

Sage-grouse and Fences

Collision

- Sage-grouse fence collision rates were consistent across years in southern Idaho and ranged from 0.70 to 0.75 strikes/km (roughly 1 strike per mile of fence).
 - These data suggest sage-grouse fence collision during the breeding season was relatively common and widespread.
- Sage-grouse collisions were more common at fence segments without wooden fence posts and with segment widths over 4 yards long.
- Probability of collision presence was influenced by study region, a terrain-ruggedness index (TRI), and fence density (km of fence per square km).
 - TRI attenuated other effects on collision, and may nearly eliminated sage-grouse collision risk.
- Collision counts were also influenced by distance to nearest active sage-grouse lek.

Mitigation

- Mitigation in breeding habitats should start in areas with fence densities > 1 km of fence/km² and at fences within 2 km (1.2 miles) of active leks.
- Constructing fences with larger and more conspicuous wooden fence posts and with segment widths < 4 m may reduce risk of sage-grouse fence collision.
- Collision risk decreased with fence marking and with increasing distance from lek but increased with increasing lek-counts.
- Marking fences reduced collisions by about 83% compared to unmarked fences.
- Fence markers were constructed of vinyl siding undersill and their visibility was increased further by adding reflective metallic tape.
 - Markers were placed on the top strand of barbed-wire at approximate 1 m intervals (3 feet).
- Marking may not be necessary on all fences, and mitigation should focus on areas with locally abundant grouse populations and fence segments less than 2 km (1.2 miles) from known leks.
 - Collision still occurred at marked fences less than 500 m from large leks and fence removal may be necessary in some areas if management is to eliminate collision.