

Melinda K. Morgan¹
Geography & Environmental Studies

Educational History:

J.D., UNIVERSITY OF IDAHO COLLEGE OF LAW, 1998

Summa Cum Laude

Law Review Comment: "Was the Lorax an Outfitter and Guide? A Shift in Idaho's Standing Doctrine: Boundary Backpackers v. Boundary County and Selkirk-Priest Basin Ass'n v. State." *Idaho Law Review* 32: 127-157. Advisor: Dale Goble

M.S., UNIVERSITY OF WYOMING, COLLEGE OF EDUCATION, 2011

Community Counseling

Plan II project topic and publication: "Are We Addicted to Oil? Lessons from Mental Health." *Southwestern Geographer* 14: 121-136. Advisor: Michael Morgan

B.A., UNIVERSITY OF OREGON, 1991

Magna Cum Laude

Major: Political Science Minor: Philosophy

Honors thesis: *Consensus Decision-making in Hannah Arendt's Public Realm: a Practical and Theoretical Consideration of Plurality*. Advisor: Deborah Baumgold

Employment History

W.K. Kellogg Chair in Sustainable Environmental & Food Systems, 2020-present

Director, Sustainability Studies Program, 2020-present

Associate Chair, 2014-2017, 2020-present

Professor, 2021

Associate Professor, 2014-2020²

Assistant Professor, 2008-2014

UNIVERSITY OF NEW MEXICO, GEOGRAPHY & ENVIRONMENTAL STUDIES DEPARTMENT; affiliated faculty with the College of Law, the Water Resources Program, and the Resilience Institute

Dean, 2017-2019

Professor, August 2017-2020

Wyoming Excellence Chair, August 2017-2020

Lecturer and Research Scientist, 2004-2008

UNIVERSITY OF WYOMING, HAUB SCHOOL AND RUCKELSHAUS INSTITUTE OF ENVIRONMENT AND NATURAL RESOURCES

Staff Attorney, 2002-2004

WESTERN RESOURCE ADVOCATES

¹ Name legally changed from Melinda Harm Benson in August 2020.

² On leave without pay while serving as Dean at the University of Wyoming August 2017-January 2020.

Natural Resources Law Institute Fellow, 2001-2002
LEWIS & CLARK LAW SCHOOL

Staff Attorney, 1999-2001
LAND AND WATER FUND OF THE ROCKIES (now Advocates for the West)

Law Clerk, 1998-1999
UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

State Affairs Director 1992-1995
IDAHO CONSERVATION LEAGUE

Short Narrative Description of Research, Teaching and Service Interests

Research

I research environmental governance. I'm particularly interested in understanding the next generation of tools and approaches to biodiversity loss, climate change, and other environmental challenges and how those new ideas interface with existing legal and regulatory requirements. These are important questions at a critical time. We have entered in the Anthropocene--a new epoch in which humans are the dominant drivers of change on earth. My scholarship addresses how to respond to the challenges of the Anthropocene.

Much of this work is highly interdisciplinary. I work with engineers, hydrologists, legal scholars and others to understand complex social-ecological systems and propose new conceptual models and frameworks for governance. Increasingly, I am orienting my research toward what is possible rather than what is not manifesting with regard to effective environmental governance. There are plenty of scholars researching what's *not* working. I'm interested in how we can nurture and replicate/encourage/expand upon instances in which we have success in environmental governance. I'm particularly interested in situations involving collaboration, i.e., where there is a shared sense among stakeholders regarding what constitutes success.

Teaching

As a professor, I share my passion for environmental protection and encourage my students to realize their own potential in this growing field. I employ pedagogies of engagement that enable my students to employ critical thinking, form independent thoughts and opinions, and gain the necessary skills to facilitate their academic and professional development. This takes place both inside and outside of the classroom. I try to create an atmosphere in my classes in which students feel both challenged and supported.

I consider being a professor a privilege. The professor/student and advisor/advisee relationships are unique. I cherish the role I get to play in students' lives. Sharing my

research and scholarship with my students is enriching to us both, and I truly believe that UNM students benefit from attending a research active university for this reason. Conversely, teaching is a critical component of being faculty at a research university; it keeps faculty connected to the needs of society as we work to prepare our students for their future careers. Students inspire me, and I strive to inspire them. That is, to my mind, what a university is all about.

Service

Service takes place on many levels. Throughout my career, I've worked hard to be a strong member of my faculty in our shared governance model, both pre and post tenure. I've also been a professional and intellectual leader in the fields relevant to my research and scholarship. Finally, I've engaged in my community, sharing my expertise and advancing natural resource management in the real world.

Research

Books

Benson M.H. and R.C. Craig. 2017. *The End of Sustainability: Resilience and the Future of Environmental Governance in the Anthropocene*. University Press of Kansas: Lawrence.

