

Open Letter to Decision Makers Concerning Wildfires in the West

As scientists with backgrounds in ecological sciences and natural resources management, we are greatly concerned about proposals to speed up and expand logging on public lands in response to recent increases in wildfires in the West – proposals such as the House version of the 2018 Farm Bill. There are pragmatic, science-based solutions that can maintain biologically diverse fire-dependent ecosystems while reducing risks to communities and firefighters facing some of the most active fire seasons in recent memory. Unfortunately, such solutions are getting lost in the endless rhetoric and blaming that has characterized wildfires in the media, Congress, and the [Trump administration](#). We the undersigned are calling on decision makers to facilitate a civil dialogue and careful consideration of the science to ensure that any policy changes will result in communities being protected while safeguarding essential ecosystem processes.

Why Is the West Burning and Is This Unnatural?

Wildfires have shaped the ecology of western ecosystems for millennia, whether lit by lightning or managed by American Indian tribes for cultural benefits. Wildfires vary in intensity and occurrence, across regions and vegetation types, elevation and climatic gradients, so there is no one-size-fits all strategy. The West has always burned and will always burn, and it needs to in order to maintain ecosystems and the myriad services they provide to the public in the form of carbon sequestration, clean water, abundant wildlife, and outdoor amenities. Attempting to suppress fires that are not a risk to communities is impractical, costly, risky to firefighters, and ecologically damaging. Also, forests are not the majority of the area burned annually on average in the United States; grasslands and shrublands are a large component of area burned annually that is unaffected by any forest management.

What is different today about wildfires is they are now burning over larger landscapes (more acres) since the 1980s, although overall fewer acres are burning today compared to that estimated in early decades and historical timelines.¹ Wildfire season in the West recently has lengthened from an average of five to seven months, and the number of large wildfires (>1,000 acres) has increased from 140 to 250 per year.² This is occurring as average annual temperature in the West has risen by nearly 2 degrees Fahrenheit since 1970s and winter snow pack has declined.³ Increases in acres burning can now be attributed, in part, to climate change⁴ and the

¹Littell, J.S. et al. 2009. Climate and wildfire area burned in western U.S. ecoprovinces, 1916-2003. *Ecol. Applic.* 19:1003-1021.
Egan, T. 2009. *The Big Burn*. Mariner Books: Boston, NY. Parks, S.A. et al. 2015. Wildland fire deficit and surplus in the western United States, 1984-2012. *Ecosphere* 6:1-13.

²Dennison, P. et al. 2014. Large wildfire trends in the western United States, 1984-2011. *Geophysics Research Letters* 41:2928-2933.

³Union of Concerned Scientists (UCS). 2017. Western wildfires and climate change.
http://www.ucsusa.org/global_warming/science_and_impacts/impacts/infographicwildfires-climate-change.html#.WcBXE5OGNTb

⁴Abatzoglou, J.T., and A.P. Williams. 2017. Impact of anthropogenic climate change on wildfire across western US forests. *PNAS* 113:11770-11775.

increase is expected to continue in many areas with additional warming, leading to even greater suppression costs and loss of life.⁵

In addition to climate change, more than 80 percent of fires nationwide have been caused by people,⁶ and millions of homes are now in harm's way,⁷ resulting in skyrocketing costs. Putting more money into fire suppression will not reduce homeowner losses as long as homes continue to be built next to fire-adapted ecosystems, lack defensible space⁸ and/or fire-proofing, and measures are not taken to reduce human-caused wildfire ignitions.⁶

What Is Active Management and Does It Work to Reduce Fire Activity?

Active management has many forms and needs to be clearly defined in order to understand whether it is effective at influencing fire behavior. Management can either increase or decrease flammable vegetation, is effective or ineffective in dampening fire effects depending on many factors, especially fire weather, and has significant limitations and substantial ecological tradeoffs.

