

Dear Governor Snyder,

As a group of academic scientists who have expertise in the conservation and management of natural resources, we are writing to urge you to veto Senate Bill 78. SB78 modifies Michigan's Natural Resources and Environmental Protection Act to prohibit state agencies from managing state land for the purpose of maintaining biological diversity. The bill subsequently alters the definition of conservation, emphasizing the need for more extraction and economic gain from public resources, and it eliminates a requirement that the Michigan Department of Natural Resources (DNS) manage ecosystems like forests in a manner that ensures their recovery.

SB78 ignores a large body of scientific evidence that has shown conservation of biological diversity is crucial for maintaining healthy, sustainable ecosystems. Ecosystems with a greater variety of species are generally more efficient and productive, are better able to resist invasions and outbreaks by economically damaging pests and disease, and are more stable in the face of environmental change.

For example, recent summaries of the scientific literature show that forests with a greater variety of tree species produce significantly more wood than forests with fewer species. Diverse forests may also be better able to resist invasive species, and minimize the frequency of outbreaks of economically damaging pests and diseases - pests and disease much like the Emerald Ash Borer, or Sudden Oak Death that kill commercially important trees here in Michigan. Biodiversity is so fundamentally important for healthy forests that both independent organizations that certify Michigan's forestry practices (the Forest Stewardship Council, and the Sustainable Forestry Initiative) explicitly require biodiversity conservation to be included in state management plans. SB 78 not only puts the sustainability of our public lands at risk, it puts state forestry certifications, and the economic gains that are realized from these certifications, at risk.

We share concerns of other groups who have emphasized additional social and cultural values of biodiversity, such as for tourism and recreation, both of which are major economic forces in our state. We also echo concerns that passing SB 78 will be widely perceived as banning the use of solid science in management, and has potential to discredit Michigan's recent progress towards becoming a leader in environmental stewardship. In doing so, we will negate much progress we've made towards balancing the desire for short-term economic growth versus longer-term goals and other valued uses of state land. Because biodiversity is the ultimate source for all renewable natural resources, maintaining healthy, diverse ecosystems should continue to be a fundamental goal for our state. Doing so enhances our promise of prosperity for future generations.

This letter has been signed by 133 Ph.D.-level scientists. Collectively, we have thousands of years of professional experience in natural science and resource management, have published thousands of peer-reviewed scientific articles, and we practice at every major research institution in the state of Michigan. Despite our varied backgrounds, research interests, and political affiliations, we are unified in our concern about the negative consequences SB 78 would have for managing Michigan's natural resources sustainably. We urge you to veto Senate Bill 78.

Sincerely,

Bradley Cardinale, Ph.D.

Associate Professor, Director Conservation Ecology Program
School of Natural Resources & Environment, University of Michigan

Burton Barnes, Ph.D.
Professor Emeritus of Forestry
School of Natural Resources and Environment, University of Michigan

Michael L. Jones, Ph.D.
Professor, Chair of the Department of Fisheries and Wildlife, Michigan State University

Deborah Goldberg, Ph.D.
Elzada U. Clover Collegiate Professor,
Chair of the Department of Ecology and Evolutionary Biology, University of Michigan

Ann Maclean, Ph.D.
Professor, School of Forest Resources & Environmental Science, Michigan Technological University

Knute Nadelhoffer, Ph.D.
Professor, Department of Ecology & Evolutionary Biology, University of Michigan
Director of the University of Michigan Biological Station

John Vandermeer, Ph.D.
Asa Gray Distinguished University Professor, Department of Ecology & Evolutionary Biology, University of Michigan

Allen Kurta, Ph.D.
Professor, Department of Biology, Eastern Michigan University

Daniel Allen, Ph.D.
Postdoctoral Researcher, School of Natural Resources & Environment, University of Michigan

Gary Roloff, Ph.D.
Associate Professor, Michigan State University

Gregory Dick, Ph.D.
Assistant Professor, Department Earth & Environmental Sciences, University of Michigan

John Vucetich, Ph.D.
Associate Professor, School of Forest Resources & Environmental Sciences, Michigan Technological University

Vincent Deneff, Ph.D.
Assistant Professor, Department of Ecology & Evolutionary Biology, University of Michigan

Paul Berry, Ph.D.
Professor & Herbarium Director, Department of Ecology & Evolutionary Biology, University of Michigan

Anita Narwani, Ph.D.
Postdoctoral Fellow, School of Natural Resources & Environment, University of Michigan

Daniel Kashian, Ph.D.

Associate Professor, Department of Biological Sciences, Wayne State University

Bobbi Low, Ph.D.

