

# ENVIRONMENTAL CONCERNS ARE FOR THE BIRDS

The health of bird populations can be construed both literally and figuratively as the proverbial canary in the coal mine. According to the most recent [Living Planet Report](#), birds are among the species that have been reduced by more than half over the last forty years. There are currently a total of [9,956](#) birds that are listed as endangered or worse.



## Contaminates

Birds are subject to poisoning from a variety of environmental contaminants. Birds can become sick or die from ingestion or exposure to toxins like pesticides and herbicides.

Some of the worst contaminants are toxic metals like lead and cadmium. These metals are commonly released from the erosion of tailings, mine waste, smelting, and dust. Birds in areas of Southeast Missouri, commonly called the Lead Belt, have cadmium and lead levels that are several times the levels of reference birds. According to a [USGS study](#) conducted at the request of the U.S. Fish and Wildlife Service, lead poisoning in birds can cause abnormal muscular function, kidney and liver failure, decreased fertility, and anemia.

In the Arctic, contaminants are having an adverse effect on bird populations. As explained by [Geir Wing Gabrielsen](#), an environmental scientist at the Norwegian Polar Institute, "We have documented several direct harmful effects of these and other chemicals, especially in seabirds.."

Acid rain is also linked to population declines in forest birds. Acid rain washes calcium out of the soil and decreases the amount of calcium-rich prey required to produce healthy eggs.

## Habitat Loss

One of the most significant threats to birds is [habitat loss due to human development and agriculture](#).

In New York state, there is a particularly interesting case illustrating the complex ecological implications of adapting to a changing climate.

As reported in a [Huffington Post article](#), habitat conservation efforts on behalf of a small bird are holding up a project designed to dampen the impact of hurricanes. The project seeks to build massive sand dunes on New York's Fire Island. However, if it goes forward, the project would destroy the habitat of the Piping Plover. An injunction has been issued that has halted a \$207 million plan to replenish the sand along a 19-mile barrier.

As this example illustrates, even efforts to help insulate people from the impacts of extreme weather can threaten bird habitats.

## Solar

Perhaps the most contentious issue pitting people against birds involves renewable energy. Studies have shown that both the wind and solar installations contribute to bird mortality.

Solar power has been singled out as a cause of bird death. The concentrating solar power industry allegedly kills birds in a few different ways. Large-scale solar plants cause bird deaths either due to collision with solar panels, collision with heliostats or exposure to elevated concentrations of solar flux (reflected sunlight) close to the tower.

Although the numbers are relatively low compared to other sources of avian mortality, common sense efforts are being employed to reduce bird mortality from solar power. This includes proper positioning of solar arrays and distress call based bird deterrents.

## Wind

Wind turbines pose a threat to bird species ranging from eagles to small passerines, either through collisions or by interrupting their migration routes. Nesting and foraging areas can also be impacted by wind farms.

However, early research may have overestimated the number of birds killed by wind turbines. Newer wind turbines reduce bird mortality. [The most recent research](#) indicates that an estimated 134,000 to 230,000 small passerines collide annually with turbines across the U.S. and Canada. Using conservative estimates, this amounts to less than 0.01 percent of the population of small passerines. In the UK, the Royal Society for the Protection of Birds (RSPB) and windfarm opponents have found themselves at odds over the risk turbines pose to bird species, particularly birds of prey. According to a [Carbon Brief](#) examination of the research on the impact of wind turbines on birds, that impact is negligible.

[The Royal Society for the Protection of Birds \(RSPB\)](#) conservation director, Martin Harper, says a large body of scientific evidence shows “appropriately located wind farms have negligible impacts” on bird populations.

A large peer-reviewed [study in the Journal of Ecology](#) monitored UK data for ten different bird species and found only two were adversely impacted.

Bird species with poor frontal vision and large birds that reproduce more slowly appear to be among those that are most adversely impacted by wind farms.

In the Altamont Pass in California, one study found about 4,000 wind turbines killed 67 golden eagles and 1,127 birds of prey in a year. In southern Spain, 252 wind turbines located in an area used by many birds of prey and on the migratory path of many large birds killed 124 birds of prey in a year. At another location in southern Spain, 256 turbines killed 30 griffin vultures and 12 common kestrels.

The RSPB attributes these deaths to “poorly sited wind farms.” According to Birdlife International, with a thorough environmental assessment as part of the planning process, bird deaths can be significantly reduced.

## Other Causes

The bird deaths attributed to renewable energy need to be put into context. The FAA reports that in the aviation industry alone, there were over 117,000 bird strikes in the 20 years from 1990 and 2010. However, it should be noted that birds also strike buildings, power lines and transmission

towers by the millions every year. The [Journal Nature](#) reported that human activities and structures including buildings, roads and domestic cats are far more destructive to birds than wind turbines.

One study determined that U.S. wind farms killed 20,000 birds in 2009, while nuclear plants killed about 330,000 and fossil fueled power plants more than 14 million. According to this study, fossil-fueled facilities are about 17 times more dangerous per gigawatt hour of electricity produced to birds than wind and nuclear power stations.

## Fossil Fuels

Fossil fuels have proven lethal to bird populations. The most recent studies show that the 2010 BP oil spill in the Gulf of Mexico killed about [800,000 birds](#) in coastal and offshore waters.

As reported in a [Global Warming is Real article](#), tens of million of migratory birds are threatened by Canada's tar sands. Citing the recently released report by the National Wildlife Federation (NWF) and the Natural Resources Council of Maine (NRCM), almost half of the 292 different migratory bird species, comprising 75 million birds, are threatened by tar sands expansion. Because birds mistake tailing ponds for natural bodies of water, Canada's oil industry has already killed hundreds of thousands of birds.

The 1989 Exxon Valdez oil spill is known to have killed as many as [half a million birds](#) including at least 250 Bald Eagles. While over 30,000 carcasses of 90 species of birds were collected from the beaches in the wake of the disaster, this is only a tiny fraction of the actual mortality. The spill remains harmful to this day as birds continue to suffer from chronic effects and decreased reproduction.

## Climate Change

Climate change may be the most serious threat faced by birds. Given that fossil fuels are a leading cause of bird deaths and the primary cause of climate change, renewable sources of energy are of great benefit. The RSPB says it supports wind power because climate change poses the "single greatest long-term threat" to bird species. Climate change is predicted to harm bird populations by affecting breeding or migration patterns, or altering their habitats.

According to a new National Audubon Society study, more than 300 bird species in North America are under threat of climate change. As reported in [Uncover California](#), Audubon's chief scientist Gary Langham said that about half of the bird species of North America could go extinct.

Climate change puts a total of 314 species of birds at risk in North America. While 200 of these species may be able migrate to a more suitable location, 126 species will have nowhere else to go.

Source : <http://globalwarmingisreal.com/2014/10/16/environmental-health-of-bird-populations/>