

WIND ENERGY:

# Environment & Wildlife

“Harnessing **power from the wind** is one of the **cleanest and most sustainable** ways to generate electricity as it produces **no toxic pollution** or global warming emissions.”

- Union of Concerned Scientists<sup>1</sup>



## WIND POWER SAVES WATER



Wind-generated electricity saved

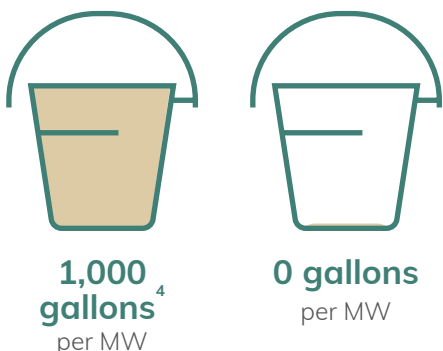
**103 billion gallons**

of water in 2019, the equivalent of

**156,000**

Olympic-sized swimming pools.<sup>2</sup>

## WATER CONSUMPTION BY FUEL SOURCE



**>98%**

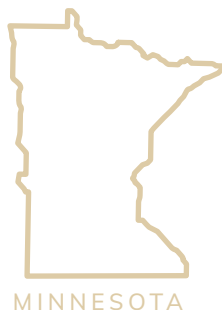
of land used for wind farms is untouched by turbines and other infrastructure.

The remainder of the land can be used for productive purposes, including **livestock grazing, agriculture, wildlife habitat, highways, and hiking trails.**<sup>5</sup>

## WIND POWER REDUCES POLLUTION

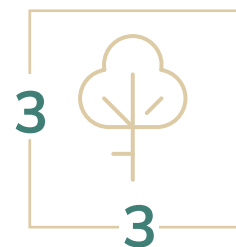


Fossil fuel power plants emit NO<sub>x</sub> and SO<sub>2</sub> pollution, causing smog and acid rain. **In 2019, wind power abated more than 881 million pounds of air pollution.**<sup>2</sup>



Carbon pollution avoided by wind power in the U.S. is the equivalent of **planting a forest the size of Minnesota.**<sup>2</sup>

**3 MW = 3 MI<sup>2</sup>**



A 3 MW turbine avoids the same amount of carbon pollution as planting **3 square miles of forest.**<sup>6</sup>

<sup>1</sup>Union of Concerned Scientists. 2017. [Environmental Impacts of Wind Power](#).

<sup>2</sup>American Wind Energy Association. 2019. [U.S. Wind Industry Annual Market Report](#).

<sup>3</sup>U.S. Department of Energy. 2015. Wind Vision: [A New Era for Wind Power in the United States](#).

<sup>4</sup>Union of Concerned Scientists. 2011. [Freshwater Use by U.S. Power Plants](#).

<sup>5</sup>Denholm, P., M. Hand, M. Jackson, and S. Ong. 2009. [Land-use requirements of modern wind power plants in the United States](#). Golden, CO: National Renewable Energy Laboratory.

<sup>6</sup>NREL. 2008. [20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply](#).

**"The wind farm doesn't bother the wildlife.**

**I think we've seen more now than we did before the wind farm."**

-Joyce K., New York landowner



## CAUSES OF BIRD MORTALITY



CATS

Loss et al. 2013

1.4B - 3.7B



BUILDINGS & WINDOWS

Loss et al. 2014a

365 - 988M



VEHICLES/ROADS

Loss et al. 2014b

89 - 340M



PESTICIDES

Mineau 2004, 2005

17 - 91M



COMMUNICATION TOWERS

Longcore et al. 2012

6.6M



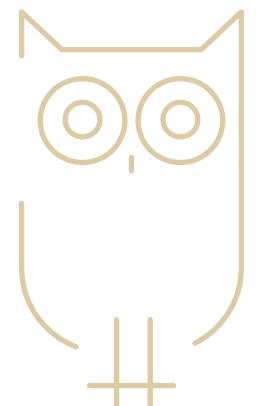
WIND ENERGY

Loss et al. 2014a

100K- 320K

Bird fatalities at wind energy facilities represent a **very small fraction of total annual human-caused bird mortality**, approximately 2 to 4 orders of magnitude **lower** than other human sources of bird mortality.<sup>9</sup>

Wind energy is **far less harmful to wildlife** than the energy sources it traditionally displaces, and the industry is **proactively addressing** the modest impacts on wildlife it does have.<sup>7</sup> The **National Audubon Society strongly supports properly sited wind power** as a renewable energy source that helps **reduce the threats posed to birds**.<sup>8</sup>



<sup>7</sup>American Wind Energy Association. 2020. [Wildlife](#).

<sup>8</sup>National Audubon Society. [Audubon's Position on Wind Power](#).

<sup>9</sup>American Wind Wildlife Institute (AWWI). 2017. [Wind turbine interactions with wildlife and their habitats: a summary of research results and priority questions](#).

<sup>10</sup>National Geographic. 2015. [Wind Industry Plans Serious Changes to Protect Bats](#).