Thinning Is Ineffective in Extreme Fire Weather – Thinning is most often proposed to reduce fire risk and lower fire intensity. When fire weather is not extreme,⁹ thinning-from-below of small diameter trees followed by prescribed fire, and in some cases prescribed fire alone,¹⁰ can reduce fire severity in certain forest types for a limited period of time¹¹. However, as the climate changes, most of our fires will occur during extreme fire-weather (high winds and temperatures, low humidity, low vegetation moisture). These fires, like the ones burning in the West this summer, will affect large landscapes, regardless of thinning, and, in some cases, burn hundreds or thousands of acres in just a few days.¹² Thinning large trees, including overstory trees in a stand, can increase the rate of fire spread by opening up the forest to increased wind velocity, damage soils, introduce invasive species that increase flammable understory vegetation, and impact wildlife habitat.⁹ Thinning also requires an extensive and expensive roads network that degrades water quality by altering hydrological functions, including chronic sediment loads.

Post-disturbance Salvage Logging Reduces Forest Resilience and Can Raise Fire Hazards – Commonly practiced after natural disturbances (such as fire or beetle activity), post-disturbance clearcut logging hinders forest resilience by compacting soils, killing natural regeneration of

⁵Schoennagel, T., et al. 2017. Adapt to more wildfire in western North American forests as climate changes. PNAS 114:4582-4590.

⁶Balch, J.K., et al. 2016. Human-started wildfires expand the fire niche across the United States. PNAS 114: 2946-2951.

⁷Syphard, A.D., et al. 2013. Land use planning and wildfire: development policies influence future probability of housing loss. PLoS ONE 8(8):71708. Strader, S.M. 2017. Spatiotemporal changes in conterminous US wildfire exposure from 1940 to 2010. Nat. Hazards <https://doi.org/10.1007/s11069-018-3217-z>.

⁸Cohen, J.D. 2000. Preventing disaster: home ignitability in the wildland-urban interface. J. of Forestry 98: 15-21.

⁹Moritz, M.A., et al. 2014. Learning to coexist with wildfire. Nature 515: 58-66. Schoennagel, T., et al. 2017. Ibid.

¹⁰Zachmann, L.J. et al. 2018. Prescribed fire and natural recovery produce similar long-term patterns of change in forest structure in the Lake Tahoe basin, California. For. Ecol. and Manage. 409:276-287

¹¹Stone, C. et al. 2003. Forest harvest can increase subsequent forest fire severity.

https://www.fs.fed.us/psw/publications/documents/psw_gtr208en/psw_gtr208en_525-534_stone.pdf

Brown, R.T., et al. 2004. Forest restoration and fire: principles in the context of place. Cons. Biol. 18:903-912. Kalies, E.I., and L.L.Y. Kent. 2016. Tamm Review: Are fuel treatments effective at achieving ecological and social objectives? A systematic review. For. Ecol. and Manage. 375:84-95. Goodwin, M.J. et al. 2018. The 15-year post-treatment response of a mixed-conifer understory plant community to thinning and burning treatments. <https://doi.org/10.1016/j.foreco.2018.07.058>

¹²Stephens, S.L., et al. 2015. Large wildfires in forests: what can be done? Action Bioscience April 15

conifer seedlings and shrubs associated with forest renewal, increases fine fuels from slash left on the ground that aids the spread of fire, removes the most fire-resistant large live and dead trees, and degrades fish and wildlife habitat.¹³ Roads, even “temporary ones,” trigger widespread water quality problems from sediment loading. Forests that have received this type of active management typically burn more severely in forest fires.¹³

Wilderness and Other Protected Areas Are Not Especially Fire Prone – Proposals to remove environmental protections to increase logging for wildfire concerns are misinformed. For instance, scientists¹⁴ recently examined the severity of 1,500 forest fires affecting over 23 million acres during the past four decades in 11 western states. They found fires burned more severely in previously logged areas, while fires burned in natural fire mosaic patterns of low, moderate and high severity, in wilderness, parks, and roadless areas, thereby, maintaining resilient forests. Consequently, there is no legitimate reason for weakening environmental safeguards to curtail fires nor will such measures protect communities.