Professor, School of Natural Resources & Environment, University of Michigan

Harvey D. Blankespoor, Ph.D.

Professor Emeritus, Biology Department, Hope College

Raymond Barbehenn, Ph.D.

Associate Research Scientist, Department of Ecology & Evolutionary Biology, University of Michigan

Daniel Fisher, Ph.D.

Claude W. Hibbard Collegiate Professor of Paleontology, Professor of Earth & Environmental Sciences, University of Michigan

Robert Grese, M.S.L.A.

Professor, School of Natural Resources & Environment, University of Michigan

Barry OConnor, Ph.D.

Professor, Department of Ecology & Evolutionary Biology
Curator, Museum of Zoology, University of Michigan

Dr. Catherine Searle, Ph.D.

Postdoctoral Fellow, Department of Ecology and Evolutionary Biology, University of Michigan

Gary Greer, Ph.D.

Associate Professor, Biology Department, Grand Valley State University

Emily Grman, Ph.D.

Postdoctoral Fellow, Michigan State University

Andrew Mahon, Ph.D.

Assistant Professor, Department of Biology, Institute for Great Lakes Research, Central Michigan University

Ivette Perfecto, Ph.D.

George W. Pack Professor of Natural Resources, School of Natural Resources & Environment, University of Michigan

Brian Maurer, Ph.D.

Professor, Department of Fisheries & Wildlife
Director, Center for Statistical Training & Consulting
Michigan State University

Larry D. Noodén, Ph.D.

Professor Emeritus, Department of Ecology & Evolutionary Biology, University of Michigan

Priscilla Tucker, Ph.D.

Professor, Department of Ecology & Evolutionary Biology
Curator, Museum of Zoology
University of Michigan

James Diana, Ph.D.
Professor of Fisheries & Aquaculture, Director of the Michigan Sea Grant
University of Michigan

Gary Hannan, Ph.D.
Professor of biology, Eastern Michigan University

Johannes Foufopoulos, Ph.D.
Associate Professor, School of Natural Resources & Environment, University of Michigan

Christopher Steiner, Ph.D.
Assistant Professor, Department of Biological Sciences, Wayne State University

Jennifer A. Moore, Ph.D.
Assistant Professor, Natural Resource Management Program, Biology Department
Grand Valley State University

David Jude, Ph.D.
Research Scientist, School of Natural Resources & Environment, University of Michigan

Catherine Lindell, Ph.D.
Associate Professor, Department of Zoology/Center for Global Change & Earth Observations, Michigan State University

Michelle Hersh, Ph.D.
Assistant Professor, Eastern Michigan University

Paul Webb, Ph.D.
Professor, School of Natural Resources & Environment, Director, Program in the Environment
University of Michigan

Catherine Riseng, Ph.D.
Assistant Research Scientist, Research Program Director, Michigan Sea Grant
University of Michigan

Tom Burton, Ph.D.
Professor Emeritus, Department of Zoology, Michigan State University

Earl Werner, Ph.D.
Professor, Department of Ecology & Evolutionary Biology, University of Michigan

Laura Bourgeau-Chavez, Ph.D.
Research Scientist, Michigan Technological University

Robyn J. Burnham, Ph.D.
Associate Professor, Department of Ecology & Evolutionary Biology, Curator of Paleontology
University of Michigan

John L. Ubels, Ph.D.
Professor of Biology, Calvin College

Dr. Scott Herron, Ph.D.
Professor of Biology, Ferris State University

Denise M. Keele, Ph.D.
Assistant Professor, Environmental Studies Program & Political Science Department, Western Michigan
University

Terry M. Trier, Ph.D.
Associate Professor of Biology, Grand Valley State University

Philip Myers, Ph.D.
Professor, Ecology & Evolutionary Biology & Curator of the Museum of Zoology, University of Michigan

Patrick Brown, Ph.D.
Professor, Department of Biology, Northern Michigan University

Donald Zak, Ph.D.
Burton V. Barnes Collegiate Professor of Ecology, School of Natural Resources & Environment, University
of Michigan

Kenneth Elgersma, Ph.D.
Postdoctoral Fellow, Department of Ecology & Evolutionary Biology, University of Michigan

Ryan Bebej, Ph.D.
Assistant Professor of Biology, Calvin College

Avik Basu, Ph.D.
Lecturer, School of Natural Resources & Environment, University of Michigan

James Bence, Ph.D.
Professor, Department of Fisheries & Wildlife, Michigan State University