Articles in Refereed Journals and Law Reviews

Gong, X., Lu, Y., Beene, D., Li, Z., Hu, T., Morgan, M., Lin, Y. Understanding public perspectives on fracking in the United States using social media big data. *Annals of GIS* (Accepted in June 2022)

Yang, L. J. Driscoll, S. Sarigai, Q. Wu, C.D. Lippitt, **M. Morgan** (2022). Towards Synoptic Water Monitoring Systems: A Review of AI Methods for Automating Water Body Detection and Water Quality Monitoring Using Remote Sensing, *Sensors* 22, 2416. <https://doi.org/10.3390/s22062416>.

Morgan, M.M. (2020). Conservation-Reliant Species as a Boundary Object for Interdisciplinary Engagements, *Idaho Law Review* 56: 83-89.

Benson, M.H. (2019). New materialism: an ontology for the Anthropocene. *Natural Resources Journal* 56(2): 251-280.

Benson, M.H. (2017). Grazing 2.0: lessons from the Valles Caldera National Preserve. *Idaho Law Review* 53: 347-72.

Gosnell, H., B. C. Chaffin, J. Ruhl, C. (Tony) Arnold, R. K. Craig, **M. H. Benson** and A. Devenish. (2017). Transforming (perceived) rigidity in environmental law through adaptive governance: a case of Endangered Species Act implementation. *Ecology and Society* 22(4):42 [online] URL: <https://doi.org/10.5751/ES-09887-220442>.

Arnold, C. Anthony (Tony), H. Gosnell, **M. H. Benson** and R. K. Craig. (2017). Cross-interdisciplinary insights into adaptive governance and resilience. *Ecology and Society* 22 (4):14. [online] URL: <https://www.ecologyandsociety.org/vol22/iss4/art14/>.

Cosens, B. A., R. K. Craig, S. Hirsch, C. (Tony) Arnold, **M. H. Benson**, D. A. DeCaro, A. S. Garmestani, H. Gosnell, J. Ruhl and E. Schlager. (2017). The role of law in adaptive governance. *Ecology and Society* 22 (1):30. [online] URL: <http://www.ecologyandsociety.org/vol22/iss1/art30/>

Gunderson, L., B. A. Cosens, B. C. Chaffin, C. A. (T.) Arnold, A. K. Fremier, A. S. Garmestani, R. K. Craig, H. Gosnell, H. E. Birge, C. R. Allen, **M. H. Benson**, R. R. Morrison, M. C. Stone, J. A. Hamm, K. Nemec, E. Schlager, and D. Llewellyn. (2017). Regime shifts and panarchies in regional scale social-ecological water systems. *Ecology and Society* 22(1):31. [online] URL: <https://doi.org/10.5751/ES-08879-220131>.

Chaffin, B.C., A.S. Garmestani, L.H. Gunderson, **M.H. Benson**, D.G. Angeler, C.A. Arnold, B. Cosens, R.K. Craig, J.B. Ruhl, and C.R. Allen. (2016). Transformative environmental governance. *Annual Review of Environment and Resources* 41: 1. <http://www.annualreviews.org/doi/abs/10.1146/annurev-environ-110615-085817>.

Benson, M.H. (2016). Shifting public land management paradigms: Lessons from the Valles Caldera National Preserve. *Virginia Environmental Law Journal* 34 (1): 1-51.

Benson, M.H., C. Lippitt, R. Morrison, B. Cosens, J. Boll, B.C. Chaffin, R. Heinse, D. Kauneckis, T. E. Link, C. Scruggs, M. Stone, V. Valentin. (2015). Five ways institutions can support interdisciplinary work *before* tenure. *Journal of Environmental Studies and Sciences* 6(2): 260-267.

Benson, M.H. (2015). Reconceptualizing social-ecological relations – is resilience the new narrative? *Journal of Environmental and Sustainability Law* 21:99-127.

Benson, M.H., D. Llewellyn, R. Morrison and M. Stone (2014). Water governance challenges in New Mexico's Rio Grande Valley: a resilience assessment. *Idaho Law Review* 51: 195-228.

Benson, M.H. and R.K. Craig (2014). The end of sustainability. *Society & Natural Resources: An International Journal* 27(7): 777-782.

Cosens, B., L. Gunderson, C. Allen, **M.H. Benson** (2014). Identifying legal, ecological and governance obstacles, and opportunities for adapting to climate change. *Sustainability* 6: 2338-2356.

Benson, M.H. (2014). Enforcing traditional cultural property protections. *Human Geography* 7(2): 60-72.

Craig, R.K. and **M.H. Benson** (2013). Replacing Sustainability. *Akron Law Review* 46: 841-880.

Benson, M.H. and A.B. Stone (2013). Practitioner perceptions of adaptive management implementation in the United States. *Ecology and Society* 18(3): 32. [online] URL: <http://www.ecologyandsociety.org/vol18/iss3/art32/>.

Benson, M.H., R.R. Morrison and M.C. Stone (2013). A classification framework for running adaptive management rapids. *Ecology and Society* 18(3): 30. [online] URL: <http://www.ecologyandsociety.org/vol18/iss3/art30/>.

Garmestani, A. S., C. R. Allen and **M.H. Benson** (2013). Can law foster social-ecological resilience? *Ecology and Society* 18(2): 37. [online] URL: <http://www.ecologyandsociety.org/vol18/iss2/art37/>.

