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Education

<u>Degrees</u>	<u>Discipline</u>	<u>Institution</u>	<u>Year</u>
B.S.	Forestry	Mich. Tech Univ.	1963
Ph.D.	Forest Sci.	Univ. of Idaho	1968

(major: Tree Physiology, minor: Soil Chemistry)

Postdoctoral Experience and Employment

<u>Institution</u>	<u>Rank</u>	<u>Year</u>
Dartmouth College	Research Associate	1968-69
Cornell University	Research Associate	1969-70
University of New Mexico	Assistant Professor	1970-74
University of New Mexico	Associate Professor	1974-79
University of New Mexico	Professor	1979-2006
University of New Mexico	Acting Chairman	1981
Nat'l Science Foundation	Director, Ecosystem Studies Prog.	1984-86
Sustainable Biosphere Initiative	Executive Director	1992
(I left the SBI Office in 1993 after getting it started to accept a position at the National Science Foundation)		
Nat'l Science Foundation	Director, Division of Environ. Biol.	1993-94
New Mexico EPSCoR Prog.	Director	2001-2006

University of New Mexico	Emeritus Professor	2006-present
University of Idaho	Research Professor	2006-present
Nat'l Science Foundation	Senior Program Director	2006-2008
University of Idaho	Assoc. Dean, Res. Prof., CNR	2008-2010
University of Idaho	Special Assist. Vice President for Research and Economic Development	2010-present

Professional Experience

1972-1978:	Founder Representative for the Institute of Ecology
1974:	Consultant, New Mexico Environmental Institute, Las Cruces, NM
1975-1976:	Chairman, New Initiatives and Programs Comm., The Institute of Ecology
1975-1978:	New Mexico Governor's Comm. on Technical Excellence (Subcomm. on Radioactive Waste Disposal)
1975-1977:	New Mexico Governor's Comm. on Environmental Aspects of Economic Progress -- Governor's Council of Economic Advisors
1976-1978:	Research Consultant, R & D Assoc., Marina del Rey, CA.
1977-1978:	Advisory Board, New Mexico Energy Institute, Las Cruces, NM
1977-1978:	Executive Committee, New Mexico Energy Institute, Las Cruces, NM
1980-1984:	Research Advisory Study Committee, Eisenhower Consortium
1981-1982:	Ecological Society of America Study Committee
1980-1984:	Research consultant, Woodward-Clyde, San Francisco, CA
1980-1984:	Delegate, Eisenhower Consortium
1980-1981:	Appointment to New Mexico Governor's Committee on Technical Excellence (subcommittee on Radioactive Waste Disposal)
1980-1981:	Advisory Board, New Mexico Energy Institute, Las Cruces, NM
1980-1981:	Executive Committee, New Mexico Energy Institute, Las Cruces, NM
1983-present:	Editorial Board of Biogeochemistry
1981-1983:	Organizing Committee, 6th Int. Environmental Biogeochemistry Symposium
1981-1984:	National Science Foundation Panel - Ecosystem Studies Program
1981-1982:	National Science Foundation Panel - LTER Program
1981-1992:	Scientific Advisor, Coweeta LTER Program
1981-1992:	Scientific Advisor, Konza Prairie LTER Program
1981-1984:	Scientific Advisor, Jornada Desert LTER Program
1983-1984:	Scientific Advisor, Forest Research Program, U.C. Berkeley
1984-1986:	Program Director, Ecosystem Studies Program, NSF

1985: Program Reviewer for DOE, Office of CO2 Research Division
1985: Panel Reviewer for NASA, Earth Science and Applications Division
1985: Project Review for EPA, Acid Precipitation Direct/Delayed Project
1986-1992: Scientific Advisor, H.J. Andrews LTER Program
1987-1989: Public Affairs Chairman, Association of Ecosystem Research Centers
1987: Program Reviewer for DOE, Nat. Experimental Reserach Park Program
1987-1990: National Science Foundation Panel - Facility Centers Program
1988: Panel Reviewer for NASA, EOS SAR Instrument Program
1988: Program Reviewer for EPA, Ecological Effects of Climate Change
1988-1992: Chairman of Technology Committee for LTER Program of NSF
1988: Grantsmanship Program, New Zealand Forest Research Institute
1988: UNEP/SCOPE Workshop on: "Management of Ecotones", Paris France
1989: Faculty Scholars Award - University of New Mexico
1989-1993: Steering Comm., Water Resources Management Curriculum
1989-1991: Secretary - Association of Ecosystem Research Centers
1989-1990: Executive Committee, Long Term Ecological Research Prog. (alternate)
1990-1992: Chairman - Rio Grande Basin Consortium (multiagency program)
1990: Panel Reviewer for National Park Service, Global Change Program
1990: IGBP Workshop on "Plant-Water Interactions in Large-Scale Hydrological Modelling", in conjunction with International Hydrological Programme (IHP), International Association of Hydrological Sciences (IAHS), and Swedish National Committee for IGBP, Vadstena, Sweden
1991: UNEP/SCOPE Workshop on: "Ecotones in a Changing Environment", Kellogg Biological Station, U.S.
1990-1992: National Academy of Sciences, Co-chairman for Comm. on Joint Research on Global Change with Chinese Acad. of Sciences
1991-1993: National Academy of Sciences, Chairman for Comm. to evaluate the EMAP program of EPA
1991-1992: Executive Board - Long Term Ecological Research Program
1991: Delegation Leader - U.S. delegation to review the Chinese Ecological Research Network (CERN)
1991: U.S. - China Coordinating Committee for U.S. LTER and CERN Network Interaction
1991: UNEP/SCOPE Workshop on: "Management of Ecotones", Moscow, Russia
1991: Public Affairs Committee; Association of Ecosystem Research Centers
1992: Executive Director for the Sustainable Biosphere Initiative Project, Ecological Society of America, Wash. D.C.