Daniel Brown, Ph.D.
Professor, School of Natural Resources & Environment, University of Michigan

Stephen B. Malcolm, Ph.D.
Professor, Department of Biological Sciences, Western Michigan University

Christopher Dick, Ph.D.
Associate Professor, Department of Ecology and Evolutionary Biology, University of Michigan

Alison Swan, Ph.D.
Adjunct Faculty, Environmental Studies Program, Western Michigan University

Maggie Hanes, Ph.D.
Assistant Professor, Director EMC Herbarium, Eastern Michigan University

Maarten Vonhof, Ph.D.
Associate Professor, Department of Biological Sciences and Environmental Studies, Western Michigan University

John M. DeCicco, Ph.D.
Professor of Practice, School of Natural Resources and Environment, University of Michigan

Rufus Isaacs, Ph.D.
Professor, Department of Entomology, Michigan State University

Katherine R. Greenwald, Ph.D.
Assistant Professor, Eastern Michigan University

Thomas H. Johengen, Ph.D.
Cooperative Institute for Limnology and Ecosystems Research (CILER), University of Michigan

Elizabeth Pringle, Ph.D.
Assistant Professor, Department of Ecology & Evolutionary Biology
Michigan Society of Fellows, University of Michigan

Joseph Dauer, Ph.D.
Postdoctoral Fellow, Department of Plant Biology, Michigan State University

Catherine Badgley, Ph.D.
Assistant Professor, Department of Ecology and Evolutionary Biology, University of Michigan

David E. Rothstein, Ph.D.
Associate Professor, Department of Forestry, Michigan State University

Sylvia M. Taylor Ph.D.
Adjunct Assistant Professor, School of Natural Resources & Environment, University of Michigan

John G. Bruggink, Ph.D.
Professor, Biology Department, Northern Michigan University

Thomas Moore, Ph.D.
Professor Emeritus and Curator Emeritus, Department of Ecology & Evolutionary Biology, University of Michigan

Dr. Sharon Gill, Ph.D.
Assistant Professor, Department of Biological Sciences, Western Michigan University

Jason P. Martina, Ph.D.
Postdoctoral Fellow, School of Natural Resources and Environment, University of Michigan

Christopher Klausmeier, Ph.D.
Associate Professor, Kellogg Biological Station, Department of Plant Biology, Michigan State University

Rebecca Hardin, Ph.D.
Associate Professor, School of Natural Resources and Environment, University of Michigan

Donna R. Kashian, Ph.D.
Department of Biological Sciences, Wayne State University

Donald Uzarski, Ph.D.
Professor, Director of CMU Institute for Great Lakes Research, Director of CMU Biological Station,
Central Michigan University

Michael Moore, Ph.D.
Professor of Environmental Economics, School of Natural Resources & Environment, University of
Michigan

Melissa Duhaime, Ph.D.
Research Scientist, Ecology and Evolutionary Biology, University of Michigan

Steven N. Francoeur, Ph.D.
Professor of Biology, Eastern Michigan University

Hessel Bouma III, Ph.D.
Professor of Biology, Calvin College

Christoph Vogel, Ph.D.
Research Scientist, University of Michigan Biological Station

Jeremiah Johnson, Ph.D.
Assistant Research Scientist, School of Natural Resources & Environment, University of Michigan

Dr. Stephen Hamilton, Ph.D.
Professor, Kellogg Biological Station & Department of Zoology, Michigan State University

Scott Tiegs, Ph.D.
Assistant Professor, Department of Biological Sciences, Oakland University

Lauren Sallan, Ph.D.
Assistant Professor, Ecology and Evolutionary Biology & Michigan Fellow, Michigan Society of Fellows,
University of Michigan

Dana L. Richter, Ph.D.
Research Scientist, School of Forest Resources & Environmental Science, Michigan Technological
University

David Karowe, Ph.D.
Professor, Department of Biological Sciences, Western Michigan University

Richard A. Nyhof, Ph.D.
Professor of Biology, Calvin College

Aaron A. King, Ph.D.
Professor, Ecology & Evolutionary Biology, Mathematics, Center for the Study of Complex Systems,
University of Michigan

Mark Luttenton, Ph.D.
Professor of Biology, Grand Valley State University

Heather A. Dawson, Ph.D.
Assistant Professor, Biology Department, University of Michigan-Flint

Dr. Gary Mittelbach, Ph.D.
Professor, Kellogg Biological Station & Department of Zoology, Michigan State University

Gregory Keoleian, Ph.D.
Director, Center for Sustainable Systems
Peter M. Wege Professor, School of Natural Resources and Environment
Professor, Civil and Environmental Engineering, University of Michigan

