

August 26, 2019

Vicki Christiansen
Chief, U.S. Forest Service
USDA Forest Service
1400 Independence Avenue, SW
Washington, DC 20250

Submitted via email to: nepa-procedures-revision@fs.fed.us

Re: Proposed Rule, National Environmental Policy Act (NEPA) Compliance 84 Fed. Reg. 27,544 June 13, 2019

Dear Chief Christiansen,

Please accept these comments on the Forest Service's proposed revision of the National Environmental Policy Act (NEPA) regulations 84 Fed. Reg. 27,544 (June 13, 2019), RIN 0596-AD31. The undersigned scientists have decades of expertise in ecological sciences and natural resources management including forestry, restoration ecology, disturbance ecology, entomology, conservation biology, hydrology, climate change, wildlife and plant biology.

We are greatly concerned about the proposed changes to the Forest Service's NEPA regulations that would significantly curtail the ability of scientists to provide the best available science to the agency in decisions affecting our national forests. The proposed changes would hamstring the agency from making informed decisions in an era complicated by unprecedented climate change and a legacy of land-use impacts to the national forest system.

NEPA is one of our country's bedrock environmental laws, providing citizens and independent scientists with a voice in federal decisions affecting the environment, fostering transparency, and ensuring that decisions are informed with the best available science.

Science-based decision-making requires the best available information, which comes from thoughtful analysis and local knowledge of landscape and site-specific conditions. The proposed rule would eliminate public input on 93 percent of Forest Service decisions including logging, roadbuilding, mining, oil and gas wells, and pipelines. While we have great respect for the agency's scientists, the Forest Service's lack of capacity is a well-known problem, which frequently results in mistakes and omissions. Current regulations provide an opportunity for such mistakes and omissions to be corrected by external input. The existing NEPA review and comment process is the only means available to ensure that best available, relevant scientific information is considered by the Forest Service before irreversible actions are taken that pose risk of long-term environmental harms.

The Council on Environmental Quality regulations provide that "NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken," and that "[a]ccurate scientific analysis, expert agency

comments, and public scrutiny” are essential to implementing NEPA.¹ The Forest Service’s proposed rule subverts this direction. Eliminating site-specific review and excluding the public and independent scientists from the majority of decisions on national forests, is certain to result in actions counter to the goal of NEPA, which is to promote efforts which will prevent or eliminate damage to the environment.² The following are among our concerns with the proposed rule.

1. Eliminating Scoping Shuts Scientists and Other Public Voices Out of Forest Planning

Decisions. The rule proposes to eliminate scoping for Categorical Exclusions and Environmental Assessments (36 C.F.R. § 220.4(d) (proposed)). Scoping is a critical step that ensures early involvement from the public and independent scientists on proposed projects that can help avoid or minimize controversy and delay. Scoping through public engagement can help determine what the appropriate level of NEPA review should be for a given action (e.g., whether the project should be reviewed under a Categorical Exclusions (CE), Environmental Assessments (EA) or an Environmental Impact Statement (EIS)). Scoping is also an important opportunity to raise concerns early, before agency costs are expended making changes difficult at later stages in the project. CEQ regulations require scoping to identify controversies early on in the process and avoid delay. Eliminating public scoping would have the opposite effect of what the Forest Service is hoping to achieve. Public scoping is a prerequisite of transparent planning.

2. Categorical Exclusions Should Be Limited In Scope, Not Expanded. The rule proposes several unprecedented new Categorical Exclusions. CEs are reserved for a class of actions that do not individually or cumulatively have a significant effect on the human environment. While we have reservations about most of the proposed CEs, several stand out as particularly inappropriate given robust scientific information showing that actions in these categories do cause significant adverse impacts, both individually and in the aggregate.

a. CE 23, 24 and 25: These proposed CEs would allow increases in the Forest Service’s already extensive network of roads and routes without any environmental analysis subject to public scrutiny, consideration of alternatives, or public input related to many natural resource values at stake. Specifically, CEs (e)(23) and (e)(25) would allow the unqualified conversion of unauthorized, user-created routes to be added to the Forest Service system of trails and roads. CE (24) would allow up to 5 miles of new Forest Service System roads and reconstruction of up to 10 miles of system roads.