1992-2005:	International Advisory Committee member for the development of the Chinese Ecological Research Network (CERN)
1992:	NASA Landsat Science Working Group
1993-1994:	Division Director, Division of Environmental Biology, National Science Foundation, Washington, D.C.
1993-1994:	Executive Secretary, Subcommittee on Environmental Biology, FCCSET Committee on Life Sciences and Health
1993-1994:	NSF representative to Biodiversity Task Group, Global Environmental Affairs, Presidential Review Directive NSC-12
1993-1994:	NSF representative to Forests Task Group, Global Environmental Affairs, Presidential Review Directive NSC-12
1993-1994:	Committee on Water Resources, FCCSET
1993-1994:	National Science Foundation Partnerships Task Force
1994:	Representative to the NSF Environment Strategic Program
1994:	NSF representative to the Subcommittee on Biodiversity and Ecosystem Dynamics, Committee on Environment and Natural Resources (CENR)
1994:	Chairman, Writing Group for the Strategy Document for the Subcommittee on Biodiversity and Ecosystem Dynamics (CENR)
1994:	Chairman, Writing Group for the Section on Biological Impacts & Adaptation, Subcommittee on Biodiversity and Ecosystem Dynamics (CENR)
1994:	NSF representative to the Office of Science, Technology and Policy Committee on the Mississippi Flood Evaluation
1994:	NSF representative to the Office of Science, Technology and Policy Committee on the Presidio
1994:	NSF representative to the Committee for the National Center for Biodiversity Information
1994:	NSF Coordinator for the Terrestrial Ecology Initiative for the U.S. Global Change Research Program
1994:	Co-chair of the Global Change Process Working Group
1994:	NSF Point of Contact for the Subcommittee on Technology and Engineering Research (CENR)
1994:	NSF representative for the Interagency Ecosystem Management Committee
1994:	Committee member, NSF High Performance Computing and Communication Coordination Committee
1994-2005:	Committee member for the Scientific Advisory Committee for the Chinese Ecosystem Research Network
1995-1996:	Chairman, Scientific Advisory Committee for the Chinese Ecosystem Research Network
1995-2006:	Chairman, U.S. Long Term Ecological Research Network
1995-1997:	Director, U.S. Long Term Ecological Research Network Office
1995-2003:	Chairman, International Long Term Ecological Research Network
1995:	Team Leader, Czech Republic Site Visit for the establishment of a LTER Network

1995-present:	Science Advisory Board, Crane Research Facility, Washington
1995:	Team Leader, Spain and Portugal Site Visits for the establishment of LTER Networks
1997:	National Science Foundation Panel: Urban LTER sites
1997:	Chairman, Office of Science, Technology and Policy (Executive Office of the President) Committee for the Development of Intensive Research Site Criteria for the National Monitoring and Research Network.
1998:	National Science Foundation Panel: GLOBE Program
1998-2001	Advisory Board for the National Science Foundation Directorate for Social, Behavioral and Economic Sciences
1998-2001	Chairman, Steering Committee for the Global Terrestrial Observing System
1999-2006	Advisory Board for the Smithsonian Environmental Research Center
1999-2000	Scientific Advisory Committee for Congresswoman Heather Wilson
1999-2000	ESPCoR coordinator for development of the ESPCoR program in New Mexico
1999-2006	Scientific Panel for the Joint Infrastructure Fund for the U.K.
1999-2006	Special Assistant to the Vice Provost for Research, UNM
2000-2006	Multidisciplinary Assessment Committee of the Canada Foundation for Innovation
2001	NASA Panel for Terrestrial Carbon for the Earth Observing System Research Program
2001-2005	Science Committee, CUAHSI (Consortium of Universities for the Advancement of Hydrologic Science, Incorporated)
2001-2006	Science Committee, Bioresearch Consortium (Sandia National Laboratory-UNM-New Mexico state agency Consortium)
2003	Panel Reviewer for NASA, Earth Science and Applications Division
2003-2008	Science Advisory Committee. National Park Service Network
2003-2004	ESPCoR Coalition Member
2004-2006	ESPCoR Foundation Board (elected)
2004-present	Editorial Board for Sustainability: Science, Practice, & Policy (new e-journal: http://ejournal.nbii.org/)
2004-2006	Consortium Building Committee of the NEON Planning Grant Effort. PIs are Bruce Hayden, and Bill Michener
2004-2006	Advisory Council, USFS Forest & Range Expt. Station, Albuquerque Office
2005-present	Presidential Appointment to the Board of Trustees for the Valles Caldera National Preserve.
2005-2006	Member: Governor's New Mexico Climate Change Advisory Group
2005-2006	Member: Albuquerque Mayor Chavez's Climate Change Task Force

2006-2008	Interagency EPSCoR Coordinating Committee, Exec. Sec.
2009-2015	NEON Board of Directors (member elected)
2014-present	Steering Committee: AGEP-Pacific Northwest Collaborative Opportunities for Success in Mentoring of Students, Univ. of Idaho
2015-present	Faculty Affiliate: Center for Resilient Communities (CRC), Univ. of Idaho

University Committee Activities at UNM and Univ. of Idaho

Large Project Planning Committee (upon request): This committee reviews and guides the development of major proposals (multi-million dollar efforts) from the University to various funding agencies. The committee works with appropriate faculty to develop proposals and performs “Red Team” reviews of proposals before submission.

Publications

- J.R. Gosz, G.E. Likens and F.H. Bormann. 1972. Nutrient input from litter fall on the Hubbard Brook Experimental Forest, New Hampshire. *Ecology* 53:769-784.
- J.A. Schenk, D.P. Everson and J.R. Gosz. 1972. Sampling cone production in Douglas-fir stands for insect population studies. Forest, Wildlife and Range Experiment Station, Moscow, Idaho. Station Paper No. 10.
- J.R. Gosz, G.E. Likens and F.H. Bormann. 1973. Nutrient release from decomposing leaf and branch litter on the Hubbard Brook Forest. *Ecol. Monogr.* 43:173-191.
- J.R. Gosz. 1975. Nutrients budgets for undisurbed ecosystems along an elevational gradient in New Mexico, pp. 780-799. In: F.G. Howell, J.B. Gentry, and M.H. Smith (eds). *Mineral Cycling in Southeastern Ecosystems*. ERDA Symposium Series CONF-740513, Technical Information Center, Office of Public Affairs, ERDA. 898 pp.
- J.R. Gosz. 1975. Leaching of nutrients from leaves of selected tree species in New Hampshire. pp. 630-641. In: F.G. Howell, J.B. Gentry, and M.H. Smith (eds). *Mineral Cycling in Southeastern Ecosystems*. ERDA. Symposium Series CONF-740513, Technical Information Center, Office of Public Affairs, ERDA. 898 pp.
- J.R. Gosz. 1975. Stream chemistry as a tool in evaluating ski area development, pp. 183-194. In: *Symposium on Man, Development, and Wildlands: a Complex Interaction*. Eisenhower Consortium Bulletin 1, 286 pp.
- J.R. Gosz, G.E. Likens and F.H. Bormann. 1976. Organic matter and nutrient dynamics of the forest and forest floor in the Hubbard Brook Forest. *Oecologia* 22:305-320.

