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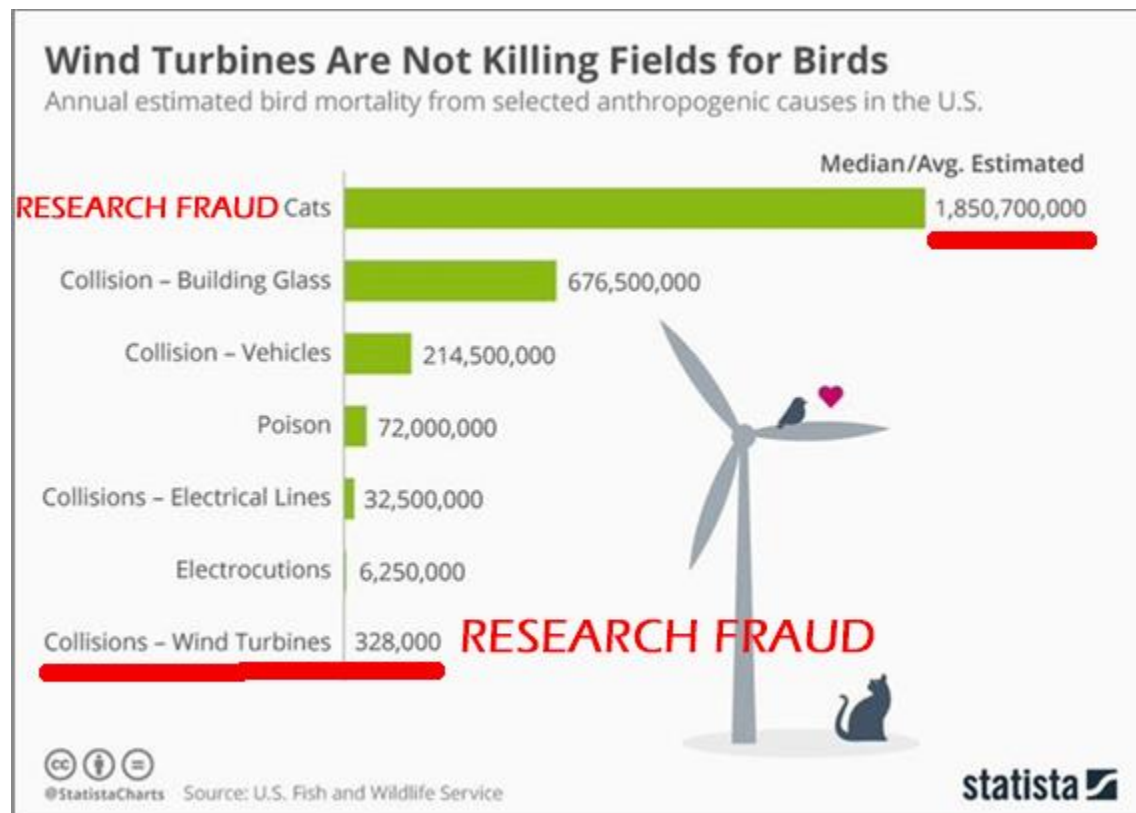
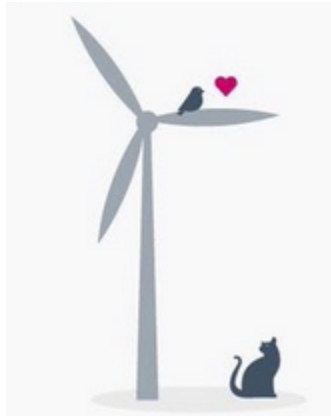
**Jim Wiegand - Comments against Fountain Wind #12**

A look at fraudulent green energy mortality research and comparisons.

*Additional submitted attachment is included below.*

# Fraudulent Green Energy Mortality Research and Comparisons

Pay attention to this image from the USFWS. The imagery is 100% false and the wind energy numbers given, were derived from incredibly fraudulent and contrived research.



## Wind Turbine Research Fraud and Cats

I know this from decades of field observations, cats in remote locations are eaten and killed by the native predators.

A feral cat's diet is in no way a threat or problem to most specialized species like shrikes, eagles and hawks, waterfowl, seabirds, owls, falcons, cranes and so on. These are the species being slaughtered off by wind turbines.

With bobcats, coyotes, wolves Mt lions, and eagles around cats do not have a chance. In all my years with many thousands of hours of wilderness observations from remote locations, **I have never seen one feral cat, EVER.** But I have seen plenty of these cat killers and cats that wander too far from the safety of communities, quickly disappear. Not only can these species easily kill a cat, they can out-compete them with their survival skills.

The primary bird problem with cats is in their association with people. Feral cats depend on people and communities. This is where they find their food and shelter away from these other predators. This is also where they do their damage to some bird species and it can be significant. But these cats do not primarily eat birds. They eat mice, rats, large insects, forage at dumps, trash bins, and even steal left over dog food from back yards. They primarily eat bird species which are strongly associated with people, those being English sparrows, pigeons, and starlings.