Closing Remarks and Need for Science-based Solutions

The recent increase in wildfire acres burning is due to a complex interplay involving human-caused climate change coupled with expansion of homes and roads into fire-adapted ecosystems and decades of industrial-scale logging practices. Policies should be examined that discourage continued residential growth in ecosystems that evolved with fire. The most effective way to protect existing homes is to ensure that they are as insusceptible to burning as possible (e.g., fire resistant building materials, spark arresting vents and rain-gutter guards) and to create defensible space within a 100-foot radius of a structure. Wildland fire policy should fund defensible space, home retrofitting measures and ensure ample personnel are available to discourage and prevent human-caused wildfire ignitions. Ultimately, in order to stabilize and ideally slow global temperature rise, which will increasingly affect how wildfires burn in the future, we also need a comprehensive response to climate change that is based on clean renewable energy and storing more carbon in ecosystems.

Public lands were established for the public good and include most of the nation’s remaining examples of intact ecosystems that provide clean water for millions of Americans, essential wildlife habitat, recreation and economic benefits to rural communities, as well as sequestering vast quantities of carbon. When a fire burns down a home it is tragic; when fire burns in a forest it is natural and essential to the integrity of the ecosystem, while also providing the most cost-effective means of reducing fuels over large areas. Though it may seem to laypersons that a post-fire landscape is a catastrophe, numerous studies tell us that even in the patches where fires burn most intensely, the resulting wildlife habitats are among the most biologically diverse in the West.¹⁵ For these reasons, we urge you to reject misplaced logging proposals that will damage

¹³Lindenmayer, D.B., et al. 2008. Salvage logging and its ecological consequences. Island Press: Washington, D.C. Thompson, J.R., and T.A. Spies. 2009. Vegetation and weather explain variation in crown damage within a large mixed-severity wildfire. *For. Ecol. Manage* 258:1684-1694.

¹⁴Odion et al. 2004. Fire severity patterns and forest management in the Klamath National Forest, northwest California, USA. *Cons. Biol.* 18:927-936. Zald, H., and C. Dunn. 2018. Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape. *Ecol. Applic.* 4:1068-1080. Bradley, C.M., et al. 2016. Does increased forest protection correspond to higher fire severity in frequent-fire forests of the western United States? *Ecosphere* 7:1-13.

¹⁵DellaSala, D.A., and C.T. Hanson. 2015. The ecological importance of mixed-severity fire: nature’s phoenix. Elsevier: Boston <http://www.sciencedirect.com/science/book/9780128027493> (Chapters 1 through 5, and 11).

our environment, hinder climate mitigation goals and will fail to protect communities from wildfire.

Sincerely (affiliations are listed for identification purposes only),

Paul Alaback, Ph.D.
Professor Emeritus
University of Montana
Missoula, MT

John Alcock, Ph.D.
Emeritus Regents Professor of Biology
Tempe, AZ

Donald Alley, M.S.
Fisheries Biologist
D.W. Alley & Associates
Brookdale, CA

Malek Al-Marayati, M.S.
Pasadena, CA

Danielle Amoroso, M.S.
Professor
Los Angeles, CA

Jennifer Anderson, B.A.
Retired Lecturer, Environmental Studies
University of California
Santa Cruz, CA

William Armbruster, Ph.D.
Principal Research Scientist
Institute of Arctic Biology, University of Alaska
Fairbanks, AK

Richard Baker, Ph.D.
Emeritus Prof., Earth and Env. Science
University of Iowa
Iowa City, IA

William Baker, Ph.D.
Professor Emeritus
University of Wyoming
Laramie, WY

Jesse Barber, Ph.D.
Associate Professor
Boise State University
Boise, ID

Paul Beier, Ph.D.
Professor of Conservation Biology
School of Forestry, Northern Arizona Univ.
Flagstaff, AZ

Craig Benkman, Ph.D.
Professor
University of Wyoming
Laramie, WY

Linda Bernhardt, M.S.
Former County Natural Resources Manager
Talent, OR

Leslie Bishop, Ph.D.
Professor Emerita of Biology
Earlham College
Nashville, IN

Scott Black, M.S.
Executive Director
Xerces Society
Portland, OR

James Blauth, Ph.D.
Professor of Biology
University of Redlands
Redlands, CA

David Blockstein, Ph.D.
Senior Adviser
Assoc. for Env. Studies and Sciences
Takoma Park, MD