- J.R. Gosz, G.E. Likens and F.H. Bormann. 1977. Organic matter and nutrient dynamics of the forest floor in the Hubbard Brook Forest. pp. 311-319. In: J.K Marshall (ed). The Belowground Ecosystem: A Synthesis of Plant-Associated Processes, Range Science Department, Science Series No. 26, Colorado State Univ., Fort Collins, Colo.
- J.R. Gosz. 1977. Effects of ski area development and use on stream water quality of the Santa Fe Basin, New Mexico. *Forest Science* 23:167-179.
- J.R. Gosz, A.L. Parker, R.W. Vogel and A.K. Turner. 1977. The application of a composite computer mapping system to environmental impact analysis and recreational land management in Northwestern New Mexico. pp. 17-44. In: J.T. Kitchings, and N.E. Tarr (eds). National Environmental Research Park Symposium: Natural Resources Inventory, Characterization and Analysis. ORNL-5304. Oak Ridge National Laboratory, Oak Ridge, Tenn.
- C.S. White, J.R. Gosz, and D.I. Moore. 1978. Impact of a ski basin on a mountain watershed. Part I: Bacteriological water quality. *Water, Air and Soil Pollution*. 10:71-79.
- D.I. Moore, J.R. Gosz, and C.S. White. 1978. Impact of a ski basin on a mountain watershed. Part II: Heavy metals. *Water, Air and Soil Pollution*. 10:81-93.
- J.R. Gosz. 1978. Nitrogen inputs to stream water from forests along an elevational gradient in New Mexico. *Water Research*. 12:725-734.
- J.R. Gosz, G.E. Likens, R. Holmes, and F.H. Bormann. 1978. Energy flow in a forest ecosystem. *Scientific American* 238:92-102.
- J.R. Gosz. 1978. The influence of reduced stream flows on water quality. In: A. Kneese (ed). Symposium on the Impact of Energy Development on Western Waters, Fish and Wildlife. Resources for the Future. Washington, D.C.
- J.R. Gosz, L. Barton, and L.D. Potter. 1978. An evaluation of New Mexico humate deposits for restoration of mine spoils. pp. 180-188. In: R.A. Wright (ed). The Reclamation of Disturbed Arid Lands. University of New Mexico Press, Albuquerque, N.M. 196 pp.
- J.R. Gosz. 1980. Nutrient budget studies for forests along an elevational gradient in New Mexico. *Ecology* 61:515-521.
- J.R. Gosz. 1980. Biomass distribution and production budget for a nonaggrading forest ecosystem. *Ecology* 61:507-514.
- J.R. Gosz and C.S. White. 1980. Nutrient and heavy metal transport capabilities of sediment in the Southwestern U.S.. *Water Resources Bulletin* 16:927-933.

- J.R. Gosz. 1980. The influence of reduced stream flows on water quality. In: Spofford, W. Jr., A. Parker, and A. Kneese, (eds). *Energy Development and the Water, Fish, and Wildlife in the Southwest: Problems of the Upper Colorado River Basin. Resources for the Future*; Washington, D.C.
- J.R. Gosz. 1981. Nitrogen cycling in coniferous ecosystems. In: F.E. Clark and T. Rosswall (eds). *Nitrogen Cycling in Terrestrial Ecosystems: Processes, Ecosystem Strategies, and Management Impacts. Ecological Bulletins (Stockholm)* 33:405-426.
- P. Vitousek, W. Reiners, J. Melillo, C. Grier, and J.R. Gosz. 1981. Nitrogen cycling and loss following forest perturbation: The components of response. In: Barrett, G.W. and R. Rosenberg (eds). *Stress Effects on Natural Ecosystems. John Wiley & Sons, New York.*
- M. Molles and J.R. Gosz. 1981. Effects of a ski area development on the water quality and invertebrates of a mountain stream. *Water, Air, and Soil Pollution.* 14:187-205.
- C. White and J.R. Gosz. 1981. Organic nitrogen interference with automated ammonium analyses. *Can. J. Forest Res.* 11:739-741.
- C. Crawford and J.R. Gosz. 1982: Desert ecosystems: Their resources in space and time. *Environ. Conser.* 9:181-195.
- P. Vitousek, J.R. Gosz, C. Grier, J. Melillo, and W. Reiners. 1982. A comparative analysis of nitrification and nitrate mobility in forest ecosystems. *Ecol. Monogr.* 52:155-177.
- J.R. Gosz. 1982. Research assessment and research needs for non-point source pollution of water by recreation. *Eisenhower Consortium Bull.* 13. 15pp.
- J. Melillo and J.R. Gosz. 1983. Interactions of biogeochemical cycles in forest ecosystems. pp. 177-222. In: Bolin, B. and R.B. Cook (eds). *SCOPE 21. The major biogeo-chemical cycles and their interactions.*
- J.R. Gosz, D. Brookins, and D. Moore. 1983. Using strontium isotope ratios to estimate inputs to ecosystems. *BioScience* 33:23-30.
- C.S. White and J.R. Gosz. 1983. Sediment chemistry as influenced by vegetation and bedrock in the southwestern United States. *Water Res. Bull.* 19:829-835.
- L. Potter, J.R. Gosz, and J. Carlson. 1983. Water resources in the southern Rockies and high plains: Forest recreation use and aquatic interactions. *University of New Mexico Press.* 330 pp.

