

Statement by Richard Jagels, Professor of Forest Biology, University of Maine
Maine Sportsmen Speak Out on Climate Change
Press Conference at Penobscot County Conservation Association Clubhouse, Brewer
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My name is Richard Jagels and I am a Professor of Forest Biology at the University of Maine and an avid fisherman. I have been involved in the study of climate impacts for more than 10 years and participated in the study Maine's Climate Future released this year by the University's Climate Change Institute. I have conducted research in the high arctic, 10 degrees from the North Pole, and have observed dramatic long-term changes in ice and snow cover that are well outside normal fluctuations. In Maine, all three climate zones have become warmer over the past 30 years, and sea surface temperatures have increased by nearly 2 degrees Fahrenheit. Commercial fishermen are being forced to go farther north to get haddock, cod and other fish. Sea level in Portland has risen about 8 inches since 1912. We are seeing progressively earlier snowmelt and ice-out each spring. These and other long-term trends are well outside the realm of normal climate fluctuations.

Maine's forests are already seeing changes in tree species due to climate change and that trend will continue. Many conifers will decline while hardwoods will increase. This will affect riparian zones as increased sunlight will reach waters not shaded year round by evergreen conifers. Thus, stream temperatures will likely increase, even without air temperature change, impacting brook trout and other cold water fish that are unique to Maine's rivers and streams. Insects such as caddis and mayflies may decline due to increasing competition from other species and changing water chemistry as hardwood leaf litter replaces the more acidifying conifer litter currently entering streams and rivers. Native brook trout are already threatened by introductions (legal and illegal) of non-native fish species. Climate change will enhance native trout demise as warmer waters and different food sources favor introduced species. Compounding this scenario, speckled alder, a cold climate, acid loving shrub that fixes nitrogen, shades trout streams in summer and is a staging plant for caddis flies, may decline as Maine's climate continues to warm.

A greater number of severe storms are predicted with ongoing climate change in Maine. Ice storms and hurricanes are predicted to increase and provide opportunities for the establishment of new kinds of migrants from the south, with consequent changes in the forested landscape. Hardwoods, particularly pioneer species like birch, some cherries, and aspen, are more susceptible to icing than are northern conifers. As these trees are damaged and temperatures change, insect and disease outbreaks will further degrade forest stands. This continuing change in the make-up of our forest will force unprecedented changes in wildlife populations. Some species like deer may find improved conditions (more oaks) while iconic species like moose and fur-bearers that depend on conifer forests and snow cover (martin, lynx) will face declining habitat.

I am here today because Maine is the last place in the Eastern U.S. where we have 90 percent forest cover with the wonderful fish and wildlife it supports. That environment provides an unsurpassed resource for anglers, hunters, birders, hikers, bikers and boaters. Without strong, comprehensive climate change legislation at the federal level, we in Maine stand to lose much of our cherished natural heritage. Climate change is a global problem, but we must set strong U.S. policy in order to have credibility with the rest of the world's governments. I urge the speedy passage of comprehensive federal climate change legislation.