Katherine Bode, M.S.
Senior Botanist
Avila and Assoc. Consulting Engineers, Inc.
Gerton, NC

Monica Bond, M.S.
Principal Scientist
Wild Nature Institute
Concord, NH

Jim Boone, Ph.D.
Owner
Desert Wildlife Consultants, LLC
Las Vegas, NV

Brooke Boswell, M.S.
Research Program Manager
University of Northern British Columbia
(UNBC)
Seattle, WA

Curtis Bradley, M.S.
Senior Scientist
Center for Biological Diversity
Tucson, AZ

Richard Bradley, Ph.D.
Associate Professor, Emeritus
The Ohio State University
Columbus, OH

Dennis Bramble, Ph.D.
Professor (Emeritus)
University of Utah
Escalante, UT

Chelsea Brisson, M.S.
Student
Northridge, CA

Barbara Brower, Ph.D.
Professor
Portland State University
Portland, OR

Betsy Bultema, M.S.
Nevada City, CA

Steven Buskirk, Ph.D.
Professor Emeritus
University of Wyoming
Laramie, WY

Ken Carloni, Ph.D.
Science and Natural Resources Chair
Umpqua Community College (Ret.)
Roseburg, OR

Ron Carroll, Ph.D.
Distinguished Fellow, River Basin Center
University of Georgia
Watkinsville, GA

Bobb Carson, Ph.D.
Professor and Dean Emeritus
Lehigh University
Coopersburg, PA

Donna Cassidy-Hanley, Ph.D.
Freeville, NY

F. Stuart Chapin, Ph.D.
Forest Ecosystem Ecologist, Retired
University of Alaska Fairbanks
Fairbanks, AK

Eric Chivian, M.D.
Founder and Former Director
Harvard Medical School
Boston, MA

Raymond Clarke, Ph.D.
Professor Emeritus
Sarah Lawrence College
Bronxville, NY

Patrick Crist, Ph.D.
Director of Conservation Planning
Broomfield, CO

Sam Davis, Ph.D.
Research Manager
Dogwood Alliance
Asheville, NC

Brittany Davis, Ph.D.
Assistant Professor of Env. Science
Allegheny College
Meadville, PA

Dominick A. DellaSala, Ph.D.
Chief Scientist
Geos Institute
Ashland, OR

Alan Dickman, Ph.D.
Professor Emeritus
University of Oregon
Eugene, OR

Andrew Dobson, Ph.D.
Prof. of Ecology and Evol. Biology
Princeton University
Princeton, NJ

Craig Downer, Ph.D. Candidate
Wildlife Ecologist
Andean Tapir Fund
Minden, NV

Tom Dudley, Ph.D.
Research Scientist
University of California
Santa Barbara, CA

Christopher Dunn, Ph.D.
Research Scientist
Oregon State University
Corvallis, OR

Vern Durkee, Ph.D.
Retired Botanist
Ithaca, NY

Richard E Edelman, Ph.D.
Director
Miami University
Oxford, OH

Robert Espinoza, Ph.D.
Professor
California State University, Northridge
Northridge, CA

Gerald Estberg, Ph.D.
Retired
University of San Diego
Port Angeles, WA

Jonathan Evans, Ph.D.
Professor of Biology
University of the South
Sewanee, TN

Daniel Feller, B.S.
Western Region Ecologist
Department of Natural Resources
Swanton, MD

Doug Fischer, Ph.D.
Research Scholar
Ronin Institute
Santa Barbara, CA

Daniel Fisher, Ph.D.
Professor
University of Michigan
Ann Arbor, MI

Thomas Fleischner, Ph.D.
Executive Director
Natural History Institute
Prescott, AZ

Eric Forsman, Ph.D.
Research Wildlife Biologist, Retired
Corvallis, OR

Michael Fox, DVM PhD, DSc
Private consultant
Minneapolis, MN

Janet Franklin, Ph.D.
Distinguished Professor of Biogeography
University of California - Riverside
Riverside, CA