- J.R. Gosz. 1984. Biological factors influencing nutrient supply in forest soils. pp. 119-146. In: Bowen, G.D. and E.K.S. Nambiar, (eds). Nutrition of Forest Trees in Plantations. Academic Press, London, 516 pp.
- J.R. Gosz. 1984. Energy flow in the system. In: Chapter on Forest Ecology, Forestry Handbook, Society of American Foresters.
- W. Dyck, J.R. Gosz, and P. Hodgkiss. 1984. Nitrate losses from disturbed ecosystems in New Zealand. N.Z.J. For. Sci. 13:14-24.
- J.R. Gosz and F. Fisher. 1984. Influence of clear-cutting on selected microbial processes in forest soils. pp. 523-530. In: M.J. Klug and C.A. Reddy (eds). Current Prospectives in Microbial Ecology. Third International Symposium on Microbial Ecology.
- J. Weins, C. Crawford, and J.R. Gosz. 1985. Boundary dynamics as a conceptual framework for studying landscape ecosystems. OIKOS 45:421-427.
- F. Fisher and J.R. Gosz. 1986. Effects of plants on net mineralization of nitrogen in forest soil microcosms. Biology and Fertility of Soils 2:43-50.
- F. Fisher and J.R. Gosz. 1986. Effects of trenching on soil processes in a New Mexico mixed conifer forest. Biology and Fertility of Soils 2:35-42.
- C. Crawford and J.R. Gosz. 1986. Dynamics of desert resources: an overview. In: G. Knox and N. Polunin (eds). Ecosystem Theory and Application. John Wiley & Sons.
- J.R. Gosz. 1986. Biogeochemistry reserach needs: Observations from the Ecosystem Studies Program of the National Science Foundation. Biogeochemistry 2: 101-112.
- J.R. Gosz and C. White. 1986. Seasonal and annual variation in nitrogen mineralization and nitrification along an elevational gradient in New Mexico. Biogeochemistry 2:281-297.
- M. Watwood, J. Fitzgerald, and J.R. Gosz. 1986. Sulfur processing in forest soil and litter along an elevational and vegetational gradient. Can. J. For. Res. 16:689-695.
- J. Horner, R. Cates, and J.R. Gosz. 1987. Tannin, nitrogen, and cell wall composition of green vs. senescent Douglas-fir foliage: within-and between-stand differences in stands of unequal density. Oecologia 72:515-519.

- C.S. White and J.R. Gosz. 1987. Factors controlling nitrogen mineralization and nitrification in forest ecosystems in New Mexico. *Biology and Fertility of Soils* 5:195-202.
- C.S. White, D.I. Moore, J.D. Horner, and J.R. Gosz. 1988. Nitrogen mineralization-immobilization response to field N or C perturbations: an evaluation of a theoretical model. *Soil Biol. Biochem.* 20:101-105.
- J.R. Gosz, C.N. Dahm, and P.G. Risser. 1988. Long-path FTIR technology for large scale ecological studies. *Ecology* 69:1326-1330.
- J.D. Horner, J.R. Gosz, and R.G. Cates. 1988. The role of carbon-based plant secondary metabolites in decomposition in terrestrial ecosystems. *Amer. Nat.* 132:869-883.
- C.S. White, J.R. Gosz, J.D. Horner, and R. Cates. 1988. Seasonal, annual, and treatment-induced variation in available nitrogen pools and nitrogen-cycling processes in soils of two Douglas-fir stands. *Biology and Fertility of Soils* 6:93-99.
- J.R. Gosz and D.I. Moore. 1989. Strontium isotope studies of atmospheric inputs to forested watersheds in New Mexico. *Biogeochemistry* 8: 115-134.
- J.R. Gosz and P.J.H. Sharpe. 1989. Broad-scale concepts for interactions of climate, topography, and biota at biome transitions. *Landscape Ecology*. 3: 229-243.
- J.R. Gosz, D.I. Moore, C.N. Dahm & S. Hofstadler. 1990. Field testing long-path Fourier Transform Infrared (FTIR) Spectroscopy for measurements of atmospheric gas concentrations. *Remote Sens. Environ.* 32: 103-110.
- C.S. White, D.I. Moore and J.R. Gosz. 1990. Acid deposition and stream chemistry in New Mexico. pp. 437-453. In: *International Mountain Watershed Symposium: Subalpine Processes and Water Quality*. Tahoe Resource Conservation District Publ.
- R.V. O'Neill, S.J. Turner, V.I. Cullinan, D.P. Coffin, T. Cook, W. Conley, J. Brunt, J.M. Thomas, M.R. Conley, and J.R. Gosz. 1991. Multiple Landscape Scales: An Intersite Comparison. *Landscape Ecology* 5: 137-144.
- P.G. Risser, J.R. Gosz and J. Melillo. 1991. Current status and future of long-term ecological research. pp. 275-286. In: P.G. Risser (ed). *Long-Term Ecological Research: An International Perspective*. John Wiley & Sons, Chichester.
- E.H. Trotter and J.R. Gosz. 1991. Long-term ecological research: International workshop II. pp. 257-274. In: P.G. Risser (ed). *Long-Term Ecological Research: An International Perspective*. John Wiley & Sons, Chichester.

