

## SENATE BILL No. 78

Testimony from Dr. Bradley J. Cardinale  
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My name is Dr. Brad Cardinale. I'm a professor in the School of Natural Resources & Environment at the University of Michigan, and director of the school's Conservation Ecology Program. I teach courses in Conservation, Restoration Ecology, and Environmental Economics, and I have published more than 70 scientific papers on Biodiversity and Conservation. I live in Ann Arbor, but my wife and I have four generations of family living in the Upper Peninsula, and we routinely make the 9-hr drive to join family at deer camp, to go fishing, enjoy the fall colors, or swim in the beautiful lakes.

I am, by no, means an environmentalist. I have routinely called out my colleagues for over-exaggerated claims about the importance of biodiversity. And I firmly believe that conservation of biodiversity, like all natural resources, must balance our current economic needs with the need to ensure resources remain available to our grandchildren. With that caveat in mind, I'd like to express three concerns I have about Senate Bill 78:

1. First, there are several scientific inaccuracies in this bill. I'll take time to point out two.
  - a. Section 35502b strikes language implicating humans as the cause of biodiversity loss, which reminds me of the Kansas Educational Boards denial of evolution as a biological process. For anyone who doubts that humans are the cause of biodiversity loss, I'd be happy to provide of list >500 peer-reviewed scientific papers confirming this.
  - b. In Section 35501B, which redines conservation, the text suggests that managing for biodiversity reduces our ability to maintain productive, economically viable forests. This is scientifically inaccurate. I am one of the world's leading authorities on how biological diversity impacts the productivity of forests and other ecosystems. The paper I handed out was published in the same journal Watson & Crick detailed the structure of DNA, and represents a summary of 1,700 peer-reviewed scientific papers, critiqued by myself and 16 of the world's leading scientists, including several members of the U.S. National Academy. In Table 1 on page 64, we show there is overwhelming evidence that diverse forests are more productive ... not less ... than forests that have fewer species. In Quebec, not far from here, forests that are managed for a greater variety of tree species produce up to 40% more wood each year than forests that do not maintain diversity.
2. Second, I can't help but wonder if you've considered the unintended consequences of this bill for forest management. There is abundant evidence that diverse forests are better able to resist invasive species, and minimize the frequency of outbreaks of economically damaging pests and diseases like the Asian Longhorned Beetle, or Sudden Oak Death that kill commercially important trees. Managing for biodiversity is one of the primary ways the Michigan DNR maintains healthy forests. Senate Bill 78 would directly hamper the DNR's ability to manage public lands for invasive species, pests and disease, and thus, the productivity and sustainability of wood.
3. Third, I can't help but wonder if you've considered the economic implications of Senate Bill 78. Recent marketing studies suggest that 83% of U.S. and Canadian companies are expecting to increase their green purchasing over the next two years, and 87% of these believe that third-party forest certification is important for demonstrating the environmental credentials of their products.

In anticipation of this trend, former Governor Granholm signed the "Sustainable Forestry Act" into law in 2004, which required Michigan's DNR to seek forestry certification by at least one independent program. The DNR achieved dual certification from the Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI) - the two leading forest sustainability certification organizations in North America. For certification, both of these organizations specifically mandate conservation of forest biodiversity because it is well-recognized that diverse forests are healthier and more sustainable.

The DNR's Living Legacies Program, and formation of Biological Stewardship Areas to conserve biodiversity, were partly initiated to help Michigan meet accreditation standards and receive certification as a sustainable forestry system. Senate Bill 78 would put Michigan's forestry certifications at risk and, in turn, it could limit the ability of Michigan lumber companies and paper mills to compete in expanding markets that require certification.

In closing, I'd like to direct one final comment to Senator Casperson. Senator ... as of two weeks ago, I knew very little about you. But as I prepared this testimony, I learned you have gone on record in newspaper and radio interviews saying (1) there are too many environmental laws, (2) that we need more off road vehicle trails, and (3) that the United Nations Agenda 21 - a voluntary agreement for sustainable use of natural resources - is a global conspiracy to take away property rights. You have also (4) voted to reduce DEQ's ability to protect Michigan's sensitive habitats from development (SB 1130), (5) repeatedly voted against establishing renewable energy standards (e.g., SB 213), (6) voted against requiring permits for those who extract large volumes of water from the Great Lakes (HB 5068), and (7) voted against appropriations for the Michigan DNR and DEQ (HB 4354, 4358). Though you are chair of Michigan's Natural Resources, Environment and Great Lakes Committee, your record of environmental stewardship is appalling.

Last night at the dinner table, I was telling my family about Senate Bill 78 and other legislation you've supported. My 4-year old daughter said "*Dad ... he sounds like the Onceler.*" I didn't understand what she meant, so she went into her room and grabbed this book off of her shelf. It was Dr. Seuss' *The Lorax*, in which the Onceler is the short-sighted, economically driven entrepreneur who doesn't understand the importance of managing natural resources in a way that is sustainable. Senator Casperson ... my daughter Chloe very innocently suggested we give this book to you, and she signed her name ... backwards, as she always does. I added the inscription that reads "*Here's to a promising future with wonderful places and wild things to see.*"