

CURRICULUM VITAE

(Short Version)

****** Indicate most relevant experience**Name:** Robert G. Woodmansee**Address:** 31280 Broken Talon Trl
Oak Creek, CO 80467
Ph: 970-736-8153
e-mail: bobw@colostate.edu**Academic Training:**

Degree	Year	Institution	Major
B.S.	1967	University of New Mexico	Biology
M.S.	1969	University of New Mexico	Botany and Plant Ecology
Ph.D.	1972	Colorado State University	Systems Ecology and Soils

Positions Held:

Date	Position	Institution
1972-1974	Postdoctoral Fellow, Liaison Staff Member, Grassland Biome, USIBP	Colorado State University Natural Resource Ecology Laboratory
1974-1978	Senior Research Ecologist	Natural Resource Ecology Laboratory
1978-1982	Associate Professor	Department of Range Science, Colorado State University
** 1982-1984	Program Director, Division of Biotic Systems and Resources, Ecosystem Studies Program	National Science Foundation, Washington, D.C. 20550
** 1982-2005	Professor	Department of Rangeland Ecosystem Science, Colorado State University
** 1984-1992	Director	Natural Resource Ecology Laboratory, Colorado State University
** 1992-1993	Executive Director	Sustainable Biosphere Initiative of the Ecological Society of America, 2010 Massachusetts Ave., Suite #410, Washington, D.C. 20036

- 1994- Returned to RES Dept.,
Senior Research Scientist,
NREL
- **2005 - Professor Emeritus Department of Ecosystem Science and
Sustainability (includes Watershed
Science) and Department of Forest
and Rangeland Stewardship, Colorado
State University

Current Professional Interests:

- Synthesizing theoretical concepts of ecosystem structure and functioning into practical, process-based management practices
- **Integrating principles of ecosystem and social sustainability and resilience in on-line education experiences
- **Enhancing environmental literacy and outdoor learning experiences for learners of all ages and backgrounds using on-line Virtual Field Trips and Self-guided Field Trips
- Continued development of on-line courses in ecology and ecosystem science
- **Determining sources and impacts of nutrients on rivers and reservoirs in high elevation watersheds.
- **Promoting the use of ecosystem science in land-use decision making.

Current Teaching Activities:

****AGRI632—Managing for Ecosystem Sustainability** – Module in Western Center for Integrated Resource Management Program, CSU -- *On-line Course through CSU Continuing Education*

Previous Teaching Experience:

Past:

RS351--Grassland Ecosystem Functioning I--Range Science Department, CSU

AG442--Forest and Range Soils--Agronomy Department, CSU

RS660--Nutrient Cycling in Terrestrial Ecosystems--Range Science Department, CSU

AG653--Simulation of Soil-Plant Systems--Agronomy Department, CSU

NR330--Natural Resource Ecology, College of Forestry, CSU

NR340--Natural Resource Measurements, College of Forestry, CSU

NR120--Natural Resource Conservation--College of Natural Resources, CSU

BY220--Ecology--CSU Campus

**NR440--Land Use Planning-- College of Natural Resources

BLM Resource Advisory Training Short Courses – Ecosystem Management – with Roy Roath, CSU and Bill Riebsame-Travis, CU – During Clinton administration

Previous Professional Research and Administrative Experience: (Selected)

- **Chairman, Steering Committee, Scale and Global Change: Spatial and Temporal Variability in Biospheric and Geospheric Processes, SCOPE, Paris
Association of Ecosystem Research Centers: member, Board of Directors; President (1989)
- **Member, U.S. National Committee for Man and the Biosphere 1987-92. Chairman, Biosphere Reserve Coordinating Committee.
- **SCOPE (Scientific Committee for Problems of the Environment) U.S. National Committee National Academy of Sciences
Committee on Planetary Biology and Chemical Evolution, Space Science Board, National Research Council, National Academy of Sciences.
Long-Term Ecological Research Advisory Committee, National Science Foundation, Founding Member.
National Atmospheric Deposition Project, Technical Committee.
- **Special Science Advisor, Intergovernmental Panel on Climate Change (World Meteorological Organization and United Nations Environmental Program).
Advisory Committee, USDI-Geological Survey, Global Change Research Program
- **Strategy Review Team and Reviewer, USDA-CSRS, National Agriculture Initiative, Competitive Research Grants Program.
International Program Review Team, Centro Agronomico Tropical De Investigacion Y Ensenza (CATIE), Costa Rica. Funded through USAID. Costa Rica, Guatemala, Honduras, Panama, El Salvador, and Nicaragua. July - August 1990.
Co-Chair Task Force on Sustainable Agriculture Systems - Western Regional Council, USDA-CSRS.
Special Consultant, Biosphere Reserve Committee, Man and the Biosphere, UNESCO, Paris.
- **Member, White House Working Group, Global Carbon Sinks. 1993.