Douglas Frederick, Ph.D.
Professor
NCSU
Raleigh, NC

Jerry Freilich, Ph.D.
National Park Service Research Coordinator
Olympic National Park (retired)
Bend, OR

Lee Frelich, Ph.D.
Director, Center for Forest Ecology
University of Minnesota
St. Paul, MN

Christopher Frissell, Ph.D.
Principle Research Scientist
Frissell & Raven Hydrobiology &
Landscape Sciences
Polson, MT

Evan Frost, M.S.
Terrestrial Ecologist
Wildwood Consulting
Ashland, OR

Stephen W Fuller, Ph.D.
Professor Emeritus
University of Mary Washington
Fredericksburg, VA

Christine Perala Gardiner, Ph.D.
Senior Advisor
Deer Creek Association
Cave Junction, OR

A. Gatz, Ph.D.
Professor of Zoology
Ohio Wesleyan University
Delaware, OH

John Gerwin, M.S.
Research Curator, Ornithology
N. Carolina Museum of Natural Sciences
Raleigh, NC

Alexandra Getches, B.S.
Plant Biologist
National Park Service
Thousand Oaks, CA

Steven Green, Ph.D.
Professor Emeritus
University of Miami
Coral Gables, FL

Gregory Grether, Ph.D.
Professor
University of California
Los Angeles, CA

Ed Grumbine, Ph.D.
Land and Conservation Director
Grand Canyon Trust
Flagstaff, AZ

Chad T. Hanson, Ph.D.
Research Ecologist
Earth Island Institute
Berkeley, CA

Richard Halsey, M.S.
Director
California Chaparral Institute
Escondido, CA

Cheryl Harding, Ph.D.
Professor Emeritus
Hunter College
New York, NY

Stacey Harmer, Ph.D.
Professor
University of California, Davis
Davis, CA

Cindy Haws, M.S.
Professor of Science
Umpqua Community College
Myrtle Creek, OR

Betsy Herbert, Ph.D.
Freelance writer
Sempervirends Fund
Corvallis, OR

Fritz Hertel, Ph.D.
Professor
CSU Northridge
Northridge, CA

Nancy Hoalst-Pullen, Ph.D.
Acworth, GA

Ingrid Hogle, M.S.
Ecologist and GIS expert
Self-employed
Oakland, CA

Karen Holl, Ph.D.
Professor of Environmental Studies
University of California, Santa Cruz
Santa Cruz, CA

Richard Holmes, Ph.D.
Research Professor of Biology
Dartmouth College
Hanover, NH

Paula Hood, M.S.
Co-Director
Blue Mountains Biodiversity Project
Portland, OR

Malcolm Hunter, Ph.D.
Professor
University of Maine
Orono, ME

Richard Hutto, Ph.D.
Professor Emeritus
University of Montana
Missoula, MT

Timothy Ingalsbee, Ph.D.
Executive Director
Firefighters United for Safety, Ethics,
and Ecology
Eugene, OR

Jerome Jackson, Ph.D.
Professor Emeritus
Florida Gulf Coast University
Ft. Myers, FL

David Janos, Ph.D.
Professor Emeritus
University of Miami
Corvallis, OR

Robert Jarvis, Ph.D.
Professor emeritus
Oregon State University
Corvallis, OR

Mitchell Johns, Ph.D.
Professor Emeritus Soil and Plant Scientist
California State University
Chico, CA

Jay Jones, Ph.D.
Professor of Biology and Biochemistry
University of La Verne
La Verne, CA

Alan Journet, Ph.D.
Co-Facilitator
Southern Oregon Climate Action Now
Jacksonville, OR

Jacob Kann, Ph.D.
Aquatic Ecologist
Aquatic Ecosystem Sciences LLC
Ashland, OR

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

James Karr, Ph.D.
Professor Emeritus
University of Washington
Seattle, WA

Sterling Keeley, Ph.D.
Professor of Botany
University of Hawaii
Honolulu, HI

Ian Keene, Ph.D.
Environmental Scientist
Conf. Tribes of the Siletz
Newport, OR

Duane. Keown, Ph.D.
Professor Emeritus, Science Education
University of Wyoming
Laramie, WY