The National Forest System has over 370,000 miles of system roads and about another 60,000 miles of non-system routes. With a more than \$3.1 billion maintenance backlog,³ the Forest Service cannot maintain the current system of roads, let alone building new ones with no public environmental analysis. The significant ecological impacts of the Forest Service’s overly extensive road system, including motorized use on national forests and grasslands is well

¹ 40 C.F.R. §§ 1500.1(b), 1502.14.

² Sec. 2 42 USC § 4321

³ National Forest System Statistics FY 2018

documented in the scientific literature.⁴ The serious ecological impacts of roads^{5,6} are manifold, including sediment pollution to forest streams and water bodies harming fish and other aquatic and riparian systems, landslides and erosion, habitat fragmentation, predation, invasion by exotic species, dispersal of pathogens, degraded water quality and chemical contamination, destructive human actions, loss of soil productivity, decline in biodiversity and increased human-caused fire ignitions.⁷ Climate change elevates these risks by increasing the frequency and magnitude of large storm events and flooding.⁸

We note that there is no limit on the number of times these proposed CEs could be used potentially increasing the road and route system for hundreds or even thousands of miles. Further, the Forest Service has provided no rational justification for the need for these proposed CEs nor provided support that these new system roads and routes would not have individually or cumulatively significant impacts. We urge the Forest Service to abandon proposed CE 23, 24 and 25 and instead use its limited budgetary resources to upgrade and maintain needed system roads and decommission un-needed and environmentally harmful roads.

b. CE 26 Ecosystem “Restoration” Projects: Proposed CE 26 (36 C.F.R. § 220.5(e)(26), would allow “restoration” or “resilience” projects of up to 7,300 acres, of which, up to 4,200 acres could include unqualified commercial timber harvest, so long as there is at least one added restoration activity.

This CE appears to ignore the reality that forest “restoration” and “resilience” activities are inherently complex and require site-specific analysis. Forests vary by type and within forest types there is much inherent natural variation. What constitutes “restoration” or “resilience” is often the subject of scientific debate depending on the forest type, fire regime and past and current management stressors. As such, the unabridged NEPA process is well-suited to sorting out management actions and effects appropriately, and the proposed CE is not. Even *if* the very limited sample of projects (68 out of 718) that the Forest Service invokes to rationalize this CE were to hold true that no significant impacts resulted, given the high variability of forest types and conditions, it is a stretch to assume that such a small sample of randomly selected projects could encompass all of the site-specific variations that the Forest Service could encounter if this CE were to be used across the entire national forest system. Moreover, the argument ignores the fact that the EA process that these sample projects underwent included an opportunity to address and or mitigate impacts. The agency does not explain why projects that benefited from an EA are a valid basis for eliminating EAs.

Climate conditions are changing forest conditions in novel ways such that more site-specific analysis is warranted, not less. Increasing vulnerability to direct, indirect, and cumulative effects of climate change renders future response of forests to management actions trajectories

⁴ Ibisch, P.L., M.T. Hoffman, S. Kreft, G. Pe’eer, V. Kati, L. Biber-Freudenberger, D.A. DellaSala, M.M. Vale, P.R. Hobson, and N. Selva. 2017. A global map of roadless areas and their conservation status. *Science* 354:1423-1427.

⁵ Trombulak, Stephen *et al.* 2000, *Conservation Biology* (14(1):18-30 Review of Ecological Effects of Roads on Terrestrial and Aquatic Communities.

⁶ Gucinski, Hermann *et al.* 2001, Gen. Tech. Rep. PNW-GTR-509, *Forest Roads: A Synthesis of Scientific Information*, available at <http://www.fs.fed.us/pnw/pubs/gtr509.pdf>.

⁷ Balch, Jennifer *et al.* 2017, *PNAS* March 14, 2017 114(11) 2946-2951

⁸ USDA Forest Service, General Technical Report PNW-GTR-812, *Water, Climate Change, and Forests: Watershed Stewardship for a Changing Climate*, p. 72 (2010) (emphasis added), available at https://www.fs.fed.us/pnw/pubs/pnw_gtr812.pdf.

especially uncertain.⁹ Such changes can readily rise to the level of significance and long-term consequences that dictate full NEPA review.