Publications: (Selected as most influential from more than 120)

Books:

- **Woodmansee, R. G., Moore, J. C., Ojima, D. S. and Richards, L. (eds) 2021. *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), 461 pp.
- **Rosswall, T., R. G. Woodmansee, and P. G. Risser (eds.). 1988. Scales and Global Change: Spatial and Temporal Variability in Biospheric and Geospheric Processes. SCOPE Report 35. John Wiley & Sons, London and New York. 355 pp.

Journals and Chapters:

- Woodmansee, R. G. 1977. Analysis and critique of the grassland ecosystem model ELM, pp. 257-281. In G. S. Innis (ed.) Grassland simulation model. Springer-Verlag, Inc., New York.

- Woodmansee, R. G. 1978. Additions and losses of nitrogen in grassland ecosystems. *BioScience* 28:448-453.
- Woodmansee, R. G., J. L. Dodd, R. A. Bowman, F. E. Clark, and C. E. Dickinson. 1978. Nitrogen budget in a shortgrass prairie. *Oecologia (Berl.)* 34:363-376.
- Woodmansee, R. G., and D. A. Duncan. 1980. Nitrogen and phosphorus dynamics and budget in annual grasslands. *Ecology* 61(4):893-904.
- McGill, W. B., H. W. Hunt, R. G. Woodmansee, and J. O. Reuss. 1981. PHOENIX: A model of carbon and nitrogen dynamics in grasslands, pp. 171-191. In H. van Veen and M. Frissel (eds.) *Simulation of Nitrogen Behavior in Soil Plant Systems*. PUDOC, Wageningen, The Netherlands.
- Woodmansee, R. G., and L. Wallach. 1981. Effects of fire regimes on biochemical cycles, pp. 379-400. In H. A. Mooney, T. M. Bonnicksen, N. L. Christensen, J. E. Lotan, and W. A. Reiners (eds.) *Fire regimes and ecosystem properties*. USDA Forest Service, General Technical Report, PNW, Washington, D.C. Reprinted (1981), pp. 649-669. In F. E. Clark and T. Rosswall (eds.) *Terrestrial Nitrogen Cycles: Processes, Ecosystem Strategies, and Management Impacts*. *Ecol. Bull. (Sweden)*.
- Woodmansee, R. G., I. Vallis, and J. J. Mott. 1981. Grassland nitrogen, pp. 443-462. In F. E. Clark and T. Rosswall (eds.) *Terrestrial Nitrogen Cycles: Processes, Ecosystem Strategies, and Management Impacts*. *Ecol. Bull. (Sweden)*.
- Mosier, A. R., M. A. Stillwell, W. J. Parton, and R. G. Woodmansee. 1981. Nitrous oxide emissions from a native shortgrass prairie. *Soil Sci. Soc. Am. J.* 45:614-619.
- Woodmansee, R. G., W. J. Parton, and J. L. Dodd. 1982. North American Grasslands. In McGraw-Hill 1982 Yearbook of Science and Technology. McGraw-Hill, New York.
- **Bolin, B., R. Cook, P. Crutzen, H. Goldberg, P. Vitousek, and R. Woodmansee. 1983. Introduction, pp. 1-39. In B. Bolin and R. B. Cook (eds.) *The Major Biogeochemical Cycles and Their Interactions*. SCOPE Report 21. John Wiley & Sons, New York.
- Woodmansee, R. G. 1984. Comparative nutrient cycles of natural and agricultural ecosystems: A step towards principles. In R. Lowrance, G. J. House, and B. R. Stenner (eds.) *Agricultural Ecosystems: Unifying Concepts*. John Wiley & Sons, New York. pp. 145-156.
- **Schimel, D. S., M. A. Stillwell, and R. G. Woodmansee. 1985. Biogeochemistry of C, N, and P in a soil catena of the shortgrass steppe. *Ecology* 66:276-282.
- **Senft, R. L., L. R. Rittenhouse, and R. G. Woodmansee. 1985. Factors influencing patterns of cattle grazing behavior on shortgrass steppe. *J. Range Manage.* 38:82-87.
- Schimel, D. S., W. J. Parton, F. J. Adamsen, R. G. Woodmansee, R. L. Senft, and M. A. Stillwell. 1986. The role of cattle in the volatile loss of nitrogen from a shortgrass steppe. *Biogeochemistry* 2:39-52.
- **Woodmansee, R. G. 1988. Ecosystem processes and global change. In P. G. Risser, R. G. Woodmansee, and T. Rosswall (eds.) *Scales and Global Change: Spatial and Temporal Variability in Biospheric and Geospheric Processes*. SCOPE Report 35. John Wiley & Sons, London and New York. pp. 11-27.
- Swanson, F. J., T. K. Kratz, N. Caine, and R. G. Woodmansee. 1988. Landform effects on ecosystem patterns and processes. *BioScience* 38(2):92-98.