- J.R. Gosz. 1991. Ecological functions in a biome transition zone: Translating local responses to broad-scale dynamics. pp. 55-75. In: F. di Castri & A. Hansen. (eds). *Landscape Boundaries: Consequences for biotic diversity and ecological flows*. Springer-Verlag.
- J.R. Gosz. 1991. Fundamental Ecological Characteristics of Landscape Boundaries. pp. 8-30. In: M.M. Holland, R.J. Naiman and P.G. Risser (eds). *Role of Landscape Boundaries in the Management and Restoration of Changing Environments*. MAB. Chapman and Hall, Inc.
- D.I. Moore, C.N. Dahm, J.R. Gosz, and R.J. Hill. 1991. Use of long-path FTIR spectrometry in conjunction with scintillometry to measure gas fluxes. pp. 541-548. In: *Symposium Proceedings, Field Screening Methods for Hazardous Wastes and Toxic Chemicals. Second International Symposium, Feb. 12-14, 1991. U.S. EPA/EMSL-Las Vegas, NV.*
- C.N. Dahm, J.R. Gosz & P.G. Risser. 1991. Long-path FTIR spectroscopy to quantify atmospheric CH₄, CO₂, CO, N₂O, and H₂O over aquatic ecosystems. *Verh. Internat. Verein. Limnol.* 24.
- E.L. Andreas, J.R. Gosz and C.N. Dahm. 1992. Can long-path FTIR spectroscopy yield gas flux measurements through a variance technique? *Atmospheric Environment* 26A (2):225-233.
- J.R. Gosz, R.R. Parmenter & D. Marshall. 1992. Ecological indicators in a desert/grassland transition. pp. 739-763. In: D.H. McKenzie, D.E. Hyatt and V.J. McDonald (eds.) *Ecological Indicators*. Vol. 1. Elsevier Science Publishers, Inc.
- J.R. Gosz. 1992. Gradient analysis of ecological change in time and space: Implications for forest management. *Ecological Applications* 2:248-261.
- J.R. Gosz. 1992. Sustainable forest ecosystem management: Interpretations from the Sustainable Biosphere Initiative. William P. Thompson Memorial Lecture Series. XVI. Northern Arizona University. 28 pp.
- J.D. Horner, R.G. Cates, J.R. Gosz. 1993. Effects of resource manipulation on the correlation between total phenolics and astringency in Douglas-Fir. *J. of Chemical Ecology*. 19:1429-1437.
- J.R. Gosz. 1993. Ecotone hierarchies. *Ecological Applications* 3:369-376.
- J.R. Gosz. 1994. Sustainable Biosphere Initiative: Data management challenges. pp. 27-40. In: William K. Michener, J. W. Brunt and S. G. Stafford (eds.) *Environmental information and analysis: ecosystem to global scales*. Taylor and Francis, Ltd. London. 555 pp.

- S.T.A. Pickett, I.C. Burke, V.H. Dale, J.R. Gosz, R.G. Lee, S.W. Pacala and M. Shachak. 1994. Integrated models of forested regions. pp. 120-141. In: Integrated Regional Models: Interactions between humans and their environment. (P. M. Groffman and G.E. Likens, eds.) Chapman and Hall. New York, NY. 157 pp..
- J.R. Gosz, D.I. Moore, G. Shore, H.D. Grover, W. Rison, C. Rison. 1995. Lightning estimates of precipitation location and quantity during convective storms on the Sevilleta Long Term Ecological Research (LTER) site in New Mexico. *Ecological Applications* 5:1141-1150.
- J.R. Gosz. 1995. Edges and natural resource management: Future directions. *Ecology International* 22:17-34.
- J.R. Gosz. 1996. International Long Term Ecological Research: Priorities and Opportunities. *Trends in Evolution and Ecology* 11:444.
- R. J. Gosz and J.R. Gosz. 1996. Species interactions on the biome transition zone in New Mexico: Response of blue grama (*Bouteloua gracilis*) and black grama (*Bouteloua eripoda*) to fire and herbivory. *Journal of Arid Environments* 34:101-114.
- W.D. Otto, R.J. Hill, A.D. Sarma, J.D. Wilson, E.L. Andreas, J.R. Gosz and D.I. Moore. 1996. Results of the millimeter-wave instrument operated at Sevilleta, New Mexico. NOAA Technical Memorandum, ERL ETL-262. National Oceanic and Atmospheric Administration. 43 pp.
- R. Hill, W.D. Otto, J.J. Wilson, A.D. Sarma, E.L. Andreas, J.R. Gosz and D.I. Moore. 1996. Fluxes of momentum and heat measured at Sevilleta, New Mexico. NOAA Technical Memorandum ERL ETL-260. U.S. Department of Commerce. 46 pp.
- R. Hill, J.J. Wilson, A.D. Sarma, E.L. Andreas, J.R. Gosz and D.I. Moore. 1996. Data sets of the scintillation experiment at Sevilleta. NOAA Technical Memorandum ERL ETL-261. U.S. Department of Commerce. 42 pp.
- J.R. Gosz. 1997. International long-term ecological research: priorities and opportunities. *Trends in Ecology and Evolution*. 11:444.
- D. Potter, J.R. Gosz, M. Molles and L. Scuderi. 1998. Lightning, precipitation and vegetation at landscape scale. *Landscape Ecology*. 13(4):203-214.
- E.L. Andreas, R.J. Hill, J.R. Gosz, D.I. Moore, W.D. Otto and A.D. Sarma. 1998. Statistics of surface-layer turbulence and evaluations of eddy-accumulation coefficients over terrain with meter-scale heterogeneity. *Boundary-Layer Meteorology*.
- E.L. Andreas, R.J. Hill, J.R. Gosz, D.I. Moore, W.D. Otto and A.D. Sarma. 1998.

Stability dependence of the eddy-accumulation coefficients for momentum and scalars. *Boundary-Layer Meteorology*.

- J. R. Gosz. 1998. International Long Term Ecological Research: Priorities, Opportunities and Lessons Learned Pages 9-14 in T. Iwakuma editor(s). *Long-Term Ecological Research in the East Asia-Pacific Region: Biodiversity and Conservation of Terrestrial and Freshwater Ecosystems*. National Institute for Environmental Studies, Environment Agency of Japan.
- J.R. Gosz, J. Asher, B. Holder, R. Knight, R. Naiman, G. Raines, P. Stine, T.B. Wigley. 1999. An ecosystem approach for understanding landscape diversity Pages 157-194 in N. Johnson, et al. editor(s). *Ecological Stewardship: A Common Reference for Ecosystem Management*. Elsevier Science.
- J. R. Gosz. 1999. International Long Term Ecological Research: collaboration among national networks of research sites for a global understanding Pages 9-18 in P. Bijok, M. Prus editor(s). *Long Term Ecological Research Examples, Methods, Perspectives for Central Europe*. International Centre of Ecology, Polish Academy of Sciences, Warsaw, Poland.
- J. R. Gosz. 1999. International long-term ecological research: collaboration among national networks of research sites for a global understanding. Pages 59-68 in P. Kovar editor(s). *Nature and Culture in Landscape Ecology (Experiences for the 3rd Millennium)*. The Karolinum Press, Prague, Czech Republic.
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- Shachak, M., S.T.A. Pickett, and J. Gosz. 2004. Introduction. A framework for Biodiversity Studies, pp. 3-12. In: Shachak, M., J. Gosz, S.T.A. Pickett and A. Perevolotsky (eds). Biodiversity in Drylands: Towards a Unified Framework. Oxford University Press.

