

William K. Lauenroth

Academic Training

<u>Degree</u>	<u>Year</u>	<u>Institution</u>	<u>Major</u>
Ph.D.	1973	Colorado State University	Ecosystem Ecology
M.S.	1970	North Dakota State University	Botany
B.S.	1968	Humboldt State University	Range Management

Positions

2016-	Professor, School of the Environment (previously the School of Forestry and Environmental Studies), Yale University, New Haven
2008-2016	Professor, Department of Botany, University of Wyoming, Laramie
1987-2008	Professor, Department of Botany, University of Wyoming, Laramie
1981-1987	Associate Professor, Department of Range Science, Colorado State University, Fort Collins
1973-1981	Research Ecologist, Natural Resource Ecology Laboratory, Colorado State University, Fort Collins

Professional and Honorary Societies

Ecological Society of America
American Association for the Advancement of Science
American Geophysical Union

Awards

Member, Connecticut Academy of Science and Engineering, 2018
Fellow, Ecological Society of America, 2017
Fellow, American Association for the Advancement of Science, 2005
Highly Cited Researcher - Original Member, Institute for Scientific Information, 2002
E. J. Dyksterhuis Distinguished Lecturer, Texas A & M University, 1998
Outstanding Achievement Award, Society for Range Management, 1989

Editorial Boards

Rangeland Ecology & Management 2018-
Western North American Naturalist 2015-
Ecology & Ecological Monographs 2001-2003
Journal of Ecology 1999-2004
Oecologia 1998-2001
Vegetatio 1990-1996
Plant Ecology 1997-2000
Journal of Range Management 1983-1987
Ecological Modelling 1982-1986

Graduate Students Advised

<u>Doctoral Students – Year Graduated</u>	<u>Masters Students – Year Graduated</u>
Adler, Peter B. - 2003 Aguiar, Martin R. - 2000 Aguilera, Manuel O. - 1992 Bicak, Charles J. - 1984 Bradford, John B. - 2004 Byrne, Kerry. M. - 2012 Carpenter, Scott - in progress Dodd, Michael B. - 1997 Dougherty, Robert L. - 1986 Fan, Weihong - 1993 Hook, Paul B. - 1992 Humphries, Hope C. - 1993 Lkhagva Ariuntsetseg - 2013 Milchunas, Daniel G. - 1991 Moore, L. M. - 2014 Munson, Seth - 2009 Paruelo, Jose M. - 1995 Peters (Coffin), Debra P. - 1988 Renne, Rachel – in progress Sala, Osvaldo E. - 1982 Zimmerman, Gregory M. - 1987	Beck, Kelsie - 2010 Chenoweth, Damaris - 2021 Epstein, Howie – 1998 Fair, Julie - 1999 Hwang, Bernice – 2007 Jordan, Sam – 2019 Lane, Diane – 1997 Lee, Cathy - 1990 Martyn, Trace – 2015 Pennington, Victoria – 2015 Renne, Rachel – 2019 Smith, Alexandra – 2020 Wells, Floye 2004 Wythers, Kurt – 1998
<u>Postdoctoral Associates Mentored:</u>	
Bell, David Bermejo, Luis Palmquist, Kyle Schlaepfer, Daniel	

PUBLICATIONS

[Google Scholar h-index=97](#)

Underlining shows my own graduate students or postdoctoral associates, italicized and underlined shows undergraduate students. Hyperlinks available for most recent papers.