Second, the CE is not limited to restoration activities and in fact is very broad in its scope. Activities allowed under this CE can include “commercial harvest” and “non/pre-commercial thinning” without qualification. In other words, while the CE would allow logging for the purpose of restoration, it would also allow logging for other reasons, including timber production and salvage as long as at least one of the other activities are restorative. The CE would allow salvage logging which numerous scientific publications have identified as having deleterious impacts. Post fire logging is not restorative and has been characterized as a “tax” on the environment.¹⁰ Likewise, logging following insect outbreaks has been shown to increase fine and coarse fuels, increasing fire risk.¹¹ This CE encompasses activities with negative impacts that may be significant both at the site-specific level and across the landscape.

3. Changing Definition of Extraordinary Circumstances Is Inappropriate and Is Likely to Cause Future Endangered Species Listings. The proposed rule would significantly weaken the definition of extraordinary circumstances. Under current rules, if an extraordinary circumstance is present, such as the potential for significant impacts to a threatened species, or the presence of wilderness, then a more thorough review is required. The new proposal requires establishing “the likelihood of substantial adverse effects to listed resource conditions” before further review is required. This is a more permissive standard than current regulations and will likely result in greater harm to sensitive resources. The proposed rule would also eliminate the existing requirement to consider impacts to organisms on the agency’s Sensitive Species list. The proposed rule by default also excludes consideration for Species of Conservation Concern, a more recent classification developed by the agency specifically for targeting NEPA analysis and planning. Stripping species conservation considerations from the extraordinary circumstances category invites further and faster erosion of biodiversity and utterly neglects the importance of the national forest system as harboring much of the last intact habitat remaining for many imperiled species.

In conclusion, the proposed NEPA rule change is highly likely to weaken existing environmental protections. We do not believe that the Forest Service has provided adequate justification that these changes would not have significant environmental effects. While these provisions are of

⁹ Kulakowski, D., C. Matthews, D. Jarvis, and T. T. Veblen. 2013. Compounded disturbances in subalpine forests in western Colorado favor future dominance by quaking aspen (*Populus tremuloides*). *Journal of Vegetation Science*. 24: 168–176; Gill, N., F. Sangermano, B. Buma, and D. Kulakowski. 2017. Post-fire conditions conducive to quaking aspen (*Populus tremuloides*) seedling establishment may facilitate forest persistence. *Forest Ecology and Management*. 404: 156-164; Stevens-Rumann, C.S., K.B. Kemp, P.E. Higuera, B.J. Harvey, M.T. Rother, D.C. Donato, P. Morgan, and T.T. Veblen. 2017. Evidence for declining forest resilience to wildfires under climate change. *Ecology Letters* 21: 243–252. Stevens-Rumann, C.S and P. Morgan. 2019. Tree regeneration following wildfires in the western US: a review. *Fire Ecology* 15: 15. <https://doi.org/10.1186/s42408-019-0032-1>

¹⁰ Lindenmayer, David B., Burton, Philip J., Franklin, Jerry F. *Salvage Logging and Its Ecological Consequences*. Island Press 2008.

¹¹ Collins, B. J., C. C. Rhoades, M. A. Battaglia, and R. M. Hubbard. 2012. The effects of bark beetle outbreaks on forest development, fuel loads and potential fire behavior in salvage logged and untreated lodgepole pine forests. *Forest Ecology and Management*. 284:260–268; Hood, P.R., K.N. Nelson, C.C. Rhoades, D.B. Tinker. 2017. The effect of salvage logging on surface fuel loads and fuel moisture in beetle-infested lodgepole pine forests. *Forest Ecology and Management*. 390: 80–88; Mattson, L.R., J.D. Coop, M.A. Battaglia, A.S. Cheng, J.S. Sibold, and S. Viner. 2019. Post-spruce beetle timber salvage drives short-term surface fuel increases and understory vegetation shifts. *Forest Ecology and Management*. 437: 348-359.

concern individually, they are of even greater concern when viewed in combination with weakening of extraordinary circumstances and the fact that the rule would allow these categorical exclusions to be used in combination with each other and with categorical exclusions from other agencies whose missions are entirely different than the Forest Service. Additional provisions in the rule would allow for “condition based management” that could eliminate site specific analysis and public input for very large scale, multi-decadal projects.

For several decades, employment of Forest Service specialists in fields other than fire management personnel has been on the decline. If the Forest Service truly wants to improve conditions in our national forests, we recommend that the agency abandon the proposed rule changes and focus on better hiring and training of its staff to conduct timely and informed NEPA reviews.

Thank you for your consideration.

