



## Carbon Pollution: A Game Changer for America's Hunting and Fishing Heritage

### CLIMATE CHANGE

Carbon pollution from coal-burning power plants, refineries, and vehicles is causing worldwide climate change. America's wildlife is threatened by these assaults unknown until modern times. Fish are disappearing from lakes and streams, big game populations are being pushed out of their historic range, and duck wetland habitats are vanishing. From sea level to the highest mountain peaks, entire ecosystems are in retreat.

Changes from carbon pollution are leading to direct habitat loss as well as more insidious changes, such as decreases in snowpack that result in a massive loss of fish spawning sites and increased summertime temperatures that will change the wildlife communities of forests and streams forever. Many wildlife species are struggling to adapt. Some never will.

In a single generation, the future of fish and game is changing. Scientists predict that rising global temperatures could move 30% of all plant and wildlife species toward extinction in the lifetime of a child born today.<sup>1</sup> Taking action to reduce carbon pollution and confront our climate crisis will greatly benefit wildlife and our outdoor heritage.

America has a choice: Clean air, clean water, and healthy wildlife populations, or a polluted future where the only winners are special interests. This nation's core of conservationists, hunters, and anglers has a proud legacy of working to protect wildlife and must continue to do so as our world warms.

### THE CLEAN AIR ACT WORKS

Passed by Congress with overwhelming bi-partisan support 40 years ago, the Clean Air Act has been one of the starting points for our country's proud legacy of environmental protection. This act has a strong and proven track record of protecting our lakes, forests, wildlife, national parks, and other natural treasures from the devastating impacts of air pollution while allowing our economy to prosper.

Modern threats of carbon pollution will change the game for American hunters and anglers. The Clean Air Act is a critical tool that we need available to significantly reduce this carbon pollution that is wreaking havoc on wildlife.

Now, the Environmental Protection Agency (EPA) plans to update the nation's pollution standards to address the wildlife impacts caused by the carbon pollution that leads to climate change. It is essential that EPA move forward on this important work to protect wildlife and our outdoor heritage from the worst effects of a climate change.

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## Michigan: Wildlife Icons at Risk

**Carbon pollution from coal-burning power plants is causing world-wide climate change.** In Michigan, climate change will include higher annual average temperatures, increased year round precipitation, more frequent heat waves, and a decrease in lake ice, including ice on the Great Lakes.<sup>2</sup> Changes in the earth's climate directly threaten two pastimes treasured in Michigan and across our nation – recreational fishing and hunting.

In 2006, over 1,394,000 anglers and 753,000 hunters came to Michigan to hunt and fish on its lands and waters. Fishing and hunting are not just recreational pastimes; they are also a major contributor to the Michigan economy. These 2.1 million sportsmen and women in Michigan generated over \$2.5 billion in revenue in that year alone.<sup>3</sup> However, this rich community of fish and game, and the economy that depends on it, is at risk from a warming world.



### Moose

Massive and majestic, moose are a cherished icon of North America. These big mammals are tied to wetlands and require cool climates, and those aspects of moose biology place the animals in difficult straits. When it comes to rising temperatures, heat affects moose directly, leading to a fall in pregnancy rates. Moose may have evolved to bear young when climate conditions are most favorable, and some scientists are concerned that they could have a difficult time adapting to climatic variability. A warming climate will also devastate moose habitat as the preferred habitat of aspen and birch retreats northward.

### Brook Trout

Dappled with color and quick to take a fly, brook trout are a cherished part of our national fishing heritage. They are sought in tiny headwater creeks, remote wilderness ponds, and fastflowing rivers. The very fact that they require clear, cold, healthy waters is proof that the brook trout lives up to its scientific name, *Salvelinus fontinalis*, which means “dweller near springs.” A warming climate is expected to decimate populations. Parts of Michigan's Muskegon River watershed could see a 90 percent reduction in brook trout populations due to expected changes in air and water temperatures from climate change.



**For American hunters, anglers, and conservationists healthy populations of wildlife are necessary to support our economy and outdoor heritage. It remains critical to speak up for Michigan's iconic species and encourage the Environmental Protection Agency to update the nation's pollution standards.**

The EPA must carry out its legal obligation to control carbon pollution that causes climate change from our country's biggest polluters and Congress must oppose all attempts to undermine Clean Air Act programs.

For more information visit the full report: [www.nwf.org/gamechangers](http://www.nwf.org/gamechangers)  
Act to protect wildlife from climate change: [www.nwf.org/cleanair](http://www.nwf.org/cleanair)

<sup>1</sup> Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the IPCC

<sup>2</sup> Global Climate Change Impacts in the United States. <http://downloads.globalchange.gov/usimpacts/pdfs/midwest.pdf>

<sup>3</sup> U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation - Michigan.