- **Woodmansee, R. G. 1989. Biogeochemical cycles and ecological hierarchies. Pages 57-71 in: I. S. Zonneveld and R. T. T. Forman (eds.), *Changing Landscapes: An Ecological Perspective*. Springer-Verlag, New York.
- Riebsame, W. E. and R. G. Woodmansee. 1993. Mapping Common Ground on Public Rangelands. *In Let the People Judge: Wise Use and the Private Property Rights Movement*. Island Press, New York. (In Press.)
- **Woodmansee, Robert. G. and William E. Riebsame. 1994. Evaluating the effects of climate changes on grasslands. Proc. (1993) International Grassland Congress. Palmerston North, NZ.
- Fisher, Stuart G. and Robert G. Woodmansee. 1994. Ecological recovery. In *Ecological Risk Assessment*. USEPA. (Technical writing group).
- Faber, B. G., D. G. Fox, D. G. DeCoursey, R. Watts, R. G. Woodmansee and W. W. Wallace. 1993. The TERRA Laboratory: An Interagency Decision Support Environment, Proc. Air and Waste Management Assoc., 93-WA-85.01., 86th Ann. Mtn., Denver, Co.
- Hautalouma, Jacob E. and Robert G. Woodmansee. 1994. New roles in ecological research and policy making. *Ecol. Int. Bull.* 21:1-10.
- **Christensen, Norman L. (Chair) et al. (Including R. G. Woodmansee). 1996. The report of the Ecological Society of America Committee on the scientific basis of ecosystem management. *Ecological Applications* 6:665-691.
- Woodmansee R. G. and S. R. Woodmansee. 2015. The rise of ecosystem ecology and its applications to environmental challenges. *Web Ecol.*, 15, 43–44.
- Woodmansee, R. G., Moore, J. C., Ojima, D. S. and Richards, L. (2021) “Preface,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. xv-xx. doi: 10.1017/9781108655354.001.
- **Woodmansee, R. G., Moore, J. C. and Ojima, D. S. (2021) “The Systems Ecology Paradigm,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 1–35. doi: 10.1017/9781108655354.002.
- **Ojima, D. S. and Woodmansee, R. G. (2021) “Environmental and Natural Resource Challenges in the Twenty-First Century,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 36–65. doi: 10.1017/9781108655354.003.
- Parton, W. J., Del Grosso, S. J., Campbell, E. E., Hartman, M. D., Hobbs, N. T., Moore, J. C., Swift, D. M., Schimel, D. S., Ojima, D. S., Coughenour, M. B., Boone, R. B., Paustian, K., Hunt, H. W. and Woodmansee, R. G. (2021) “Five Decades of Modeling Supporting the Systems Ecology Paradigm,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 90–130. doi: 10.1017/9781108655354.005.

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- Woodmansee, R. G., Coughenour, M. B., Paustian, K., Parton, W. J., Stohlgren, T. J., Romme, W. H., Evangelista, P. H., Aldridge, C., Ojima, D. S., Lauenroth, W., Burke, I., Galvin, K. and Reid, R. (2021) “Evolution of the Systems Ecology Paradigm in Managing Ecosystems,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 202–244. doi: 10.1017/9781108655354.008.
- Woodmansee, R. G., Coughenour, M. B., Gao, W., Richards, L., Parton, W. J., Schimel, D. S., Paustian, K., Ogle, S., Ojima, D. S., Conant, R. and Wallenstein, M. (2021) “Land/Atmosphere/Water Interactions,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 245–278. doi: 10.1017/9781108655354.009.
- **Woodmansee, R. G. and Woodmansee, S. R. (2021) “A Systems Ecology Approach for Community-Based Decision Making: The Structured Analysis Methodology,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 300–334. doi: 10.1017/9781108655354.011.
- **Woodmansee, R. G., Moore, J. C., Newman, G., Evangelista, P. H. and Woodmansee, K. S. (2021) “Environmental Literacy: The Systems Ecology Paradigm,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 335–352. doi: 10.1017/9781108655354.012.
- Hautaluoma, J., Woodmansee, R. G., Kaplan, N. E., Moore, J. C. and Woodmansee, C. J. (2021) “Organizational and Administrative Challenges and Innovations,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 353–379. doi: 10.1017/9781108655354.013.
- **Woodmansee, R. G., Ojima, D. S. and Kaplan, N. E. (2021) “Where to From Here? Unraveling Wicked Problems,” in Woodmansee, R. G., Moore, J. C., Ojima, D. S., and Richards, L. (eds) *Natural Resource Management Reimagined: Using the Systems Ecology Paradigm*. Cambridge: Cambridge University Press (Ecology, Biodiversity and Conservation), pp. 380–420. doi: 10.1017/9781108655354.014.

****Business and Community Experience:**

With wife, Sarah, were proprietors of Quincy Creek Farm, a 105-acre, irrigated, family farm north of Fort Collins, 1985 – 2005. Past-President local Parent - Teachers Organization, member numerous local and Poudre R-1 School District committees. Past Member of the Larimer County Rural Land Use Center Board, 1997-2000. Board Member and Past President, Morrison Creek Metropolitan Water and Sanitation District, 2009 – 2020. Routt County Board of Adjustment, 2010 - 2014. Member, Routt Count Planning Commission, 2012 – 2017. Board Member, Upper Yampa Water Conservation District, 2016 – 2020.