Sincerely,

James Amon, Ph.D.
Professor Emeritus, Biological Scientist
Wright State University
Dayton, Ohio

Jonathan Aurnou, Ph.D.
Professor
UCLA
Los Angeles, California

William Anderson, Ph.D.
Retired Ichthyologist
Grice Marine Biological Laboratory
Charleston, South Carolina

Cody Aylward, M.S.
Graduate Student
UC Davis
Davis, California

Warren Aney, M.S.
Senior Wildlife Ecologist
Oregon Chapter The Wildlife Society
Tigard, Oregon

Peter Bahls, M.S.
Executive Director/Fish Biologist
Northwest Watershed Institute
Port Townsend, Washington

A. Z. Andis Arietta, M.S.
Ph.D. candidate
Yale University
New Haven, Connecticut

Carl Bailey, Ph.D.
Professor of Biology
New Mexico State University
Las Cruces, New Mexico

William Armbruster, Ph.D.
Principal Research Scientist
University of Alaska
Fairbanks, Alaska

Rowan Baker, M.S.
Retired Fisheries Biologist,
Regional NEPA Advisor and Reg
Portland, Oregon

William Atwill, Ph.D.
Wilmington, North Carolina

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

Bruce Baldwin, Ph.D.
Professor of Integrative Biology
University of California, Berkeley
Berkeley, California

Paul Bartelt, Ph.D.
Professor of Biology
Waldorf University
Forest City, Iowa

Jeffrey Beane, B.S.
Herpetology Collections Manager
North Carolina State Museum of Natural Sci.
Raleigh, North Carolina

Constance Dustin Becker, Ph.D.
Director
Life Net Nature
Willcox, Arizona

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

David Berg, Ph.D.
Professor of Biology
Miami University
Oxford, Ohio

Jessica Bier, M.S.
Former USFS employee
Pound, Virginia

Leslie Bishop, Ph.D.
Professor Emerita of Biology
Earlham College
Richmond, Indiana

Scott Black, M.S.
Executive Director
Xerces Society for Invertebrate Conservation
Portland, Oregon

Harvey D. Blankespoor, Ph.D.
Professor Emeritus of Biology
Hope College and the Univ. of Michigan
Howard City, Michigan

Theadora Block, Ph.D. Candidate
Santa Cruz, California

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

Joel Blum, Ph.D.
Professor
Michigan
Ann Arbor, Michigan

Katherine Bode, M.A.
Senior Botanist
Avila and Assoc. Consulting Engineers, Inc.
Newtown, Connecticut

Brian Bodenbender, Ph.D.
Professor of Geology and Env. Science
Hope College
Holland, Michigan

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

Jim Boone, Ph.D.
Senior Scientist
Desert Wildlife Consultants, LLC
Las Vegas, Nevada

Dennis Bramble, Ph.D.
Professor (Emeritus)
University of Utah
Salt Lake City, Utah

John Bremer, M.B.A.
Washington Native Plant Society
Bellingham, Washington

Jon Brodziak, Ph.D.
Honolulu, Hawaii

Barbara Brower, Ph.D.
Professor Emeritus
Portland State University
Portland, Oregon

Jesse Brunner, Ph.D.
Associate Professor
Washington State University
Pullman, Washington

Brian Buma, Ph.D.
Assistant Professor
University of Colorado
Denver, Colorado

Angelo Capparella, Ph.D.
Emeritus Assoc. Prof. of Vertebrate Zoology
Illinois State University
Normal, Illinois

James Carpenter, Ph.D.
Associate Professor of Env. Science
Abilene Christian University
Abilene, Texas

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

Kai Chan, Ph.D.
Professor
University of British Columbia
Vancouver, British Columbia, Canada

Donald Charles, Ph.D.
Senior Scientist
Acad. of Natural Sciences at Drexel Univ.
Philadelphia, Pennsylvania

Eric Chivian, M.D.
Founder and Former Director,
Center for Health and the Global
Environment, Harvard Medical School
Boston, Massachusetts

Raymond Clarke, Ph.D.
Professor Emeritus
Sarah Lawrence
Bronxville, New York

Michael Cohen, Ph.D.
Professor of Biology
Sonoma State University
Rohnert Park, California