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Smith, A.M.S., C. A. Kolden, W. T. Tinkham, A.F. Talhelm, J. D. Marshall, A.T. Hudak, L. Boschetti, M. J. Falkowski, J.A. Greenberg, J.W. Amnderson, A. Kliskey, L. Alessa, R.F. Keef, J.R. Gosz. 2014. Remote sensing the vulnerability of vegetation in natural terrestrial ecosystems. Remote Sensing of Environment. 154: 322-337.

Lilian Alessa, A. Kliskey, J. Gamble, M. Fidel, G. Beaujean, J. Gosz. 2015. The role of indigenous science and local knowledge in integrated observing systems: moving toward adaptive capacity indices and early warning systems. Sustainability Science, Springer, DOI 10.1007/s11625-015 0295-7.

Gosz, James. 2016. The LTER Stimulus: Research, Education, and Leadership Development at Individual and Community Levels, Chapter 36. In; Long-Term Ecological Research: Changing the Nature of Scientists. Eds. M. Willig, L. Walker, Oxford University Press (in press).

Virapongse, Arika, S. Brooks, E. C. Metcalf, M. Zedalis, J. Gosz, A. Kliskey, and L. Alessa; A Social Ecological Systems approach for environmental management, Journal of Environmental Management, submitted.

Technical Reports (as primary author)

Hydrologic-nutrient cycle interactions in undisturbed and man-manipulated ecosystems. 1972. Water Resources Research Institute.

Stream chemistry as a tool in evaluating ski area development effects on a spruce-fir watershed. 1973. U.S.D.A.

Hydrologic-nutrient cycle interactions in undisturbed man-manipulated ecosystems. 1973. Water Resources Research Institute.

Effects of road surfacing and salting on roadside vegetation in New Mexico mountain areas. 1973. U.S.D.A.

Stream organics to evaluate land management. 1974. Water Resources Research Institute.

An evaluation of New Mexico humate deposits for restoration of strip mining sites. 1974.
New Mexico Energy Resources Board (with L. Potter, L. Barton).

Effects of soil amendments on vegetation stressed by road salt. 1975. U.S.D.A.

Effects of ski area use on biological and heavy metal aspects of water quality. 1975.
U.S.D.A.

An evaluation of New Mexico humate deposits for restoration of strip mining sites.
1975. New Mexico Energy Resources Board (with L. Potter, L. Barton).

The impact of energy development on fish and wildlife in the Four-Corners region. 1975.
U.S. Fish and Wildlife Service (with A. Parker, A. Kneese).

Terrestrial contribution of nitrogen to stream water in managed and undisturbed forested
watersheds. 1976. Water Resources Research Institute.

An evaluation of procedures for improved water quality in ski areas. 1976. U.S.D.A.

Effects of timber stand maturity and management on some stream organic compounds.
1977. U.S.D.A. (with R. Cates).

Influence of road salting on the nutrient and heavy metal levels in stream water. 1977.
Water Resources Research Institute.

Ecological Considerations. Chapter 5. In: Genetically engineered organisms in the
environment. 1987. Biological Applications Program, Office of Technology
Assessment, Congress of the United States.

LTER Technology Report for the LTER Strategic Plan. 1989. National Science
Foundation.

Integrating the Nation's Environmental Monitoring and Research Programs: An Exercise
Using Nitrogen Enrichment to Demonstrate the Value of Index Sites in a National
Network. 1999. J.R. Gosz and P. Murdoch. A Report Prepared for the Office of
Science and Technology Policy (OSTP).

Sponsored Research

1972: Mount Taylor Baseline Study - Soils and Water Quality, New Mexico
Environmental Institute. \$22,000.

1973: Hydrologic-nutrient cycle interactions in undisturbed and man-manipulated
ecosystems (watersheds). Water Resources Research Institute. Grant 3109-150.
\$10,980.

1973: Stream chemistry as a tool in evaluating ski area development effects on a spruce-
fir watershed. U.S.D.A. Cooperative Agreement 16-293-CA. \$5,000.

- 1974: Baseline Study of the Cerillos area of New Mexico. Occidental Mineral Corporation. \$13,077.
- 1974: Quantitative Evaluation of Disturbances associated with ski area development. U.S.D.A. Cooperative Agreement 16-443-CA. \$5,000.
- 1974: Effects of road surfacing and salting on roadside vegetation in New Mexico mountain areas. U.S.D.A. Cooperative Agreement 16-USC-581. \$5,000.
- 1974: Feral Burro Impact and Alligator Bark Juniper - Bandelier National Monument, National Park Service. \$9,985.
- 1974: Stream organics to evaluate land management. Water Resources Research Institute Grant 3109-146. \$11,740.
- 1974-76: Terrestrial contribution of nitrogen to stream water in managed and undisturbed forested watersheds. Water Resources Research Institute Grant 3109-156. \$39,306.
- 1975: Effects of soil amendments on vegetation stressed by road salt. U.S.D.A. Cooperative agreement 16-524-CA. \$6,000.
- 1975: Effects of ski area use on biological and heavy metal aspects of water quality. U.S.D.A. Cooperative Agreement 16-520-CA. \$12,000.
- 1974-75: An evaluation of New Mexico Humage deposits for restoration of strip mining sites. New Mexico Energy Resources Board. \$113,260.
- 1975-78: The fish and wildlife impact of energy development in the Four-Corners Region. U.S. Fish and Wildlife Service. \$197,599.
- 1976: An evaluation of procedures for improved water quality in ski areas. U.S.D.A. Cooperative Agreement 16-588-GR. \$12,000.
- 1976: Influence of road salting on the nutrient and heavy metal levels in stream water. New Mexico Water Resources Research Institute. \$8,335.
- 1976: Effects of timber stand maturity and management on some stream organic compounds. U.S.D.A. Cooperative Agreement. \$6,375.
- 1976-78: An experimental and comparative investigation into the factors controlling nutrient losses from disturbed ecosystems. NSF. \$64,924.
- 1976: Longitudinal recovery of a stream affected by a ski area development. U.S.D.A. Cooperative Agreement. \$12,000.