Ruth Ann Kern, Ph.D.
Associate Professor
California State University, Fresno
Fresno, CA

Maya R. Khosla, M.S.
Ecologist
Ecological Studies
Rohnert Park, CA

Kevin Kilpatrick, B.A.
Electric Utility Consultant
San Diego, CA

Bruce Kirchoff, Ph.D.
Professor of Biology
Greensboro, NC

Marni Koopman, Ph.D.
Climate Change Scientist
Geos Institute
Ashland, OR

Grace Kostel, M.S.
Botanist
Black Hills State University
Aurora, NE

Fayette Krause, Ph.D.
Retired
Pt. Townsend, WA

John Lamperti, Ph.D.
Professor of Mathematics, Emeritus
Dartmouth College
Hanover, NH

Russell Lande, Ph.D.
Emeritus Professor
Dept. of Biology, University of California
San Diego, CA

Rick Landenberger, Ph.D.
Science and Management Specialist, and
Assistant Planner
West Virginia Land Trust
Morgantown, WV

Marc Lapin, Ph.D.
Assistant Laboratory Professor
Middlebury College
Middlebury, VT

Beverly Law, Ph.D.
Professor, Global Change Biology
Oregon State University
Corvallis, OR

Geoffrey Lawrence, M.S.
University Lecturer
N. Hennepin Community College
Pittsford, NY

Derek Lee, Ph.D.
Principal Scientist
Wild Nature Institute
Concord, NH

Richard Lee, Ph.D.
University Distinguished Professor
Miami University
Oxford, OH

Jason A. Lillegraven, Ph.D.
Arts and Sciences Dist. Emeritus Prof.
University of Wyoming
Laramie, WY

Harvey Lillywhite, Ph.D.
Professor of Biology
University of Florida
Gainesville, FL

Brian Linkhart, Ph.D.
Professor of Biology
Colorado College
Colorado Springs, CO

Darryl Lloyd, M.S.
Author, photographer
Friends of Mount Adams
Hood River, OR

Frank Logiudice, M.S.
Associate Instructor, Biology
University of Central Florida
Orlando, FL

Travis Longcore, Ph.D.
Assistant Professor
University of Southern California
Los Angeles, CA

Thomas Lovejoy, Ph.D.
George Mason University
Washington, DC

Loys Maingon, Ph.D.
Research Director
Strathcona Wilderness Institute
Courtenay, British Columbia

Julin Maloof, Ph.D.
Professor of Plant Biology
University of California, Davis
Davis, CA

Janet Marsden, Ph.D.
Ph.D. candidate
Syracuse University
Syracuse, NY

Travis Marsico, Ph.D.
Associate Professor
Arkansas State University
Jonesboro, AR

John Marzluff, Ph.D.
Professor
University of Washington
Seattle, WA

Chris Maser, M.S.
Corvallis, OR

Kathleen McCarthy, M.S.
Landscape Restoration Project Manager
New York, NY

Carl McDaniel, Ph.D.
Prof. of Biology Emeritus; Visiting Prof.
Rensselaer and Oberlin College
Oberlin, OH

Robert Meese, Ph.D.
Staff Research Associate IV, retired
University of California - Davis
Davis, CA

Gary Meffe, Ph.D.
Research Professor, Retired
University of Florida
Brandon, VT

Char Miller, Ph.D.
Pomona College
Claremont, CA

Wayne Minshall, Ph.D.
Emeritus Professor of Ecology
Idaho State University
Inkom, ID

Dillon Monroe, M.S.
Student
California State University, Northridge
Northridge, CA

Max Moritz, Ph.D.
Cooperative Extension Wildfire Specialist
U.C. Division of Agriculture & Natural
Resources
Santa Barbara, CA

Josie Moss, B.S.
Field Biologist
Aptos, CA

Ellen Moyer, Ph.D.
Principal
Greenenvironment, LLC
Montgomery, MA

Rob Mrowka, M.S.
Senior Scientist
Center for Biological Diversity
Franklinville, NY

Dennis D. Murphy, Ph.D.
Research Professor
Biology Department, University of Nevada
Reno, NV