E. M. Collins, M.S.
Retired Geologist
Rolla, Missouri

Randy Comeleo, M.S.
Ecologist
Corvallis, Oregon

Joseph Cook, Ph.D.
Professor
University of New Mexico
Albuquerque, New Mexico

Michael Cove, Ph.D.
Smithsonian Fellow
Smithsonian Conservation Biology Institute
Front Royal, Virginia

Frank Craighead, Ph.D.
Executive Director
Craighead Institute
Bozeman, Montana

Patrick Crist, Ph.D.
Conservation Planner
Broomfield, Colorado

Sam Davis, Ph.D.
Conservation Scientist
Dogwood Alliance
Asheville, North Carolina

Dominick DellaSala, Ph.D.
Chief Scientist
Geos Institute
Ashland, Oregon

Kathryn De Master, Ph.D.
Assistant Prof. of Agriculture, Society, and Env.
Department of Env. Science, Policy, and Mgmt.
Berkeley, California

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

Katarina Eckerberg, Ph.D.
Professor
Umeå University
Umeå, Sweden

Marianne Edain, B.A.
Restoration Ecologist
Whidbey Environmental Action Network
Langley, Washington

Heather Erickson, Ph.D.
Research Ecologist
Consulting Research Ecology
Portland, Oregon

Hardy Eshbaugh, Ph.D.
Professor Emeritus
Miami University
Oxford, Ohio

Suzanne Estes, Ph.D.
Associate Professor of Biology
Portland State University
Portland, Oregon

Daniel Evans, Ph.D.
Environmental Scientist
Denver, Colorado

Jonathan Evans, Ph.D.
Professor of Biology
Sewanee: The University of the South
Sewanee, Tennessee

Rebe Feraldi, M.S.
Data Curator
TranSustainable Enterprises, LLC
Socorro, New Mexico

Bruce Finney, Ph.D.
Professor
Idaho State University
Pocatello, Idaho

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

Brian Fisher, Ph.D.
Professor and Curator
California Academy of Sciences
San Francisco, California

Daniel Fisher, Ph.D.
Professor of Earth and Env. Sciences
University of Michigan
Ann Arbor, Michigan

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

Eric Forsman, Ph.D.
Retired Research Wildlife Biologist
US Forest Service
Corvallis, Oregon

Elizabeth Forys, Ph.D.
Professor Env. Science & Biology
Eckerd College
Saint Petersburg, Florida

Johannes Foufopoulos, Ph.D.
Associate Professor
University of Michigan
Ann Arbor, Michigan

Janet Franklin, Ph.D.
Professor
University of California
Riverside, California

Douglas Frederick, Ph.D.
Professor of Forestry
North Carolina State University
Raleigh, North Carolina

Jerry Freilich, Ph.D.
Retired Research Chief
National Park Service
Bend, Oregon

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

Christopher Frissell, Ph.D.
Principal Scientist
Frissell & Raven Hydrobiological & Landscape
Sciences
Polson, Montana

Stephen Fuller, Ph. D.
Professor Emeritus of Biology
University of Mary Washington
Fredericksburg, Virginia

Christine Perala Gardiner, Ph.D.
Senior Scientist
Deer Creek Association
Selma, Oregon

Daniel Gavin, Ph.D.
Professor
University of Oregon
Eugene, Oregon

Wynne Geikenjoyner, M.S.
Research Specialist
Northern Arizona University
Flagstaff, Arizona

T. Luke George, Ph.D.
Lecturer, Research Associate
Fort Collins, Colorado

Jennifer Gervais, Ph.D.
Wildlife Ecologist
Oregon Wildlife Institute
Corvallis, Oregon

Anthony Giordano, Ph.D.
Exec. Director & Chief Conservation Scientist
S.P.E.C.I.E.S.
Ventura, California

Elizabeth Glenn, Ph.D.
Wildlife Biologist
Corvallis, Oregon

Enrique Gomezdelcampo, Ph.D.
Associate Professor
Bowling Green State University
Bowling Green, Ohio

Robert Good, D.V.M., M.S.
Retired
USDA
Wellsville, Kansas

Robert Grumbine, Ph.D.
Land and Conservation Director
Grand Canyon Trust
Bellingham, Washington

Simon Gunner, M.S.
Botanist
Olofson Environmental, Inc.
Berkeley, California

Cheryl Harding, Ph.D.
Professor Emeritus
CUNY Hunter College
Stanton, New Jersey

Cindy Haws, B.S.
President
Umpqua Natural Leadership Science Hub
Myrtle Creek, Oregon