So, let's just finish by putting this into proper perspective, **the turbine vs. cat debate was all created from behind a desk for the purpose of hiding a horrific mortality problem associated with wind turbines.** It is the turbines that are slaughtering every indigenous bird species in their remote locations, not feral cats **and the numbers are in the tens of millions annually.**

Feral cats also eat very few bats, again for all the same reasons.

**When green energy mortality research is fraudulent, no credible comparisons to any other sources of mortality can ever be made. Yet, false comparisons like cats to wind energy, have been published by the industry and our government agencies for 2 decades.**


**Where the wind turbine mortality figure of 328,000 originated:**

Review

# Estimates of bird collision mortality at wind facilities in the contiguous United States

Scott R. Loss<sup>a</sup>  , Tom Will<sup>b</sup>  , Peter P. Marra<sup>a</sup>  

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## My comments on this published wind turbine mortality study:

**"We estimate bird mortality at monopole wind turbines in the contiguous U.S."**

This study has no credibility because it relied upon the wind industry's own fraudulent data and **did not account for the green energy's grossly undersized search areas** being used by the industry. Keep in mind with voluntary regulations and self-reporting, no science or credibility is required of the wind industry. The authors say nothing about this.

The author did make some adjustments for varying search radius, but these adjustments accounted for small differences in the search area sizes used from site to site. The entire discussion of the mortality search area adjustments given in this study are very deceptive.

This study failed to point out these several critical facts about monopole mounted wind turbines. **As the industry began installing these types of turbine towers and moved away from the lattice towers, tower height and turbine blade length increased dramatically.** Wind turbine towers have grown from about 20 meters to 100 meters and blades have increased from 7 meters on 40 kW turbines to over 50 meters in length. **Instead of increasing carcass search areas in their mortality studies to accommodate these progressively larger turbines, the wind industry has deliberately stayed with their search areas of about 50 meters from towers even though their new turbines have bird killing zones as much as 56 times larger.**

In addition to search area size, all the estimated bird mortality at monopole wind turbines in the contiguous US is derived from green energy's standardized contrived mortality studies, all rigged to miss most of the turbine related mortality.

**These are green studies, with small designated search areas, that all pretend turbine carcasses do not land 100-200 meters beyond the industry's tiny designated search areas.**

**Their opinion... "Between 140,000 and 328,000 birds are killed annually at monopole turbines."**

**In my opinion, this was a premediated hit piece designed to fool the public.** The ridiculously low estimates given in the study were the primary purpose of this study. These estimates even lowered the old 2009 FWS number of 440,000 bird fatalities per year, which was based upon 25,000 MW. Once again, all estimates from this study and the old FWS mortality estimates, aren't even close to being accurate because their mortality data was obtained from the fatally flawed studies that used very deceptive research methodologies or tricks.

A single lattice tower 40 kW turbine, has a rotor sweep of about 141 cubic meters, a kill zone 84 times smaller than a modern 2.3 MW turbine. **A 100-kW lattice tower turbine has a rotor sweep of 254 square meters**, with a bird killing zone of about 393 cubic meters. This kill zone is 30 times smaller than the kill zone of most monopole turbines.

For years the small turbines mounted on lattice towers had 50-meter carcass search areas and launched carcasses, were still found out beyond 100 meters.

In the past, wind industry mortality search areas for carcasses around 56 small 40 kW turbines, amounted to about **439600 square meters**. Today the search area on a modern 2.3 MW turbine is about **7850 square meters** and in many cases is even far less. I have looked over some industry studies, that only looked for carcasses in areas of about 1000-1300 square meters around large 2.3 MW turbines...An ethical disgrace

When this study was written, the US had about 61,000 MW of installed capacity. After accounting for the wind industry's flawed study methodologies and tricks, **the true mortality to birds easily exceeded 6 million birds per year in the US.**

**"Mortality increases with increasing height of monopole turbines."**

Of course, mortality increases with increasing height of monopole turbines. The killing rotor sweep can be as much as 84 times greater when compared to turbines with mounted on lattice towers. These huge turbines mounted on monopole towers have always killed far more birds per turbine. Any modern turbine with far more rotor sweep mounted on a much taller 80-meter tower, is always going to kill far more birds than a tiny turbine mounted on a shorter 24.6-meter tower.

**They did not need a study to figure this out.** But even with grossly undersized search areas, far more bodies per turbine are still showing up in the industry's tiny search areas around monopole turbines.

But a study like this, it very important to green energy because it will hide the fact that some of these huge turbines are killing over 1000 birds and bats per year.

**"Mortality rates appear to be lower in the Great Plains relative to other regions."**

The Great Plains region has experienced the greatest amount of wind energy expansion in the last 7 years. This expansion has included the installment the industry's most modern and largest turbines. These are turbines that should have the largest search areas because carcasses can be found in areas of at least 200 meters in all directions from towers. The industry has instead used their grossly undersized carcass search areas, and other carcass hiding, research tricks in this region.