Journal Articles

241	Zhang, Lifeng, <u>Daniel R. Schlaepfer</u> , Zhiguang Chen, Liang Zhao, Qi Li, Song Gu, William K. Lauenroth. 2021. Precipitation and evapotranspiration partitioning on the Three-River Source Region: A comparison between water balance and energy balance models. <u>Journal of Hydrology: Regional Studies</u> 38: 100936.
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240	Zhang, LF, <u>Schlaepfer, DR</u> , Chen, NN, Gu, Lauenroth, WK. 2021. Comparison of AET partitioning and water balance between degraded meadow and artificial pasture in Three-River Source Region on the Qinghai-Tibetan Plateau. <i>Ecohydrology</i> 14: Article Number e2329.
239	<u>Smith, Alexandra J.</u> , <u>Daniel R. Schlaepfer</u> , <u>Kyle A. Palmquist</u> , Ingrid C. Burke, William K. Lauenroth. 2021. Allometric Modeling of Bunchgrasses in Big Sagebrush Plant Communities. <i>Rangeland Ecology and Management</i> 79:77-86.
238	<u>Schlaepfer, D.R.</u> , <u>J.B. Bradford</u> , W.K. Lauenroth, R.K. Shriver. 2021. Understanding the future of big sagebrush regeneration: challenges of projecting complex ecological processes. <i>Ecosphere</i> 12
237	<u>Palmquist, Kyle</u> ; <u>Schlaepfer, Daniel</u> ; <u>Renne, Rachel</u> ; Torbit, Steve; Doherty, Kevin; Remington, Thomas; Watson, Greg; <u>Bradford, John</u> ; Lauenroth, William. 2021. Divergent climate change effects on widespread dryland plant communities driven by climatic and ecohydrological gradients. <i>Global Change Biology</i> 27:5169-5185.
236	Hoover, D. L., W. K. Lauenroth, <u>D. G. Milchunas</u> , L. M. Porensky, D. J. Augustine, J. D. Derner. 2021. Sensitivity of productivity to precipitation amount and pattern varies by topographic position in a semiarid grassland. <i>Ecosphere</i> 12 Article e03376
235	<u>Petrie, M. D.</u> , <u>J. B. Bradford</u> , W. K. Lauenroth, <u>D. R. Schlaepfer</u> C. M. Andrews, and <u>D. M. Bell</u> . 2020. Non-analog increases to air, surface, and belowground temperature extreme events due to climate change. <i>Climatic Change</i> 163:2233-2256.
234	<u>Bradford, J.B.</u> , <u>D.R. Schlaepfer</u> , W.K. Lauenroth and <u>K.A. Palmquist</u> . 2020. Robust ecological drought projections for drylands in the 21st century. <i>Global Change Biology</i> 26:3906-3919.
233	Reeves, M.C., B.B. Hanberry, H. Wilmer, N.E. Kaplan, W.K. Lauenroth. 2020. An assessment of production trends on the Great Plains from 1984 to 2017. <i>Rangeland Ecology & Management</i> doi: 10.1016/j.rama.2020.01.011.
232	<u>Jordan, S.E.</u> , <u>K.P. Palmquist</u> , <u>J.B. Bradford</u> , and W.K. Lauenroth. 2020. Soil water availability shapes species richness in mid-latitude shrub steppe plant communities. <i>Journal of Vegetation Science</i> 31:646-657.
231	Bradford J.B, D.R. Schlaepfer, W.K. Lauenroth, K.A. Palmquist, J.C. Chambers, J.D. Maestas and S.B. Campbell. 2019. Climate-driven shifts in soil temperature and moisture regimes suggest opportunities to enhance assessments of dryland resilience and resistance. <i>Frontiers in Ecology & Evolution</i> 7:358. doi: 10.3389/fevo.2019.00358
230	Renne, R.R., J.B. Bradford, I.C. Burke, and W.K. Lauenroth. 2019. Soil texture and precipitation seasonality influence plant community structure in temperate shrublands of western North America. <i>Ecology</i> DOI: 10.1002/ecy.2824
229	Renne, R.R., D.R. Schlaepfer, K.A. Palmquist, J.B. Bradford, I.C. Burke, and W.K. Lauenroth. 2019. Soil and stand characteristics explain patterns of shrub mortality following global change type-drought and extreme precipitation. <i>Ecology</i> 100 DOI: 10.1002/ecy.2889
228	Swindon, J.G., I.C. Burke, and W.K. Lauenroth. 2019. Seasonal patterns of root production with water and nitrogen additions across three dryland ecosystems. <i>Ecosystems</i> 22:1664-1675.
227	Swindon, J.G., I.C. Burke, D.R. Schlaepfer, and W.K. Lauenroth. 2019. Spatial distribution of roots across three dryland ecosystems and plant functional types.