Susanna Hecht, Ph.D.
Professor
University of California, Los Angeles
Topanga, California

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

Marissa Hill, M.S.
Senior Analyst
Toronto, Canada

Bill Hilton Jr., M.S.
Executive Director
Hilton Pond Center for Piedmont Nat. History
York, South Carolina

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

Jeff Hollenbeck, Ph.D.
Research Scientist, Land Manager
Corvallis, Oregon

Richard Holmes, Ph.D.
Biologist
Dartmouth College
Hanover, New Hampshire

Jonathan Horton, Ph.D.
Professor
UNC Asheville
Asheville, North Carolina

Elizabeth Horvath, M.S.
Associate Professor, Biology
Westmont College
Santa Barbara, California

Edward Huang, Ph.D.
Principal
CIEDM
Arcadia, California

Malorri Hughes, M.S.
Portland State University
Portland, Oregon

Malcolm Hunter, Ph.D.
Libra Professor of Conservation Biology
University of Maine
Amherst, Maine

Richard Hutto, Ph.D.
Emeritus Prof. of Biology and Wildlife Biology
University of Montana
Missoula, Montana

Marc Imlay, Ph.D.
Natural Places Chair
Sierra Club
Bryans Road, Maryland

Karl Jarvis, Ph.D.
Lecturer
Southern Utah University
Cedar City, Utah

Mitchell Johns, Ph.D.
Professor Emeritus Soil and Crop Science
California State University
Chico, California

Bart Johnson, Ph.D.
Professor
University of Oregon
Eugene, Oregon

Russell Jones, Ph.D.
Professor Emeritus
University of California, Berkeley
Berkeley, California

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

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

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

Ken Keefover-Ring, Ph.D.
Assistant Professor
University of Wisconsin-Madison
Madison, Wisconsin

Peter Kennedy, Ph.D.
Professor
University of Minnesota
St. Paul, Minnesota

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

Maya Khosla, M.S.
Consulting
Ecological Studies
Rohnert Park, California

Matt Kirchhoff, M.S.
Wildlife Biologist
Anchorage, Alaska

Alex Krevitz, M.A.
Wildlife Biologist
Independent Researcher
Coarsegold, California

Indah Kusuma, Ph.D.
Baton Rouge, Louisiana

Thomas Lacher, Ph.D.
Professor
Texas A&M University
College Station, Texas

Rick Landenberger, Ph.D.
Science & Mgmt. Specialist & Asst. Prof
West Virginia Land Trust
Morgantown, West Virginia

Marc Lapin, Ph.D.
Associate Laboratory Professor
Middlebury College
Middlebury, Vermont

Derek Lee, Ph.D.
Associate Research Professor
Penn State University
University Park, Pennsylvania

Victor Leipzig, Ph.D.
Retired
Audubon California
Huntington Beach, California

Simon Levin, Ph.D.
Professor
Princeton University
Princeton, New Jersey

John Lill, Ph.D.
Professor
The George Washington University
Washington, District of Columbia

Jay Lininger, M.S.
CEO & Chief Scientist
Pyrolysis LLC
Talent, Oregon

James Litts, Ph.D.
Retired Botanist
Klamath Wetland Edu. & Research Institute
Eugene, Oregon

Darvel Lloyd, M.A.
Retired
Portland, Oregon

Frank Logiudice, M.S.
Senior Instructor
University of Central Florida
Orlando, Florida

Travis Longcore, Ph.D.
Associate Adjunct Professor
UCLA Inst. of the Env. and Sustainability
Los Angeles, California

Steve Manchester, Ph.D.
Professor of Paleobotany
University of Florida
Gainesville, Florida

Debora Mann, Ph.D.
Assistant Professor of Biology, Director of Env.
Millsaps College
Jackson, Mississippi

Janet Marsden, Ph.D.
Research Associate
Syracuse University
Syracuse, New York

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

Chris Maser, M.S.
Social-environmental Sustainability
Corvallis, Oregon

Carl McDaniel, Ph.D.
Professor Emeritus and Visiting Professor
RPI, Oberlin College
Oberlin, Ohio

Aleta McKeage, M.S.
Technical Director
Belfast, Maine

John McLaughlin, Ph.D.
Associate Professor
Western Washington University
Bellingham, Washington

