Wildlife Habitat Restoration on Northwest Wind Energy Projects

By David Bradney and Lisa Vogler, WildLands, Inc.
## Wind Farm Restoration Experience

### Completed Projects

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Year</th>
<th>Client</th>
<th>Location</th>
<th>Turbine #</th>
<th>Disturbance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildhorse</td>
<td>2006/7</td>
<td>RES</td>
<td>Ellensburg, WA</td>
<td>127</td>
<td>Minor Grazing</td>
</tr>
<tr>
<td>Leaning Juniper</td>
<td>2006</td>
<td>DH Blattner</td>
<td>Arlington, OR</td>
<td>67</td>
<td>Agriculture/Heavy Grazing</td>
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<tr>
<td>Bighorn</td>
<td>2006/7</td>
<td>DH Blattner</td>
<td>Bickleton, WA</td>
<td>133</td>
<td>Agriculture/Heavy Grazing</td>
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<tr>
<td>Klondike III</td>
<td>2007</td>
<td>DH Blattner</td>
<td>Wasco, OR</td>
<td>123</td>
<td>Agriculture/CRP</td>
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<td>Biglow</td>
<td>2007</td>
<td>DH Blattner</td>
<td>Wasco, OR</td>
<td>69</td>
<td>Agriculture/CRP</td>
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<td>White Creek</td>
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<td>RES</td>
<td>Bickleton, OR</td>
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<tr>
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<td>2008</td>
<td>DH Blattner</td>
<td>Wasco, OR</td>
<td>36</td>
<td>Agriculture/CRP</td>
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</table>

### In Progress

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Year</th>
<th>Client</th>
<th>Location</th>
<th>Turbine #</th>
<th>Disturbance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willow Creek</td>
<td>2008</td>
<td>DH Blattner</td>
<td>Ione, OR</td>
<td>48</td>
<td>Agriculture/Heavy Grazing</td>
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<tr>
<td>Elkhorn</td>
<td>2008/9</td>
<td>Horizon Wind</td>
<td>Tococasset, OR</td>
<td>61</td>
<td>Minor Grazing</td>
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<td>Kittitas Valley</td>
<td>2008/9</td>
<td>Horizon Wind</td>
<td>Ellensburg, WA</td>
<td>65</td>
<td>Minor Grazing</td>
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<td>Vantage</td>
<td>2008/9</td>
<td>Inenergy</td>
<td>Ellensburg, WA</td>
<td>69</td>
<td>Minor Grazing</td>
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<td>Pebble Springs</td>
<td>2008/9</td>
<td>DH Blattner</td>
<td>Arlington, OR</td>
<td>47</td>
<td>Agriculture/Grazing</td>
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<td>Rattlesnake Road</td>
<td>2008/9</td>
<td>Horizon Wind</td>
<td>Arlington, OR</td>
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<td>Heavy Grazing</td>
</tr>
</tbody>
</table>
Restoration of Wind Power Projects

- Primary focus is usually erosion control
- More recent emphasis placed on restoring native plants
- Most restoration involves hydroseeding and/or drill seeding
- Many wind farms are built in areas of intense historical land use, such as farming and/or grazing.
Restoration of Wind Power Projects
Historically Disturbed Sites

- **Farmland:**
  - Seed mixes may include cultivars

- **Grazing Land:**
  - Seed mixes may include traditional forage species

These historically disturbed areas have little existing value to terrestrial wildlife.
Restoration of Wind Power Projects
Relatively Undisturbed Sites

- Few sites are completely undisturbed.
- Less disturbed sites have more value to wildlife.
- These areas require consideration for existing wildlife habitat, in the form of:
  - Restoration
  - Mitigation
Restoration/Mitigation Strategies
For Wildlife Habitat

Restoration of temporarily disturbed areas:
- To minimize impacts to existing wildlife habitat
- To mitigate impacts to native plant populations

Off-site mitigation to offset net loss of valuable habitat:
- By set-aside and protection of valuable, intact habitat
- By restoration and protection of potential habitat
Restoration of Temporary Disturbance
Wild Horse Wind Power Project

- Sage Grouse, Elk, and Mule Deer habitat
- 350 acres of disturbance
- Restoration plan followed recommendations by the Washington Department of Fish and Wildlife
Restoration of Wildlife Habitat
Wild Horse Wind Power Project

Sagebrush Planting
- Planted 5,500 10-cubic inch Sagebrush plugs
- Planted in islands along oversized underground cable trench
- Planted area is close to known Sage Grouse occurrences
Wildlife Habitat Mitigation
Elkhorn Valley Wind Farm

- Potential big game winter forage habitat
- Significant disturbance to prime wildlife habitat
- Upland mitigation plan followed recommendations by the Oregon Department of Fish and Wildlife
Existing Condition:
- Dominated by thick stands of Big Sagebrush
- History of cattle grazing
- Pockets of noxious weed infestations

Strategy for Improvement:
- Increase vegetation diversity to improve forage value
- Control noxious weeds
- Exclude cattle
Elkhorn Valley Wind Farm
Upland Mitigation Plan

Upland Mitigation Plan – 300 Acres
- Adjacent to area of disturbance
- Aerial seeding of 170 acres
- Planting across 130 acres – locally sourced, native plants
- Weed control across entire mitigation area
- Wildlife-friendly fence around perimeter of mitigation area
Where there are gaps in existing vegetation, supplement with a variety of shrub species.

In solid sagebrush stands, remove some sagebrush and increase diversity with other shrub species.
Elkhorn Valley Wind Farm
Mitigation Area
Elkhorn Valley Wind Farm
Planting Locations

UPPER AND LOWER BENCHES
Wildlife Habitat Mitigation
Elkhorn Valley Planting Locations

SADDLE
Contact Us

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