

The Threat of Carbon Pollution: Michigan

We have a moral obligation to leave our children a planet that's not polluted or damaged, and by taking an all-of-the-above approach to develop homegrown energy and steady, responsible steps to cut carbon pollution, we can protect our kids' health and begin to slow the effects of climate change so we leave a cleaner, more stable environment for future generations. Climate change impacts including severe weather, asthma attacks, prolonged allergy seasons, and sea-level rise are affecting our security, our economy, and our communities. In 2012 alone, the cost of weather disasters exceeded \$110 billion in the United States, and climate change will only increase the frequency and intensity of these events. Today, we already set limits for arsenic, mercury and lead, but we impose no limits on how much carbon pollution our power plants release. Carbon pollution is contributing to a higher risk of asthma attacks and more frequent and severe storms, floods, heat waves, and wildfires, driving up food prices and threatening our communities. The President's Climate plan is a comprehensive approach to cutting the pollution that causes climate change and threatens public health, setting us on a path to make our communities healthier, safer, and more resilient.

THE IMPACT OF POLLUTION AND EXTREME WEATHER IN MICHIGAN

In 2011, power plants and major industrial facilities in Michigan emitted more than 90 million metric tons of carbon pollution—that's equal to the yearly pollution from more than 19 million cars.

Recent incidents provide a reminder of the impacts to our public health and costs due to extreme weather in Michigan. Although we cannot say that climate change is responsible for any individual event, climate change is already increasing our risks from these events.

- In 2012, hazardous weather caused 9 deaths, 119 injuries and cost \$153 and \$42 million in property and crop damage respectively.
- In 2012, rapid plant growth as a result of unusually high temperatures and warm, nighttime early spring temperatures resulted in tree fruit development that was at least four weeks ahead of normal by late March. A return to a normal spring weather pattern resulted in a series of freezes that destroyed the cherry crop and at least 90% of the apple, peach, and juice grape crops. An event of that severity had not occurred since 1945.
- In Michigan, there were over 14,300 hospital admissions for asthma in 2011, with an average charge of over \$15,000 for each stay.

ANTICIPATED CLIMATE-RELATED RISKS IN THE MIDWEST

Midwesterners will experience increased frequency and intensity of extreme weather events due to climate change, including heat waves, floods, and lake-effect snow. In 2011, 11 of the 14 U.S. weather-related disasters with damages of more than \$1 billion occurred in the Midwest. While severe flooding is already an issue in the region – in 2008, floods caused 24 deaths and \$8 billion in agricultural losses - likely increases in precipitation in winter and spring and more heavy downpours mean it is expected to become more commonplace. Greater evaporation in the summer is also likely to result in water deficits. Longer and more extreme heat waves will impact human health through reduced air quality and increases in insect and waterborne diseases, and require increased use of electricity for cooling, further increasing carbon pollution. While the longer growing season provides the potential

for increased crop yields, increases in heat waves, floods, droughts, insects, and weeds will present growing challenges to managing crops, livestock, and forests.

CUTTING CARBON POLLUTION AND INCREASING RESILIENCE IN MICHIGAN

Climate change is a long-term problem, but we can make substantial progress through a series of steady and responsible steps. The President's plan builds from progress already underway to work with states, local communities, and the private sector to reduce carbon pollution and to prepare our Nation for the impacts that cannot be avoided. Since 2009, President Obama has taken a number of common sense measures to combat carbon pollution, including:

- ***Investing in Clean Energy:*** During the President's first term, the United States more than doubled its use of renewable energy from wind, solar, and geothermal sources. In Michigan, renewable energy generation from these sources increased nearly 50 percent. Since 2009, the Administration has supported tens of thousands of renewable energy projects throughout the country, including more than 190 in Michigan, generating enough energy to power nearly 100,000 homes and helping Michigan meet its own goal of generating 10 percent of its electricity from renewable energy sources plus 1,100 megawatts by 2015.
- ***Improving Efficiency:*** Using less energy to power our homes, businesses and vehicles is critical to building a clean and secure energy future. President Obama has made essential investments in research and development for energy efficiency advances, and set new standards to make the things we use every day – from cars to microwaves – more efficient.
 - President Obama established the toughest fuel economy standards for passenger vehicles in U.S. history. These standards will double the fuel efficiency of our cars and trucks by 2025, saving the average driver more than \$8,000 over the lifetime of a 2025 vehicle and cutting carbon pollution.
 - Since October 2009, the Department of Energy and the Department of Housing and Urban Development have jointly completed energy upgrades in more than one million homes across the country, saving many families more than \$400 on their heating and cooling bills in the first year alone.
 - As part of the President's Better Buildings Challenge, Michigan State University committed to reducing energy intensity 20 percent by 2020 in 20 million square feet of campus buildings.
- ***Preparing Communities for the Consequences of Climate Change:*** The Obama Administration has worked since its earliest days to strengthen the Nation's resilience to climate change impacts, including investing in critical science and tools, developing the first-ever Federal agency climate adaptation plans, and directly partnering with communities. For example, with support from Centers for Disease Control and Prevention, Michigan health officials developed a plan to survey heat-related illness which was used during the 2012 heat events.