative effects
• Wind energy future in OR
• Role of FWS
Migratory Bird Treaty Act

- Passed in 1918 + subsequent amendments
- Implements treaties with:
  - Canada (GB) – 1916
  - Mexico – 1936
  - Japan – 1972
  - Russia – 1978
- Prohibits direct take unless authorized by permit.
- There are no regulations that permit indirect or incidental take.
- It’s a Strict Liability statute – one incidental take is a violation.
Which Birds Are/Aren’t Protected?

Protects 830+ native species except
- resident game birds
- introduced species
- hawaiian honeycreepers, &
- …wrentits
(50 CFR 10.13)
...While MBTA and the Bald and Golden Eagle Protection Act have no provision for allowing unauthorized take, the Service recognizes that some birds may be killed at structures such as wind turbines even if all reasonable measures to avoid it are implemented. While it is not possible under these acts to absolve individuals, companies, or agencies from liability, the Service's office of Law Enforcement and Department of Justice have used enforcement and prosecutorial discretion in the past regarding individuals, companies, or agencies who have made good faith efforts to avoid the take of migratory birds....
Mitigation?

- Cannot mitigate mortality under MBTA
  - Strict liability statute
  - No take thresholds or allowances
  - No ability to permit take
- States bound to uphold MBTA
- Can mitigate for land under FWS
  Mitigation policy
FWS Siting Guidelines

- 2003 – FWS distributes for comment
  - 2004 grouse guidelines
- 2007 – FAC formed
- 2009 – FAC recommendations to FWS
Total Mortality?

- We think bird mortality nationwide averages 2 birds/yr/MW;
- Current wind power capacity is 21,017 MW.
- Now killing ~ 42,000/yr
- Projected capacity ~ 100 times current.
- Projected mortality ~ 4 million/yr
## Wind v. Other Sources of Mortality?

<table>
<thead>
<tr>
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<th>U.S. Annual</th>
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<tbody>
<tr>
<td>Buildings &amp; Windows</td>
<td>98 M to 980 M</td>
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<tr>
<td>High Tension Lines</td>
<td>50,000 to 174 M</td>
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<tr>
<td>Cats</td>
<td>100 M</td>
</tr>
<tr>
<td>Vehicles</td>
<td>60 M to 80 M</td>
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<tr>
<td>Pesticides</td>
<td>70 M</td>
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<tr>
<td>Commun. Towers</td>
<td>4 M to 50 M</td>
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<tr>
<td>Projected Wind</td>
<td>4 M</td>
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<tr>
<td>Current Wind</td>
<td>40,000</td>
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<td>Seabird By-catch</td>
<td>?</td>
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Cumulative Effects?

  - evaluated 448 species
  - 100 on the ‘Watch List’ (threats to habitat, declining populations, small population sizes, or limited distributions)
    - 28 require immediate action
    - 44 more need management to reverse long-term declines.
Which Species are Killed at Wind Facilities?

- Few nocturnal migrants
- In the West/Midwest – Horned Larks. 30% of all birds killed were HOLAs
- Altamont, CA – 1.5-2.2 raptors/MW/year
  - 75 to 116 golden eagles
  - 209 to 300 red-tailed hawks
  - 73 to 333 American kestrels
  - 99 to 380 burrowing owls, per year
- Altamont is unique. Seasonal shutdowns, re-powering, + many other mitigations now being implemented and being monitored
Displacement/Avoidance

- Some sage grouse researchers recommend larger.
- NWCC – GS3C studying prairie chicken and recommending sage grouse studies.
Future Development in OR?

- Previously limited by lack of transmission
- Transmission and wind projects planned for high desert areas
- Need for multi-partner long-term plan, particularly in shrub-steppe
  - Mapping lek locations
  - Wind Resources areas
  - Transmission corridors
  - Climate change models
  - 50+ year horizon
- Research on effects on grouse – every new site is an experiment.
FWS Role

- We are not regulatory to industry
- If mortalities, the Law Enforcement might get involved
  - Prosecutorial Discretion
- Some site visits, phone consultations, ES involvement, some memberships on TACs
- Grouse not MBTA spp. – but might be ESA some day
- We issue letters to developers regarding Fed laws
- Consult on State guideline development
- Review pre/post construction survey results with industry and contractors
- National Siting Guidelines – draft, interim, volunteer since 2003
- Work with partners to minimize mortality