



## CHANGE THE FORECAST FOR WILDLIFE SOLUTIONS TO GLOBAL WARMING

# Global Warming and MASSACHUSETTS

Despite a 2001 commitment by New England governors and Canadian provincial leaders to cut global warming pollution in the Northeast, emissions of carbon dioxide and other global warming gases in the region are on the rise. According to an analysis by the New England Climate Action Network, fuel consumption for cars and trucks is increasing, as is coal, oil and gas consumption for home and commercial heating—all contributing to increasing emissions. This is not good news, considering sea level is already rising along the state's coastline and warmer average temperatures are contributing to the spread of West Nile virus and Lyme disease. The Environmental Protection Agency estimates average temperatures in Massachusetts could rise another 4-5 degrees Fahrenheit by 2100 if global warming continues unabated, affecting the state from the tip of Cape Cod to the Berkshire Mountains. We can solve global warming and revitalize our economy by rebuilding America with clean energy.



## Global warming effects on Massachusetts wildlife

Massachusetts is home to an incredible diversity of native wildlife species, including 303 birds, 74 mammals, 29 reptiles, 20 amphibians and 46 fish. Rising temperatures and sea level in the state will likely change the makeup of entire ecosystems, forcing wildlife to shift their ranges or adapt.



- Massachusetts' state bird, the black-capped chickadee, is one of more than 30 songbird species that could shift its breeding range out of some areas of the state due to global warming.
- Barrier island refuges such as the Monomoy National Wildlife Refuge south of Cape Cod and the Parker River National Wildlife Refuge in northeastern Massachusetts could be threatened or lost to sea level rise, hurting beach habitat for the threatened piping plover and endangered roseate tern.
- Conifer forests in New England and the mixed forests of the northeast are expected to gradually change to a temperate deciduous forest similar to that found today in southeastern Pennsylvania and northern Virginia. Some forest species, such as sugar maple, are projected to disappear entirely from the U.S. over the next century.

## Global Warming Pollution

Burning coal, gas and oil produces carbon dioxide, which is a greenhouse gas that warms the planet as it builds up in the atmosphere. Some of the carbon dioxide released today remains in the atmosphere after even 100 years, trapping more and more heat.

Since the mid-1800s, emissions of carbon dioxide have skyrocketed, causing global temperatures to rise by about 1° Fahrenheit in the last century. Earth has not experienced such a rapid change in temperature in thousands of years.

## A Global Solution

The U.S. must lead the world by passing global warming legislation at home and working with other nations at the Copenhagen climate summit at the end of 2009 to sign a new climate treaty that keeps further warming below 2° Fahrenheit. With a global solution, we can avoid the worst impacts of global warming.



## What's at stake for Bay Staters?

In the coming century, sea level in Massachusetts is projected to rise 2-4 times faster than it did in the past 100 years. On average, 65 acres of land is submerged each year due to a combination of rising seas and subsiding land in the state, with much of the loss occurring along the state's south-facing coast, including along Nantucket and Martha's Vineyard. Eroding coastlines are just one of the challenges global warming is expected to bring to the state.

- The EPA estimates sand replenishment to protect the state's coastline from a 20-inch sea level rise by 2100 could cost \$490 million-\$2.6 billion.
- Higher temperatures are expected to increase the frequency of summer heat waves. By 2050, scientists project heat-related deaths in Boston could number close to 150 deaths per summer, a 50 percent increase.
- A study by Tufts and Boston University indicates that sea level rise from global warming will exacerbate flooding in the Charles River basin from storm surges, and will tax the city's aging wastewater infrastructure.
- Loss of wildlife and habitat could mean a loss of tourism dollars. In 2006, more than 2.5 million people spent more than \$1.5 billion on hunting, fishing and wildlife viewing in Massachusetts. The industry in turn supported 24,413 jobs in the state.\* (*Jobs are an average of 2001 and 2006 data.*)

**“Global warming poses an overriding challenge to our responsibility to protect wildlife for our children's future. We must advance balanced solutions that work for people, wildlife and the economy to overcome this challenge.”—**

**Larry Schweiger**  
*President, CEO*  
*National Wildlife Federation*

### GLOBAL WARMING NATIONAL POLICY SOLUTION:

A federal legislative solution can drive American ingenuity, create millions of green jobs, and restore America's global leadership on global warming. Legislation should:

- \* Include ambitious targets to reduce America's global warming pollution as swiftly and deeply as possible. Scientists say that developed countries as a whole need to reduce their global warming pollution by at least 80% from 1990 levels by 2050 to avoid the worst impacts of global warming.
- \* Move America toward a 100% clean electricity future by maximizing energy efficiency, modernizing the electric power grid, expanding power generation from renewable energy resources, and investing in clean transportation infrastructure.
- \* Invest in natural resources. Forests, coasts, wetlands, clean air and clean water are already being impacted by global warming. Funding is needed to safeguard the natural resources that are critical to wildlife populations and human health.
- \* Lead a worldwide effort to finance clean energy technology, forest conservation, and adaptation to unavoidable impacts of global warming.

For more information, visit: [www.nwf.org/globalwarming](http://www.nwf.org/globalwarming).



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## Massachusetts' solutions to global warming

The state signed a 2001 compact between New England governors and neighboring Canadian provincial leaders requiring a collective reduction of global warming pollution in the region.

- As part of its 2004 climate action plan, Massachusetts agreed to cap carbon dioxide emissions from its six highest-emitting power plants, setting a goal of reducing these emissions by 10 percent over the next several years.
- Massachusetts Electric offers a “Green Energy” option for residents to buy renewable electricity from small hydro, wind, biomass and solar sources in New England. The state also allows residents to purchase 100 percent tax deductible wind energy certificates from Massachusetts Electric's New England Wind™, a wind company with a turbine in Hull, Mass.

Following some simple guidelines, you can cut your global warming pollution, become more energy efficient and give something back to nature.

- **Plant shade trees:** The Department of Energy says planting three trees strategically around your home can reduce your annual heating and cooling costs by an average of 40 percent.
- **Convert to compact fluorescent bulbs:** If every household in America replaced its next burned out light bulb with a compact fluorescent, we would prevent more than 13 billion pounds of carbon dioxide from being emitted each year. That's the same as taking 1.2 million cars off the road for an entire year.
- **Act locally:** Contact your mayor and ask that (s)he sign the U.S. Mayors Climate Protection Agreement, committing your city or town to meet or beat the global warming pollution reductions outlined in the Kyoto Protocol.

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