Robert Meese, Ph.D.
Retired Staff Research Associate IV
University of California, Davis
Davis, California

Gary Meffe, Ph.D.
Conservation Biologist, retired
Brandon, Vermont

Vicky Meretsky, Ph.D.
Professor
Indiana Univ., School of Public and Env.
Bloomington, Indiana

John Metz, Ph.D.
Professor
Cincinnati, Ohio

Dillon Monroe, M.S.
Student
Texas State University
San Marcos, Texas

Faisal Moola, Ph.D.
Associate Professor
Dept. of Geography, Env. & Geomatics
University of Guelph, Ontario, Canada

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

Megan Mueller, M.S.
Senior Conservation Biologist
Rocky Mountain Wild
Parowan, Utah

John Mull, Ph.D.
Professor of Zoology
Weber State University
Ogden, Utah

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

Rose-Marie Muzika, Ph.D.
Curator of Ecology
Powdermill Nature Reserve
Rector, Pennsylvania

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

Charles R. Neal, B.S.
Retired Ecologist
US Dept. of Interior
Cody, Wyoming

Jay Nelson, Ph.D.
Professor
Towson University
Towson, Maryland

John Nemeth, Ph.D.
Former CEO
Sigma Xi
Christiansburg, Virginia

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

Elliott Norse, Ph.D.
Former Staff Ecologist
White House Council on Env.
Redmond, Washington

Gretchen North, Ph.D.
Professor of Biology
Occidental College
Los Angeles, California

Marilyn Novillo, M.S.
Belcamp, Maryland

Philip Nyhus, Ph.D.
Associate Professor of Env. Studies
Colby College
Waterville, Maine

Kiva Oken, Ph.D.
University of Washington
Seattle, Washington

Bradley Olwin, Ph.D.
Professor
University of Colorado
Boulder, Colorado

Gwen Ortiz, M.S.
Mission Viejo, California

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

Michael Pelizzari, Ph.D.
Retired Physicist
Xero Carbon
Milpitas, California

David Perry, Ph.D.
Professor Emeritus
Oregon State University
Corvallis, Oregon

Esther Peters, Ph.D.
Associate Professor
George Mason University
Fairfax, Virginia

Roger A Powell, Ph.D.
Professor Emeritus
North Carolina State University
Raleigh, North Carolina

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

Robert Pyle, Ph.D.
Biologist and Writer
Xerces Society
Gray's River, Washington

John Ratti, M.S., Ph.D.
Retired Research Scientist
University of Idaho
Moscow, Idaho

Michael Reed, Ph.D.
Professor of Biology
Tufts University
Medford, Massachusetts

Michael Rentz, Ph.D.
Assistant Professor of Teaching
Iowa State University
Ames, Iowa

Barbara Reynolds, Ph.D.
Retired Professor Environmental Science
UNCA
Asheville, North Carolina

Fred M. Rhoades, Ph.D.
Retired Mycologist/Lichenologist
Western Washington University
Bellingham, Washington

Dina Roberts, Ph.D.
Senior Faculty
CIEE
Olympia, Washington

Javier Rodriguez, Ph.D.
Professor of Biological Sciences
University of Nevada, Las Vegas
Las Vegas, Nevada

Garry Rogers, Ph.D.
Agua Fria Open Space Alliance, Inc.
Dewey-Humboldt, Arizona

Thomas Rooney, Ph.D.
Professor of Biological Sciences
Wright State University
Dayton, Ohio

Terry Root, Ph.D.
Professor Emeritus
Stanford University
Stanford, California

Daniel Rosenberg, Ph.D.
Oregon Wildlife Institute
Corvallis, Oregon

Michael Rosenzweig, Ph.D.
Editor-in-chief
Evolutionary Ecology, Ltd.
Tucson, Arizona

Donald Ross, Ph.D.
Research Professor of Soils
University of Vermont
Burlington, Vermont

John Rotenberry, Ph.D.
Em. Prof. of Evolution, Ecology
University of California
Riverside, California

Scott Russell, Ph.D.
Professor of Plant Biology
University of Oklahoma
Norman, Oklahoma

Ann Sakai, Ph.D.
Irvine, California

Robin Salter, Ph.D.
Professor Emeritus
Oberlin College
Boca Raton, Florida

Ira Sasowsky, Ph.D.
Akron, Ohio

Melissa Savage, Ph.D.
Associate Professor Emeritus
University of California Los Angeles
Los Angeles, California