Darren Proppe, Ph.D.
Assistant Professor of Biology, Calvin College

Thomas Duda, Ph.D.
Associate Professor, Department of Ecology and Evolutionary Biology, University of Michigan

Scott C Stark, Ph.D.,
Postdoctoral Fellow, Michigan State University, Department of Forestry

David C. Michener, Ph.D.
Associate Curator, Matthaei Botanical Gardens and Nichols Arboretum, University of Michigan

Rolf O. Peterson, Ph.D.
Research Professor, Robbins Chair, School of Forest Resources and Environmental Science, Michigan
Technological University

Robert D. Hollister, Ph.D.
Associate Professor, Biology Department, Grand Valley State University

Lars Brudvig, Ph.D.
Assistant Professor, Department of Plant Biology, Michigan State University

Steven L. Yaffee, Ph.D.
Professor of Natural Resources and Environmental Policy, University of Michigan

Charles F. Ide, Ph.D.
Gwen Frostic Professor of Biological Sciences, Western Michigan University

Julia Wondolleck, Ph.D.
Associate Professor, School of Natural Resources & Environment, University of Michigan

David Warners, Ph.D.
Professor of Biology, Calvin College

Oliver Gailing, Ph.D.
Associate Professor for Ecological Genomics, School of Forest Resources and Environmental Science,
Michigan Technological University

Daniel Kramer, Ph.D.
Associate Professor of Fisheries and Wildlife, Michigan State University

Lucas Nave, Ph.D.
Assistant Research Scientist, University of Michigan Biological Station, Department of Ecology &
Evolutionary Biology.

Randall G. Van Dragt, Ph.D.
Professor of Biology, Calvin College

Kristi Judd, Ph.D.
Associate Professor of Biology, Eastern Michigan University

Raymond De Young, Ph.D.
Associate Professor of Environmental Psychology and Planning, School of Natural Resources &
Environment, University of Michigan

Molly Cavaleri, Ph.D.
Assistant Professor of Tree Physiology, Michigan Technological University

Orlando Sarnelle, Ph.D.
Professor, Department of Fisheries and Wildlife, Michigan State University

Curtis L. Blankespoor, Ph.D.
Professor of Biology, Calvin College

Mac Strand, Ph.D.
Professor, Department of Biology, Northern Michigan University

George W. Kling, Ph.D.
Robert G. Wetzel Professor of Ecology, Department of Ecology & Evolutionary Biology, University of
Michigan

Tawny M. Mata, Ph.D.
Postdoctoral Fellow, Department of Plant Biology, Michigan State University

Randall DeJong, Ph.D.
Professor of Biology, Calvin College

Joseph P. Messina Ph.D.
Professor, Department of Geography, Michigan State University

David Flaspohler, Ph.D.
Professor, School of Forest Resources and Environmental Science, Michigan Technological University

Deric R. Learman, Ph.D.
Assistant Professor, Institute for Great Lakes Research, Central Michigan University

Ulrich Reinhardt, Ph.D.
Professor of Biology, Eastern Michigan University

Dr. Patricia A. Soranno, Ph.D.
Professor, Department of Fisheries and Wildlife, Michigan State University

Dr. Bopaiah A. Biddanda, Ph.D.
Associate Professor, Annis Water Resources Institute and Lake Michigan Center, Grand Valley State University

David L. Dornbos, Jr., Ph.D.
Associate Professor, Biology Department, Calvin College

G. Philip Robertson, Ph.D.
University Distinguished Professor, W.K. Kellogg Biological Station and Department of Plant, Soil and Microbial Sciences, Michigan State University

Neal R. Foster, Ph.D.
Adjunct Assistant Professor, School of Natural Resources & Environment, University of Michigan

Richard W. Merritt, Ph.D.
University Distinguished Professor, Department of Entomology, Michigan State University

Neil W. MacDonald, Ph.D.
Professor of Biology and Natural Resources Management, and Chair, Biology Department, Grand Valley State University

Deborah G. McCullough, Ph.D.
Professor, Departments of Entomology and Forestry, Michigan State University

Katherine L. Gross, Ph.D.

University Distinguished Professor, Director of the WK Kellogg Biological Station, Michigan State University

Jianguo Liu, Ph.D.

Rachel Carson Chair in Sustainability & University Distinguished Professor, Center for Systems Integration and Sustainability, Michigan State University

James E. Crowfoot, Ph.D.

Professor Emeritus & Dean Emeritus, School of Natural Resources and Environment, University of Michigan