	Western North American Naturalist 79:159-169.
226	Lindquist, L.W., K.A. Palmquist, S.E. Jordan, and W.K. Lauenroth. 2019. Impacts of climate change on groundwater recharge in Wyoming big sagebrush ecosystems are contingent on elevation. <i>Western North American Naturalist</i> 79:37–48.
225	Pennington, V.E., K.A. Palmquist, J.B. Bradford, and W.K. Lauenroth. 2019. Patterns of big sagebrush plant community composition and stand structure in the Western US. <i>Journal of Rangeland Ecology and Management</i> 72:505-514.
224	Palmquist, K.P., J.B. Bradford, T.E. Martyn, D.R. Schlaepfer, and W.K. Lauenroth. 2018. STEPWAT2- an individual-based model for exploring the impact of climate and disturbance on dryland plant communities. <i>Ecosphere</i> 9 (8).
223	Wilson, S.D., D.R. Schlaepfer, J. B. Bradford, W.K. Lauenroth, M.C. Duniway, S.A Hall, K. Jamiyansharav, J. Gensuo, A. Lkhagva, S.M. Munson, D.A. Pyke, B. Tietjen. 2018. Functional group, biomass, and climate change effects on ecological drought in semiarid grasslands. <i>Journal of Geophysical Research: Biogeosciences</i> 123: 1072-1085.
222	Rottler, C. M., I. C. Burke, K.A. Palmquist, J.B. Bradford, and W.K. Lauenroth. 2018. Current reclamation practices after oil and gas development do not speed up succession or plant community recovery in big sagebrush ecosystems in Wyoming. <i>Restoration Ecology</i> 26:114-123. doi: 10.1111/rec.12543
221	Bradford, J.B., D.R. Schlaepfer, W.K. Lauenroth, C.B. Yackulic, M.Duniway, S. Hall, G. Jia, K. Jamiyansharav, S.M. Munson, S.D. Wilson & B. Tietjen. 2017. Future soil moisture and temperature extremes imply expanding suitability for rainfed agriculture in temperate drylands. <i>Scientific Reports</i> 7 (1), 12923. doi:10.1038/s41598-017-13165-x
220	Pennington, V.E., K.A. Palmquist, J.B. Bradford, and W.K. Lauenroth. 2017. Climate and soil texture influence patterns of forb species richness and composition in big sagebrush plant communities across their spatial extent in the Western US. <i>Plant Ecology</i> 218: 957-970.
219	Moore L. M. and W. K. Lauenroth. 2017. Differential effects of temperature and precipitation on early versus late flowering species. <i>Ecosphere</i> 8 (5).
218	Petrie, M.D., J.B. Bradford, R. M. Hubbard, W.K. Lauenroth, C.M. Andrews, D.R. Schlaepfer. 2017. Climate change will restrict dryland forest regeneration in the 21st century. <i>Ecology</i> 98: 1548-1559.
217	Tietjen, B, D.R. Schlaepfer, J.B. Bradford, W.K. Lauenroth, S. Hall, M. Duniway, T. Hochstrasser, G.S. Jia, S. Munson, D. Pyke, S. Wilson, S. 2017. Climate change-induced vegetation shifts lead to more ecological droughts despite projected rainfall increases in many global temperate drylands. <i>Global Change Biology</i> 23: 2743-2754.
216	Byrne, K.M, P.A. Adler, and W.K. Lauenroth. 2017. Contrasting effects of precipitation manipulations on plant communities at two Great Plains, USA sites. <i>Journal of Vegetation Science</i> 28: 238-249.
215	Schlaepfer, D.R., J.B. Bradford, W.K. Lauenroth, S. Munson, B. Tietjen, S. Hall, S. Wilson, S. Duniway, G. S. Jia, D. Pyke, A. Lkhagva, K. Jamiyansharav. 2017. Climate change reduces extent of temperate drylands and intensifies drought in deep soils. <i>Nature Communications</i> 8, 14196. doi:10.1038/ncomms14196