- 1977: Nutrient changes in soil following fire. U.S.D.A. Cooperative Agreement. \$15,000.
- 1977: Nutrient and heavy metal transport capability of sediments in the Southwest. U.S.D.A. Cooperative Agreement. \$30,000.
- 1978-80: An experimental and comparative investigation into the factors controlling nutrient losses from disturbed ecosystems. NSF. \$117,643. (co-P.I.)
- 1978-79: Senior Research Fellowship, New Zealand National Research Advisory Council. "Factors influencing nutrient loss from managed and natural forests in New Zealand".
- 1980-81: An experimental and comparative investigation into the factors controlling nutrient losses from disturbed ecosystems. NSF. \$63,568. (co-P.I.)
- 1981-83. Evaluation of Sr isotopes for quantifying inputs. NSF. \$305,433.
- 1981-82: Impact of recreation on forest and stream water. USFS. (RM 81-159-GR) \$54,378.
1982. Prescribed fire effects on water soluble organics and nutrients. USFS. (RM 82-C2-233). \$30,000.
- 1983-84: Evaluation of Sr isotopes for quantifying organics and nutrients. NSF. \$98,453.
- 1983-84: Predoctoral Dissertation Grant (C.S. White). NSF. \$1,770.
- 1984-85: Prescribed fire effects on water soluble organics and nutrients. USFS. \$29,200.
- 1986-87: Role of plant secondary chemistry in ecosystem processes. NSF. \$604,989.
- 1987-88: Manipulation of nitrogen and water availability and effects on belowground production of plant secondary metabolites and ecological processes. NSF. \$88,200.
- 1987-89: Pattern Analysis of Landscapes. Martin Marietta (Oak Ridge National Lab). \$30,000.
- 1987-90: Long-path FTIR analysis of biosphere/atmosphere interactions. NSF. \$578,784.
- 1988: Quantification of evapotranspiration across scales and gradients. Los Alamos National Lab. \$30,140.

- 1988: REU Supplement to: FTIR analysis of biosphere/atmosphere interactions. NSF. \$8,000.
- 1988-94: Long-term ecological research on climatic and ecological gradients: Sevilleta National Wildlife Refuge. NSF. \$2,400,000.
- 1989: REU Supplement to: Long-Term Ecological Research on the Sevilleta. NSF. \$8,000.
- 1989: Development of an image acquisition and processing system for spatial analysis of vegetation. NSF. \$23,000. (co-P.I.)
- 1989: Supplement to: Long-Term Ecological Research on the Sevilleta - Data Management Equipment Acquisition. NSF. \$94,000.
- 1989: REU Supplement to: FTIR analysis of biosphere/atmosphere interactions. NSF. \$8,000.
- 1989: SGER Grant for: Three dimensional image processing for plant ecology. NSF. \$35,500.
- 1990: Development of an image acquisition and processing system for spatial analysis of vegetation. NSF. \$77,240. (co-P.I.)
- 1990: REU Supplement to: Long-Term Ecological Research on the Sevilleta. NSF. \$16,000.
- 1990: REU Supplement to: FTIR analysis of biosphere/atmosphere interactions. NSF. \$8,000.
- 1990-93: Long-path FTIR analyses of ecosystem processes. NSF. \$539,000.
- 1990: Development of a regional research center in New Mexico. NSF. \$140,000. (co-P.I.)
- 1990: Supplement to: Long-Term Ecological Research on the Sevilleta - GIS Equipment Acquisition. NSF. \$50,350.
- 1991: REU Site proposal for the Sevilleta National Wildlife Refuge Field Station. NSF. \$49,600.
- 1991: Sewage Sludge Application in Semiarid Grasslands: Effects on Vegetation and Water Quality. WRRI. \$28,106.
- 1991: REU Supplement to: FTIR analysis of biosphere/atmosphere interactions. NSF. \$8,000.

- 1991: REU Supplement to: Long Term Ecological Research on the Sevilleta. NSF. \$16,000.
- 1991: Analysis of relationships between lightning, precipitation, and runoff: a continuation proposal. WRRI. \$24,989.
- 1991: Supplement to: Long-Term Ecological Research on the Sevilleta - Equipment Acquisition. NSF. \$50,135.
- 1991: Sevilleta Field Station: Laboratory Equipment for Ecological Research. NSF. \$119,834. (co-P.I.)
- 1991: Supplement to: Development of an Image Acquisition and Processing System for Spatial Analysis of Vegetation. NSF. \$25,122. (co-P.I.)
- 1992: REU in Ecological Studies: Establishment of a REU Site with the Sevilleta LTER Program. NSF. \$151,800.
- 1992: Software for Collaboration in Ecological Science. NSF. \$162,147. (co-P.I.)
- 1992: Supplement to: Long-Term Ecological Research on the Sevilleta - Equipment Acquisition and REU support. NSF. \$74,955.
- 1992: Ecosystem Recovery Following Three Centuries of Livestock Grazing in Central New Mexico. NSF. \$25,245.
- 1992: DOD Legacy Program Supplement to Sevilleta LTER: Grassland Biodiversity After 50 Years of Livestock Exclusion. DOD. \$50,000. (co-P.I.)
- 1992: Sewage Sludge Application in Semi Arid Grasslands: Effects on Soils, Vegetation and Water Quality. WRRI. \$24,375.
- 1992: The Sevilleta Field Station: Construction of a Desert-Plant Lath House and a Shop/Storage Building. NSF. \$74,820. (co-P.I.).