K. Greg Murray, Ph.D.
T. Elliot Weier Prof. of Plant Sciences
Hope College
Holland, MI

Philip Myers, Ph.D.
Professor, Emeritus
University of Michigan
Ann Arbor, MI

Richard Nawa, M.A.
Staff Ecologist
Klamath-Siskiyou Wildlands Center
Ashland, OR

Charles R. Neal, B.S.
Ecologist
US Dept. of Interior (retired)
Cody, WY

Gerald Niemi, Ph.D.
Professor
Duluth, MN

Barry Noon, Ph.D.
Professor of Wildlife Ecology
Colorado State University
Fort Collins, CO

Elliott Norse, Ph.D.
Ancient Forests of the Pacific Northwest
Redmond, WA

Reed Noss, Ph.D.
President
Florida Institute for Conservation Science
Sarasota, FL

Philip Nyhus, Ph.D.
Associate Prof. of Env. Studies
Colby College
Waterville, ME

Dennis Odion, Ph.D.
Research Ecologist
Earth Research Institute
University of California
Ashland, OR

David Olson, Ph.D.
Conservation Biologist
Conservation Earth
Washington, DC

Michael Parker, Ph.D.
Professor of Biology
Southern Oregon University
Ashland, OR

Simmi Patel, M.S.
New York, NY

Gustav Paulay, Ph.D.
Professor
University of Florida
Gainesville, FL

Dennis Paulson, Ph.D.
Director Emeritus
Slater Museum, Univ. of Puget Sound
Tacoma, WA

Stuart Pimm, Ph.D.
Doris Duke Chair of Conservation
Duke University
Durham, NC

Gerald Post, DVM
Medical Director
The Veterinary Cancer Center
Norwalk, CT

Thomas Power, Ph.D.
Professor Emeritus
University of Montana
Missoula, MT

Jessica Pratt, Ph.D.
Assistant Professor
University of California - Irvine
Irvine, CA

Riley Pratt, Ph.D.
Environmental Scientist
University of California, Irvine
Irvine, CA

Cameron Pujdak, M.S.
CSUN
Northridge, CA
Robert Pyle, Ph.D.

Independent Biologist
Xerces Society
Gray's River, WA

James Quinn, Ph.D.
Professor Emeritus
Rutgers University
New Brunswick, NJ

John Ratti, Ph.D.
Research Professor
University of Idaho
Moscow, ID

Peter Raven, Ph.D.
President Emeritus
Missouri Botanical Garden
St. Louis, MO

Ryan Rebozo, Ph.D.
Director of Conservation Science
Pinelands Preservation Alliance
Southampton, NJ

Khale Century Reno, M.Ed.
Executive Director
Wyoming Wilderness Association
Sheridan, WY

Fred Rhoades, Ph.D.
Research Assoc. & Retired Bio. Instructor
Western Washington University
Bellingham, WA

Ann F. Rhoads, Ph.D.
Retired Professor of Botany
Morris Arboretum of the Univ. of Pennsylvania
Philadelphia, PA

Amy Rossman, Ph.D.
Research Leader (retired)
Mycology Laboratory
Beltsville, MD

Matthew Rubino, M.S.
Research Associate
North Carolina State University
Raleigh, NC

Will Russell, Ph.D.
Professor
San Jose State University
San Jose, CO

Scott Russell, Ph.D.
Professor
University of Oklahoma
Norman, OK

Robin Salter, Ph.D.
Professor Emeritus
Oberlin College
Oberlin, OH

Paul Schaeffer, Ph.D.
Associate Professor
Miami University
Oxford, OH

Charles Schelz, M.S.
Ecologist
Cascade-Siskiyou NM
Ashland, OR

Paula Schiffman, Ph.D.
Professor of Biology
California State University, Northridge
Los Angeles, CA

David Schindler, Ph.D.
Killam Memorial Prof. of Ecology Emeritus
University of Alberta
Edmonton, Alberta

Fiona Schmiegelow, Ph.D.
Professor
University of Alberta / Yukon College
Whitehorse, Yukon

Karl Schneider, M.S.
Retired Alaska Dept. of Fish and Game
Alaska Dept. of Fish and Game (ret.)
Homer, AK