214	Palmquist, K.P., D.R. Schlaepfer, J.B Bradford, and W.K. Lauenroth. 2016. Spatial and ecological variation in dryland ecohydrological responses to climate change-implications for management. <i>Ecosphere</i> 7 (11)
213	Moore L. and W.K. Lauenroth. 2016. Twelve years of high resolution near surface radiometer data provide insight into end of season controls in a dry grassland. <i>Western North American Naturalist</i> 76:143-162.
212	Martyn, T.E., W.K. Lauenroth, J.B. Bradford, D.R. Schlaepfer. 2016. Seed bank and existing plant community mismatch: Potential impacts on climate change induced species range shifts. <i>Ecosphere</i> 7 (10).
211	Pennington, V.E., J.B. Bradford, D.R. Schlaepfer, J.L.Beck, K.A. Palmquist, and W.K. Lauenroth. 2016. Sagebrush, greater sage-grouse, and the occurrence and importance of forbs. <i>Western North American Naturalist</i> 76:298-312.
210	Palmquist, K. A., W. K. Lauenroth, D.R. Schlaepfer, and J.B. Bradford. 2016. Mid-latitude shrub steppe plant communities: Climate change consequences for soil water resources. <i>Ecology</i> 97:2342-2354.
209	Petrie, M.D., A.M. Wildeman, J.B. Bradford, R.M. Hubbard, W.K. Lauenroth. 2016. A review of precipitation and temperature control on seedling emergence and establishment for ponderosa and lodgepole pine forest regeneration. <i>Forest Ecology and Management</i> 361:328-338.
208	Martyn, T.E., C.W. Beltz, K.A. Palmquist, V.E. Pennington, C.M. Rottler. 2015. Daubenmire versus line-point intercept- A response to Thacker et al. (2015). <i>Rangelands</i> 37:158-160.
207	Moore L., W.K. Lauenroth, D.M. Bell, D.R. Schlaepfer. 2015. Soil water and temperature explain canopy phenology and onset of spring in a semiarid steppe. <i>Great Plains Research</i> 25:121-138.
206	Bell, D.M., J.B. Bradford, W.K. Lauenroth. 2015. Scale-dependence of disease impacts on quaking aspen (<i>Populus tremuloides</i>) mortality risk in the southwestern U. S. <i>Ecology</i> 96: 1835-1845.
205	Schlaepfer, D.R., Taylor, K., V.E. Pennington, K. N. Nelson, T.E. Martyn, C.M. Rottler, W.K. Lauenroth, and J.B. Bradford. 2015. Simulated big sagebrush regeneration supports predicted changes at the trailing and leading edges of distribution shifts. <i>Ecosphere</i> 6:Art 3.
204	Avirmed, O., I.C. Burke, M.I. Mobley, W.K. Lauenroth. 2014. Sagebrush steppe recovery on 30–90-year-old abandoned oil and gas wells. <i>Ecosphere</i> 6Art116.
203	Newbold, T.A. Scott, P. Stapp, K.E. Levensailor, J.D. Derner, and W.K. Lauenroth. 2014. Community responses of arthropods to a range of traditional and manipulated grazing in shortgrass steppe. <i>Environmental Entomology</i> 43: 556-568
202	Bell, D.M., J.B. Bradford, W.K. Lauenroth. 2014. Mountain landscapes offer few opportunities for high elevation tree species migration. <i>Global Change Biology</i> 20:1441-1451.
201	Bell, D.M., J.B. Bradford, W.K. Lauenroth. 2014. Forest stand structure, productivity, and age mediate climatic effects on aspen decline. <i>Ecology</i> 95: 2040-2046.
200	Bell, D.M., J.B. Bradford, W.K. Lauenroth. 2014. Early indicators of change-divergent climate envelopes between tree life stages imply range shifts in the western United States. <i>Global Ecology and Biogeography</i> 23: 168-180.