Carol Savonen, M.S.
Associate Professor Emeritus
Oregon State University
Philomath, Oregon

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

Charles Schelz, M.S.
Ecologist
Cascade-Siskiyou National Monument
Ashland, Oregon

Joshua Schimel, Ph.D.
Associate Dean
University of California Santa Barbara
Santa Barbara, California

David Schindler, Ph.D.
Professor of Ecology Emeritus
University of Alberta
Edmonton, Alberta, Canada

John Schoen, Ph.D.
Retired Wildlife Ecologist
Anchorage, Alaska

Kathy Schwager, M.S.
Ecologist
Yaphank, New York

Dr. Steve Sheffield, Ph.D.
Professor of Biology
Bowie State University
Bowie, Maryland

Jan Shellman Sherman, Ph.D.
Retired Lecturer, Research Scientist
Cornell University
Eastsound, Washington

Rodney Siegel, Ph.D.
Executive Director
The Institute for Bird Populations
Fairfax, California

Paul Sieracki, M.S.
Geospatial Analyst/Wildlife Biologist
Retired
Priest River, Idaho

Diana Six, Ph.D.
Professor, Forest Entomology and Pathology
University of Montana
Missoula, Montana

Winston Smith, Ph.D.
Principal Research Scientist
University of Alaska - Fairbanks
Juneau, Alaska

Douglas Smith, Ph.D.
Professor
CSU Monterey Bay
Seaside, California

Walter Smith, Ph.D.
Wise, Virginia

Copley Smoak, M.S.
Volunteer
Conservancy of SW Florida
Bonita Springs, Florida

Douglas Soltis, Ph.D.
Professor
University of Florida
Gainesville, Florida

Michael Soule, Ph.D.
Professor Emeritus
University of California
Paonia, Colorado

Trygve Steen, Ph.D.
Prof. of Env. Science & Management
Portland State University
Portland, Oregon

Richard Strathmann, Ph.D.
Professor Emeritus
University of Washington
Friday Harbor, Washington

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

Samuel Sweet, Ph.D.
Prof. of Ecology and Evolutionary Biology
University of California
Santa Barbara, California

Michael Swift, Ph.D.
Assistant Prof. Emeritus of Biology
St. Olaf College
Northfield, Minnesota

Stephen Tettelbach, Ph.D.
Cutchogue, New York

Tamara Ticktin, Ph.D.
Professor of Botany
University of Hawaii at Manoa
Honolulu, Hawaii

Pepper Trail, Ph.D.
Ornithologist
Ashland, Oregon

Walter Tschinkel, Ph.D.
Prof. Emeritus of Biological Science
Florida State University
Tallahassee, Florida

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

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

Mike Vandeman, Ph.D.
San Ramon, California

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

John Vogel, Ph.D.
Adjunct Professor
UC Berkeley
Berkeley, California

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

David Wake, Ph.D.
Prof. of the Graduate School in Integrative Bio.
University of California Berkeley
Berkeley, California

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

Donald Waller, Ph.D.
Professor
University of Wisconsin-Madison
Madison, Wisconsin

Frank Wegscheider, M.A.
Wildlife Biologist
Orange, California

Judith Weis, Ph.D.
Professor Emeritus
Rutgers University
New York, New York

Joseph Werne, Ph.D.
Senior Research Scientist
NorthWest Research Associates
Boulder, Colorado

Dave Werntz, M.S.
Science and Conservation Director
Conservation Northwest
Twisp, Washington

David Whitacre, Ph.D.
Biology, statistics instructor
Treasure Valley Math and Science Center
Boise, Idaho

Philip Whitford, Ph.D.
Professor of Biology
Capital University
Columbus, Ohio

Richard Whitkus, Ph.D.
Professor
Dept. of Biology, Sonoma State Univ.
Rohnert Park, California

Norris Williams, Ph.D.
Curator Emeritus
FLMNH
Gainesville, Florida

Neville Winchester, Ph.D.
Adjunct Assistant Professor
University of Victoria
Victoria, British Columbia, Canada

David Wood, Ph.D.
Professor of the Graduate School
University of California Berkeley
Berkeley, California

Mark Woods, Ph.D.
Professor
University of San Diego
San Diego, California