Tania Schoennagel, Ph.D.
University of Colorado
Boulder, CO

Kathy Schwager, M.S.
Ecologist
Yaphank, NY

Mark Shapley, Ph.D.
Research Paleolimnologist
Idaho State University
Helena, MT

Janet Shellman Sherman, Ph.D.
Research Scientist, Lecturer
Cornell University, Retired
Gold Beach, OR

Stevem Singer, M.S.
Forest Biologist
Self-employed
Santa Cruz, CA

Thomas Sisk, Ph.D.
Olajos-Goslow Chair of Env. Science
Northern Arizona University
Flagstaff, AZ

Diana Six, Ph.D.
Professor of Forest Entomology and Pathology
Franke College of Forestry and Conservation
Missoula, MT

Candan Soykan, Ph.D.
San Francisco, CA

Timothy Spira, Ph.D.
Emeritus Professor, Biological Sciences
Clemson University
Clemson, SC

Trygve Steen, Ph.D.
Forest Ecology Professor
Portland State University
Portland, OR

Alan Stemler, Ph.D.
Professor Emeritus
University of California - Davis
Davis, CA

Richard Strathmann, Ph.D.
Professor Emeritus
Friday Harbor, WA

James Strittholt, Ph.D.
President and Executive Director
Conservation Biology Institute
Corvallis, OR

Susan Swensen, Ph.D.
Professor
Ithaca, NY

Michael Swift, Ph.D.
Assistant Professor Emeritus of Biology
St. Olaf College
Northfield, MN

John Terborgh, Ph.D.
Professor Emeritus
Duke University, University of Florida
Gainesville, FL

Stephen Tettelbach, Ph.D.
Professor of Biology
Long Island University
Brookville, NY

Chant Thomas, M.S.
Director
Dakubetede Env. Education Programs
Jacksonville, OR

Pepper Trail, Ph.D.
Ornithologist
Ashland, OR

Vicki Tripoli, Ph.D.
Environmental Scientist
Moorpark, CA

Walter Tschinkel, Ph.D.
Professor Emeritus
Florida State University
Tallahassee, FL

Mary Tyler, Ph.D.
Professor of Zoology
University of Maine
Orono, ME

Rick Van de Poll, Ph.D.
Principal
Ecosystem Management Consultants
Center Sandwich, NH

Mike Vandeman, Ph.D.
San Ramon, CA

Thomas Veblen, Ph.D.
Distinguished Professor
University of Colorado Boulder
Boulder, CO

John Vickery, M.S.
Natural Areas Specialist
Denver Natural Areas
Denver, CO

Marlene Wagner, M.S.
Ph.D. Candidate
Simon Fraser University
Petersburg, AK

Robert Wagner, Ph.D.
Senior Ecologist
Quantitative Ecological Services, Inc.
Castle Rock, CO

Greg Walker, Ph.D.
Professor Emeritus
University of California, Riverside
Riverside, CA

Vicki Watson, Ph.D.
Professor Emeritus
University of Montana
Missoula, MT

Frank Wegscheider, M.A.
Wildlife Biologist
CSUF
Orange, CA

Judith Weis, Ph.D.
Professor Emerita
Rutgers University
Newark, NJ

Jeffery Werner, Ph.D.
Wildlife Ecologist
Conservation North
Prince George, British Columbia

David Whitacre, Ph.D.
Biology and Statistics Instructor
Treasure Valley Math and Science Center
Boise, ID

William Whitten, Ph.D.
Senior Biologist
Florida Museum of Nat. History
Gainesville, FL

Tyler Wilson, B.S.
Teaching associate/contract Biologist
Simi Valley, CA

Gary Wilson, M.A.
Professor
Moorpark College
Moorpark, CA

Shaye Wolf, Ph.D.
Climate Science Director
Center for Biological Diversity
Oakland, CA

George M. Woodwell, Ph.D.
Founder, Director Emeritus
The Woods Hole Research Inst.
Woods Hole, MA

George Wuerthner, Ph.D.
Ecologist and author
Wildlife: A Century of Failed Forest Policy
Bend, OR