199	Schlaepfer, D.R., W.K. Lauenroth, and J.B. Bradford. 2014. Modeling regeneration responses of big sagebrush (<i>Artemisia tridentata</i>) to abiotic conditions. <i>Ecological Modelling</i> 286:66-77.
198	Schlaepfer, D.R., W.K. Lauenroth, and J.B. Bradford. 2014. Natural regeneration processes in big sagebrush (<i>Artemisia tridentata</i>). <i>Rangeland Ecology and Management</i> 67: 344-357.
197	Lauenroth, W.K., D.R. Schlaepfer, and J.B. Bradford. 2014. Ecohydrology of dry regions of the United States: Storage versus pulse soil water dynamics. <i>Ecosystems</i> 17: 1469-1479.
196	Bradford, J.B., D.R. Schlaepfer, W. K. Lauenroth, I.C. Burke. 2014. Shifts in plant functional types have time-dependent and regionally variable impacts on dryland ecosystem water balance. <i>Journal of Ecology</i> 102: 1408-1418.
195	Bradford, J.B., D.R. Schlaepfer, W. K. Lauenroth. 2014. Ecohydrology of adjacent sagebrush and lodgepole pine ecosystems: the consequences of climate change and disturbance. <i>Ecosystems</i> 17:590-605.
194	Avirmed, O., I.C. Burke, M.L. Mobley, W.K. Lauenroth, and D.R. Schlaepfer. 2014. Natural recovery of soil organic matter in 30–90-year-old abandoned oil and gas wells in sagebrush steppe. <i>Ecosphere</i> 5:art 24.
193	Schlaepfer, D.R., B.E. Ewers, B.N. Shuman, D.G. Williams, J.M. Frank, W.J. Massman, and W.K. Lauenroth. 2014. Terrestrial water fluxes dominated by transpiration: Comment Arising from S. Jasechko et al. <i>Nature</i> 496, 347-351 (2013). <i>Ecosphere</i> 5:art61.
192	Chu, C., K.M. Havstad, N. Kaplan, W.K. Lauenroth, M. P. McClaran, D.P. Peters, L. T. Vermeire & P.B. Adler. 2014. Life form influences survivorship patterns for 109 herbaceous perennials from six semi-arid ecosystems. <i>Journal of Vegetation Science</i> 25:947-954.
191	Byrne, K.M., W.K. Lauenroth, P.B. Adler. 2013. Contrasting effects of precipitation manipulations on production in two sites within the Central Grassland Region, USA. <i>Ecosystems</i> 16: 1039-1051.
190	Lkhagva, A., B. Boldgiv, C. . Goulden, O. Yadamsuren, and W.K. Lauenroth. 2013. Effects of grazing on plant community structure and aboveground net primary production of semiarid boreal steppe of northern Mongolia. <i>Grassland Science</i> 59:135-145. doi: 10.1111/grs.12022
189	Chu, Chengjin, J. Norman, R. Flynn, N. Kaplan, W.K. Lauenroth, and P.B. Adler. 2013. Cover, density, and demographics of shortgrass steppe plants mapped 1997–2010 in permanent grazed and ungrazed quadrats. <i>Ecology</i> 94: 1435.
188	Burke, I.C., E. E. Bontti, J.E. Barrett, P.N. Lowe, W.K. Lauenroth and R. Riggle. 2013. Impact of labile and recalcitrant carbon treatments on available nitrogen and plant communities in a semiarid ecosystem. <i>Ecological Applications</i> 23: 537-545.
187	Sala, O.E., R.A. Golluscio, W.K. Lauenroth, and P.A. Roset. 2012. Contrasting nutrient-capture strategies in shrubs and grasses of a Patagonian arid ecosystem. <i>Journal of Arid Environments</i> 82: 130-135.
186	Bermejo, L.A. and W.K. Lauenroth. 2012. Conservation grazing management: A new approach to livestock management and biodiversity conservation. <i>Journal of Sustainable Agriculture</i> 36: 744-758. DOI: 10.1080/10440046.2011.627992

