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Wind

California Leads Nation in Wind Turbine Eagle Deaths

(<http://www.kcet.org/news/define/rewire/wind/california-leads-nation-in-wind-turbine-eagle-deaths.html>)

by **Chris Clarke**

September 10, 2013 2:43 PM



A golden eagle on the UC Santa Cruz campus | Photo: **Lee Jaffe**/Flickr/**Creative Commons**

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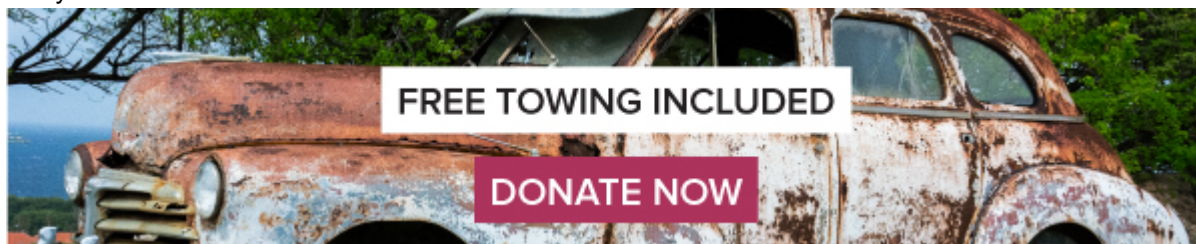
A new study released Tuesday indicates that California may have more wind turbine facilities responsible for killing eagles than any other state. The study, conducted by six U.S. Fish and Wildlife Service staff

biologists, showed that at least 27 golden eagles perished at 13 California wind turbine facilities between 1997 and June 2012, with a startling rise in reported mortalities in 2011.

Only Wyoming rivaled California's eagle wind turbine death toll in the facilities studied, with 29 golden eagles and two bald eagles killed at two wind facilities during the survey period. And the study didn't include documented mortalities at the Altamont Pass Wind Resource Area, responsible for dozens of eagle deaths each year.

Through the United States overall, 85 eagles were killed at 32 wind facilities in 10 states, with nearly 80 percent of those fatalities taking place in the last five years as wind facilities are built nationwide.

Story Continues Below



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The study, with the self-explanatory title "Bald Eagle and Golden Eagle Mortalities At Wind Energy Facilities In The Contiguous United States," was published Tuesday in the **September issue of the Journal of Raptor Research**. Despite the authors' employment status with USFWS, the paper bears the obligatory disclaimer that the results aren't endorsed by the agency.

The authors, led by USFWS raptor biologist Joel Pagel, say the results of their study are almost certainly an underestimate of actual eagle kills. As wind facilities in the U.S. aren't required to report eagle mortalities, the authors had to rely on voluntary reports from wind turbine operators and other public domain data, which mainly reflected inadvertent finds of dead or injured eagles. From that data, the authors excluded at least 17 reports that lacked unambiguous evidence of either mortality or mortal injury.

The other main reason for the likely undercount? For purposes of statistical clarity, the authors omitted mortalities from the Altamont Pass Wind Resource Area in Northern California, where conservative estimates have it that between 60 and 75 eagles perish each year.

Even ignoring Altamont Pass, which the usually sober-sided Golden Gate chapter of the National Audubon Society **describes** as "probably the worst site ever chosen for a wind energy project," the apparent uptick in Californian eagle deaths is cause for significant concern. For more than a decade after 1997, the year of the first records examined by the authors, verifiable eagle mortalities from Californian wind facilities other than Altamont stayed between zero and two annually, with a peak of three eagles confirmed killed in 2002. And then, in 2011, that number more than doubled with six confirmed deaths, and then four more in just the first half of 2012.

Wyoming's eagle kills have shot up even more dramatically, with all 31 taking place in the years since 2009 -- 24 in 2010 and 2011 alone.

Of the documented fatalities nationwide, close to 53 percent were noted by wind turbine operators during routine operations activities, and just 19 percent were discovered during deliberate mortality surveys. ReWire suspects that if wind turbine operators had been required to conduct rigorous surveys for dead and injured eagles, with survey areas that reflected the actual aerodynamics of eagles struck by blade tips traveling at potential speeds of more than 100 miles per hour, the data selection Pagle *et al* would have had to work with might well have been substantially higher.

Because of all the potential for undercount, the authors urge closer study of wind turbine eagle mortality through what they call "robust and peer-reviewed research and monitoring."

Given that each of the 85 confirmed deaths discussed in the study is a **violation of federal law**, USFWS would seem to have the legal authority to insist on that research and monitoring -- if the agency has the will to do so.

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