My name was removed as P.I. or co-P.I. from all previous awards when I became the Division Director for the Division of Environmental Biology at NSF to avoid Conflict of Interest situations.

- 1995: Stimulating and facilitating collaborative Long Term Ecological Research: A proposal for continued support of the LTER and ILTER Networking. NSF. \$94,000 (subcontract from U. Washington).
- 1995: Supplement to the Sevilleta LTER award: Travel funds for an exchange of U.S., Portuguese and Spanish scientists to facilitate the development of

- LTER Networks in Portugal and Spain. NSF. \$22,000.
- 1996: Stimulating and facilitating collaborative Long Term Ecological Research: A proposal for continued support of the LTER and ILTER Networking. NSF. \$94,991 (subcontract from U. Washington).
- 1996: Supplement to the Seville LTER award: Travel funds for interactions with S. Africa. NSF. \$5,400.
- 1996: Supplement to the Seville LTER award: Travel funds for Polish scientists to attend the ILTER meeting in Panama. NSF. \$5,500.
- 1996: U.S. - Hungary grassland comparisons: Response of vegetation to environmental constraints and global climate change. NSF. \$156,076 (co-PI).
- 1997: REU Supplement to U.S. - Hungary grassland comparisons. NSF. \$8,000 (co-PI).
- 1997: Supplement to the Seville LTER award: Travel funds for an exchange of Asian students with the LTER program and attendance at the Ecological Society of America meeting. NSF. \$14,500.
- 1997: Data and Information Management in the Ecological Sciences: Proposal for a Training Workshop. NSF. \$58,270. (co-P.I.).
- 1997: A Proposal for the Network Office of the U.S. Long Term Ecological Research Network from an Association of Institutions. NSF. \$5,590,000.
- 1997: Development of Criteria for the Intensive Research Sites in the National Monitoring and Research Network. OSTP (Executive Office of the President). \$10,000.
- 1999: Research Experiences for Undergraduates Site Program with the Seville LTER: Ecosystem Productivity, Biodiversity, and Systematics. NSF. \$120,000
- 1999: Replacement and Consolidation of Research and Research Training Facilities of the Department of Biology, University of New Mexico (replacement PI for T. Yates). NSF. \$960,000.
- 1999: Improvement of the Museum of Southwestern Biology's Biological Materials Collections: A genetic Resource for the 21st Century (replacement PI for T. Yates). NSF.
- 1999: KDI: Knowledge, Networking of Biodiversity Information (replacement PI for T. Yates). NSF.

- 2000. Sevilleta Long Term Ecological Research Program: Climatic and environmental gradients in a Biome Transition Zone. \$1,400,000. NSF. (2 yrs).
- 2000. Planning Grant for the New Mexico EPSCoR Program. \$154,000. NSF.
- 2001. Supplement to the Sevilleta LTER Research Program. \$25,000. NSF
- 2002. Supplement to the EPSCoR Planning Grant. \$75,000. NSF.
- 2002. EPSCoR Research Infrastructure Grant. \$6,200,000. NSF. (3 yrs).
- 2002. Sevilleta Long Term Ecological Research Program: Climatic and environmental gradients in a Biome Transition Zone. \$2,800,000. NSF. (4 yrs).
- 2001. Undergraduate Mentorships in Environmental Biology: Undergraduate Career Enhancement and Training in Ecological Studies. (Co-PI). \$400,000. NSF (5 yrs).
- 2004. Preparing the LTER Network for collaborative science, education and synthesis: A planning proposal. \$985,000. NSF. (2 yrs).
- 2004. Research and Education Laboratory Building. \$4,567,902. Fish & Wildlife Service. (3 yrs).
- 2005. An additional \$2.1 million in the Senate Appropriations bill for the Research and Education Laboratory Building in 2006.
- 2004. Scientific Assessment of Vegetation and Hydrologic Conditions in our Watersheds and River Systems. \$224,000. State Legislature – NMDA. (1 yr).
- 2005. New Mexico EPSCoR RII (NM NEW) Proposal. \$6,750,000. NSF. 03/01/05 - 02/28/08.

My name was removed as PI of current awards and activities on a number of committees in Dec. 2005 when I become Senior Program Director at the National Science Foundation.

- 2008. A Study of the eco-social system of an amenity-driven, urbanizing environment in the Inland Empire. \$25,000. University of Idaho. 6/1/08 to present.
- 2008. Polishing a Gem for Wilderness Research and Education: a Planning Proposal for Taylor Wilderness Research Station. \$25,000. NSF. 10/1/08 – 05/31/11.
- 2009. Planning a Long-term Agricultural Project for Dryland Agroecosystems of the Inland Pacific Northwest. coPI. \$200,000. USDA/AFRI. 09/01/09 to present.

2009. Collaborative Research: FSML-Enhanced Cooperative Research and Education at Flathead lake Biological Station and Taylor Wilderness Research Station. \$261,952. NSF. 09/15/09 – 08/31/12.
2010. Collaborative Research: WSC-Category 1. Sustainability Dynamics for Water Resources in a Rapidly Urbanizing and Climatically Sensitive Region. \$150,000 (jointly with WSU). NSF. 09/15/10 – 08/31-12.
2011. University of Idaho McCall Field Campus Infrastructure Planning (coPI). \$25,000. NSF. 02/01/11 – 1/31/12.
2012. RCN-SEES: Advancing our understanding of complex mountain landscapes and the vulnerability of natural and human systems to environmental change (PI). \$750,000. NSF. 09/1/2012 – 8/31/2017.
2013. EPSCoR Track I: Managing Idaho's Landscapes for Ecosystem Services (MILES) (coPI). \$20 million. NSF. 2013-2018.

Courses Taught at the Univ. of New Mexico

General Ecology
Biological Adaptations
Biometry
Physiological Plant Ecology
Soil Ecosystems
Ecosystem Ecology (undergraduate)
Ecosystem Concepts (graduate)
Field Ecosystem Studies
Desert Field Biology
Ecosystem Dynamics of US Ecosystems
Special Topics Courses:
 Tree Secondary Chemistry,
 Nutrient Dynamics
 Resource Limitations in Ecosystems