185	Schlaepfer, D.R., W.K. Lauenroth and J.B. Bradford. 2012. Consequences of declining snow accumulation for water balance of mid-latitude dry regions. <i>Global Change Biology</i> 18: 1988-1997. DOI: 10.1111/j.1365-2486.2012.02642.x
184	Munson, S.M., W.K. Lauenroth, I.C. Burke. 2012. Soil carbon and nitrogen recovery on semiarid Conservation Reserve Program lands. <i>Journal of Arid Environments</i> 79: 25-31. doi:10.1016/j.jaridenv.2011.11.027
183	Schlaepfer, D.R., W.K. Lauenroth and J.B. Bradford. 2012. Ecohydrological niche of sagebrush ecosystems. <i>Ecohydrology</i> 5: 453-466.
182	Munson, S.M. and W.K. Lauenroth. 2011. Plant community recovery following restoration in semiarid grasslands. <i>Restoration Ecology</i> 20: 656-663. DOI: 10.1111/j.1526-100X.2011.00808.x
181	Schlaepfer, D.R., W.K. Lauenroth and J.B. Bradford. 2012. Effects of ecohydrological variables on current and future ranges, local suitability patterns, and model accuracy in big sagebrush. <i>Ecography</i> 35: 374-384. doi: 10.1111/j.1600-0587.2011.06928.x.
180	Bermejo, L.A., S. Fernandez-Lugo, L. de Nascimento & W.K. Lauenroth. 2011. Gestion del pastoreo para la conservacion de la avifauna. Podria aplicarse en Canarias? <i>Boletín de la Real Sociedad Economica de Amigos del Pais de Tenerife</i> 303-325.
179	Byrne, K.M., W.K. Lauenroth, P.B. Adler, and C. M. Byrne. 2011. Estimating aboveground net primary production in grasslands: a comparison of nondestructive methods. <i>Range Management & Ecology</i> 64: 498-505.
178	Evans, S.E., K.M. Byrne, W.K. Lauenroth, and I.C. Burke. 2011. Defining the limit to resistance in a drought-tolerant grassland: long-term severe drought significantly reduces the dominant species and increases ruderals. <i>Journal of Ecology</i> 99: 1500-1507.
177	Lauenroth, W.K. and J. B. Bradford. 2011. Ecohydrology of dry regions of the United States: Water balance consequences of small precipitation events. <i>Ecohydrology</i> 5:46-53. DOI- 10.1002/eco.195
176	Evans, S.E., I.C. Burke, W.K. Lauenroth, Z. Guangsheng. 2011. Controls on soil organic carbon and nitrogen in Inner Mongolia, China: a cross-continental comparison of temperate grasslands. <i>Global Biogeochemical Cycles</i> 25, GB3006, doi:10.1029/2010GB003945.
175	Sasaki, T. and W.K. Lauenroth. 2011. Dominant species, rather than diversity, regulates temporal stability of plant communities. <i>Oecologia</i> 166: 761-768.
174	Byrne, K.M., W. K. Lauenroth, and L.N. Davis. 2010. Non-native plant species impacts on production and diversity in the front range of Colorado. <i>Western North American Naturalist</i> 70: 288-295.
173	Hwang, B.C., and W.K. Lauenroth. 2010. Effect of nitrogen, water, and neighbor presence on the growth of <i>Hesperis matronalis</i> in a natural community. <i>American Midland Naturalist</i> 163: 212-219.
172	Munson, S.M., T.J. Benton, W.K. Lauenroth, and I.C. Burke. 2010. Soil carbon flux following pulse precipitation events in the shortgrass steppe. <i>Ecological Research</i> 25: 205-211. DOI: 10.1007/s11284-009-0651-0
171	Lauenroth, W.K. and J.B. Bradford. 2009. Ecohydrology of dry regions of the United States: Precipitation pulses and intraseasonal drought. <i>Ecohydrology</i> 2 173-181.