The Great Plains region is also plagued with another problem that imparts reported mortality. This region has the most agriculture taking place around installed turbines. This agriculture plows and tills carcasses into the ground. As a result, many carcasses go undetected by industry searches.

**This study fails to mention that. agriculture land is land leased by the green fraudsters. As a condition of turbine leases, land owners must dispose of carcasses.**

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6) Leaseholders in partnership with wind energy developers are also required to sign very strict non-disclosure agreements. These leaseholders are never allowed to discuss species mortality taking place from the wind turbines on their property. They're also required to immediately dispose of carcasses. Even with post construction mortality research, access by leaseholders and wind energy employees has never been restricted during studies.

6.2.5 Disposal of Animal Carcasses. Owner agrees to take all reasonable measures to avoid attracting scavenging birds and other animals by ensuring all animal carcasses on the Property are immediately (to the extent permitted by applicable law) burned, buried, adequately and completely composted by covering with an adequate amount of earth or mulch, cooked or placed in enclosed containers with lids if such carcasses will be removed at a later time from the Property. Animal carcasses shall not be left in open fields or adjacent to buildings and shall not be left uncovered or exposed. **Hiding all carcasses. One of the many conditions required of landowners that sign a wind energy lease.**

***This was a peer reviewed study. Yet it's nothing but scientific garbage. It's a disgrace that he low mortality estimates given in this study were quoted in the media, in future studies, and was used to mislead communities on how devastating these turbines are to the birds and bats living in their communities.***

A few years earlier cats were estimated to be killing 100 million birds a year. The newer cat mortality estimates had somehow jumped 18.5 times and this number was used to deflect from this reality.....the annihilation of birds and bats in the regions of wind turbines.

### A Summary and Comparison of Bird Mortality from Anthropogenic Causes with an Emphasis on Collisions<sup>1</sup>

Wallace P. Erickson,<sup>2,3</sup> Gregory D. Johnson,<sup>2</sup> and David P. Young Jr.<sup>2</sup>

USDA Forest Service Gen. Tech. Rep. PSW-GTR-191. 2005

Mortality Sources Compared—Erickson et al.

Table 2—Summary of predicted annual avian mortality.

Mortality source	Annual mortality estimate	Percent composition
Buildings <sup>1</sup>	550 million	58.2 percent
Power lines <sup>2</sup>	130 million	13.7 percent
● Cats <sup>3</sup>	<b>100 million</b>	10.6 percent
Automobiles <sup>4</sup>	80 million	8.5 percent
Pesticides <sup>5</sup>	67 million	7.1 percent
Communications towers <sup>6</sup>	4.5 million	0.5 percent
● Wind turbines <sup>7</sup>	<b>28.5 thousand</b>	<0.01 percent
Airplanes	25 thousand	<0.01 percent
Other sources (oil spills, oil seeps, fishing by-catch, etc.)	not calculated	not calculated

<sup>1</sup>Mid-range of fatality estimates reported from Klem (1990), 1 – 10 bird fatalities per house, extrapolated to 100 million residences

<sup>2</sup>Based primarily on a study in the Netherlands (Koops 1987), extrapolated to 500,000 miles of bulk transmission line in U.S.

<sup>3</sup>One study in Wisconsin estimated 40 million (Coleman and Temple 1996), there are 60 million cats claimed as pets in the U.S.

<sup>4</sup>Based primarily on one study in England (Hudson 1965, Banks 1979) that estimated 15.1 fatalities/mile of road each year, no searcher efficiency or bias adjustments in that study, updated based on increase in vehicle registrations

<sup>5</sup>Conservative estimate using low range of empirical fatality rate (0.1 to 3.6 birds/acre), studies typically adjusted from searcher efficiency and scavenging

<sup>6</sup>Estimates from models derived by Manville and Evans (M. Manville, pers. comm.).

<sup>7</sup>Mid-range of per turbine and per MW estimates derived from empirical data collected at several wind projects (table 1).

### Acknowledgments

The effort to gather and summarize much of the literature in this document was funded by DOE, with direction and support from the Wildlife Working Group of the National Wind Coordinating Committee. Most of the collision mortality information was first reported in the NWCC Resource Document entitled “Avian collisions with wind turbines: A summary of existing studies and comparisons to other sources of avian collision mortality in the United States” (Erickson et al. 2001). We appreciate the comments from the reviewers of that report, including K. Sinclair (National Renewable Energy Laboratory), A. Manville (USFWS), P. Kerlinger (Curry and Kerlinger), S. Ugoretz (Wisconsin Department of Natural Resources), T. Gray (American Wind Energy Association), and J. Stewart (FPL Energy). We also appreciate the comments on this manuscript from C. J. Ralph.



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