170	Burke, I.C. and W.K. Lauenroth. 2009. Environmentalist label not in our best interest. <i>Frontiers in Ecology and the Environment</i> 7:240.
169	White, M.A., K.M. de Beurs, K. Didan, D.W. Inouye, A.D. Richardson, O.P. Jensen, J. O'Keefe, G. Zhang, R.R. Nemani, J.D. Willem, J.F. van Leeuwen, A. Brown, M. de Wit, X.L. Schaepman, M. Dettinger, A.S. Bailey, J. Kimball, M.D. Schwartz, D.D. Baldocchi, J.T. Lee, W K. Lauenroth. 2009. Intercomparison, interpretation, and assessment of spring phenology in North America estimated from remote sensing for 1982 to 2006. <i>Global Change Biology</i> 15: 2335-2359. doi: 10.1111/j.1365-2486.2009.01910.x
168	Lauenroth, W.K., R.L. Dougherty, and J.S. Singh. 2009. Precipitation event size controls on long-term abundance of <i>Opuntia polyacantha</i> in Great Plains grasslands. <i>Great Plains Research</i> 19: 55-64.
167	Derner, J.D., W.K. Lauenroth, P. Stapp, and D.J. Augustine. 2009. Livestock as ecosystem engineers for grassland bird habitat in the western Great Plains of North America. <i>Rangeland Ecology and Management</i> 62:111-118.
166	McCulley, R.L., I.C. Burke, and W.K. Lauenroth. 2009. Conservation of nitrogen increases with precipitation across a major grassland gradient in the central Great Plains of North America. <i>Oecologia</i> 159: 571-581.
165	Munson, S.M. and W.K. Lauenroth. 2009. Plant population and community responses to removal of the dominant species. <i>Journal of Vegetation Science</i> 20: 1-9.
164	Adair, E.C., I.C. Burke, and W.K. Lauenroth. 2008. Contrasting effects of resource availability and plant mortality on plant community invasion by <i>Bromus tectorum</i> L. <i>Plant and Soil</i> 304:103-115.
163	Lauenroth, W.K. and P.B. Adler. 2008. Demography of grassland plants: Survival, life expectancy, and lifespan. <i>Journal of Ecology</i> 96:1023-1032.
162	Cleland, E.E., C.M. Clark, S.L. Collins, J.E. Fargione, L. Gough, K.L. Gross, D.G. Milchunas, S.C. Pennings, W.D. Bowman, I.C. Burke, W.K. Lauenroth, G.P. Robertson, J.C. Simpson, D. Tilman, and K.N. Suding. 2008. Species responses to nitrogen fertilization in herbaceous plant communities, and associated species traits. <i>Ecology</i> 89: 1175.
161	Hwang, B. C., and W. K. Lauenroth. 2008. Effect of nitrogen, water and neighbor density on the growth of <i>Hesperis matronalis</i> and two native perennials. <i>Biological Invasions</i> 10:771-779.
160	Oyarzabal, M., J.M. Paruelo, F. Del Pino, M. Oesterheld, and W.K. Lauenroth. 2008. Trait differences between grass species along a climatic gradient in South and North America. <i>Journal of Vegetation Science</i> 19:183-192.
159	Adler, P.B., W.R. Tyburcz, and W.K. Lauenroth. 2007. Long-term mapped quadrats from Kansas prairie: A unique source of demographic information for herbaceous plants. <i>Ecology</i> 88: 2673.
158	Wells, F.H. and W.K. Lauenroth. 2007. The potential for horses to disperse alien plants along recreational trails. <i>Rangeland Ecology and Management</i> 60:574-577.
157	Bradford, J.B. and W.K. Lauenroth. 2006. Controls over invasion of <i>Bromus tectorum</i> : The importance of climate, soil, disturbance, and seed availability. <i>Journal of Vegetation Science</i> 17: 693-704.

156	Lauenroth, W.K., A.A. Wade, M.A. Williamson, B. Ross, S. Kumar, and D.P. Cariveau. 2006. Uncertainty in calculations of net primary production for grasslands. <i>Ecosystems</i> 9:843-851.
155	Lauenroth, W.K. and J.B. Bradford. 2006. Ecohydrology and the partitioning AET between transpiration and evaporation in a semiarid steppe. <i>Ecosystems</i> 9:756-767.
154	Bradford, J. B., W.K. Lauenroth, I.C. Burke, and J.M. Paruelo. 2006. The influence of climate, soils, weather, and land use on primary production and biomass seasonality in the US Great Plains. <i>Ecosystems</i> 9: 934-950.
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Funded Projects¹

Colorado State University (I was the PI unless otherwise indicated)

Using Long-Term Chart Quadrats To Evaluate Plant Demography In The Subalpine: Rescuing The Great Basin Experimental Range Data Sets coPI (with R. Gill, Washington State University) National Science Foundation. 2007-2009

Shortgrass Steppe Field Station. National Science Foundation. (with I. C. Burke) \$270,000. 2007-8. coPI

Shortgrass Steppe Conservation National Fish and Wildlife Foundation June-October 2007 ~\$25,000

Shortgrass Steppe Field Station. National Science Foundation. (with I. C. Burke) \$232,000. 2005-2009. coPI

Shortgrass Steppe Field Station National Science Foundation. 2005-2008 (with I. C. Burke) \$230,000 2009-2010 coPI

Long-term carbon and greenhouse gas consequences of fire in montane forests and woodlands of the Colorado Front Range. McIntire-Stennis Formula Funding 2006-2011 coPI (with I.C. Burke) ~\$125,000

Long-term ecological research program: Shortgrass Steppe (LTER). National Science Foundation. 2002-2008. coPI (E. F. Kelly et al.) ~\$4,680,000

Effects of plant invasions on rangeland ecosystems of eastern Colorado. Colorado State University Agricultural Experiment Station. 2003-2008. ~\$25,000

Cross-site LTER project of vegetation structure - soil process interactions-- A Supplement to BSR-9011659 LTER. National Science Foundation. 1993 (with I. C. Burke). \$74,781

Effects of plant invasions on rangeland ecosystems of eastern Colorado. Colorado State University Agricultural Experiment Station. 1998-2003. ~\$25,000

Ecosystem significance of soil as a long-term sink for anthropogenic additions of nitrogen. National Science Foundation. 1997-2000. coPI (With I. C. Burke and G. E. Maciel) \$686,000

Long-term ecological research program: Shortgrass Steppe (LTER). National Science Foundation. 1996-2002. coPI (with I. C. Burke) \$3,360,000

Long-term ecological research program: Shortgrass Steppe (LTER). National Science Foundation. 1992-1996. (with I. C. Burke) ~\$3,300,000

Regional analysis of ecosystem structure and function in the Central Grasslands of the United States. National Science Foundation. 1991-1993 coPI (with I. C. Burke) \$427,000.

Modeling vegetation structure-ecosystem process interactions across sites and ecosystems. National Science Foundation. 1990-1994. (with H.H. Shugart and W. J. Parton) ~\$500,000

Long-term ecological research program: Shortgrass Steppe (LTER). National Science Foundation. 1986-1992. ~\$1,000,000

Long-term ecological research program: Shortgrass Steppe (LTER). National Science Foundation. 1982-1986. coPI (with R. G. Woodmansee and W. Laycock) ~\$450,000

¹ Dollar amounts preceded by ~ are estimates. I didn't keep records of amounts for all grants.

University of Wyoming

- Modeling Plant Community Composition and Vegetation Structure in Core Sage Grouse Habitats, U.S. Fish & Wildlife Service/Department of the Interior; 2013-2015; \$154,869
- Assessing Future Ecohydrological Suitability for Sagebrush Ecosystems, U.S. Geological Survey/Department of the Interior; 2013-2017; \$81,249
- Modeling Plant Community Composition and Vegetation Structure in Core Sage Grouse Habitats, U.S. Fish & Wildlife Service/Department of the Interior; 2013-2015; \$154,869
- Climate change and ecohydrology in temperate dryland ecosystems: a global assessment. U. S. Geological Survey; 2012-2014; \$92,000
- Climate change and ecohydrology in temperate dryland ecosystems: a global assessment. U. S. Geological Survey; 2012-2014; \$92,000
- Vulnerability Assessment of Ecological Systems and Species to Climate and Land Use Change within the North Central Climate Change Center and Partner Land Conservation Cooperatives; Colorado State University; 2012-2013; \$161,004
- The Influence of Changing Climate on Water Cycling and Terrestrial Water Availability in the Southern Rockies Region; 2011-2013; \$115,000
- Shortgrass Steppe Long Term Ecological Research; I. C. Burke; subcontract from Colorado State University; 2011-2012; \$65,349
- Assessment of grass awn disease in dogs & CRP plantings of grasses with barbed awns; American Kennel Club Canine Health Foundation; 2010-2011; \$11,768
- Shortgrass Steppe Long Term Ecological Research; I. C. Burke; subcontract from Colorado State University; 2009-2010; \$110,398
- Plant functional group distributions described by "climate-soil" envelopes; USDA Forest Service; 2009-2011; \$25,000

Colloquia and Seminars

Apologies, but I have not kept track of these.