Kavanaugh, J. and **M.H. Benson** (2013). Reintroduction of conservation reliant species: an assessment of the southwestern grizzly bear's place on the recovery continuum. *Human Dimensions of Wildlife* 18: 3, 194-207 [online] URL: <http://dx.doi.org/10.1080/10871209.2013.751638>.

Garmestani, A.S. and **M.H. Benson** (2013). A framework for resilience-based governance of social-ecological systems. *Ecology and Society* 18(1): 9. [online] URL: <http://www.ecologyandsociety.org/vol18/iss1/art9/>.

Benson, M.H. (2012). Intelligent tinkering: the Endangered Species Act and resilience. *Ecology and Society* 17(4): 28. [online] URL: <http://www.ecologyandsociety.org/vol17/iss4/art28/>.

Roybal, M. A. and **M.H. Benson** (2012). Opportunities for building social-ecological resilience in New Mexico forest communities. *Journal of Natural Resources Policy Research* 4(4): 253-269.

Benson, M.H. (2012). Mining sacred space: law's enactment of competing ontologies in the American West. *Environment and Planning A* 44: 1443-1458.

Jones, J. A., I. Creed, K. Hatcher, R. Warren, **M.H. Benson**, E. Boose, W. Brown, J. Campbell, A. Covich, D. Clow, C. Dahm, K. Elder, C. Ford, N. Grimm, D. Henshaw, K. Larson, E. Miles, K. Moore, S. Sebestyen, A. Stone, J. Vose, M. Williams (2012). Water supply sensitivity and ecosystem resilience to land use change, climate change, and climate variability at long-term ecological research sites. *Bioscience* 64(4): 390-404.

Benson, M.H. and A.S. Garmestani (2011). Can we manage for resilience? The integration of resilience thinking into natural resource management in the United States. *Environmental Management* 48(3): 392-399.

Benson, M.H. and A.S. Garmestani (2011). Embracing panarchy, building resilience and integrating adaptive management through a rebirth of the National Environmental Policy Act. *Journal of Environmental Management* 92(5): 1420-1427.

Benson, M.H. (2010). Are we addicted to oil? Lessons from mental health. *Southwestern Geographer* 14: 121-136.

Benson, M.H. (2010). Regional initiatives: scaling the climate response and responding to conceptions of scale. *Annals of the Association of American Geographers* 100: 1025-1035.

Benson, M.H. (2010). Adaptive management approaches by resource management agencies in the United States: implications for energy development in the Interior West. *Journal of Energy & Natural Resources Law* 28(1) 87-118.

Benson, M.H. (2010). Legislative reallocation: how compliance with federal legislative initiatives including the Endangered Species Act results in the redistribution of water resources. *Journal of Contemporary Water Research and Education* 144: 1-7.

Benson, M.H. (2009). Integrating adaptive management and oil and gas development: existing obstacles and opportunities for reform. *Environmental Law Reporter* 39: 10962-78.

Benson, M.H. (2002). The Tulare Case: water rights, the Endangered Species Act, and the Fifth Amendment. *Environmental Law* 32: 551-587.

Harm, M.K. (1997). Was the Lorax an outfitter and guide? A shift in Idaho's Standing Doctrine: Boundary Backpackers v. Boundary County and Selkirk-Priest Basin Ass'n v. State. *Idaho Law Review* 32: 127-157.

Articles Appearing in Chapters of Edited Volumes

L.V. Jaramillo, M.C. Stone, **M.H. Benson** (2021). Developing Factors for Socio-Ecohydrological Resilience, *Handbook of Disaster Risk Reduction for Resilience*. S. Eslamian and F. Eslamian eds., 387-416, (New York: Springer).

Benson, M.H., D. Llewellyn, R. Morrison, and M. Stone (2018). Governing the Rio Grande: challenges and opportunities for New Mexico's water supply, in *Practical Panarchy, Linking Law, Resilience and Adaptive Water Governance of Regional Scale Social Ecological Systems*. B. Cosens and L. Gunderson, eds., 99-114 (New York: Springer).

Cosens, B, Craig, R.K. Craig, S. Hirsch, C.A.T. Arnold, **M.H. Benson**, D. DeCaro, A. S. Garmestani, H. Gosnell, J. B. Ruhl, & E. Schlager (2018). Legal pathways to adaptive governance, in water basins in North America and Australia in *Practical Panarchy, Linking Law, Resilience and Adaptive Water Governance of Regional Scale Social Ecological Systems*. B. Cosens and L. Gunderson, eds., 151-160 (New York: Springer).

Gosnell, H, B.C. Chaffin, J. B. Ruhl, C.A.T. Arnold, R.K. Craig, **M.H. Benson**, & A. Devenish (2018). Finding flexibility in Section 7 of the Endangered Species Act through adaptive governance, in *Practical Panarchy, Linking Law, Resilience and Adaptive Water Governance of Regional Scale Social Ecological Systems*. B. Cosens and L. Gunderson, eds., 183-204 (New York: Springer).

Arnold, C.A.T., H. Gosnell, **M.H. Benson**, & R.K. Craig (2018). Cross-Basin Patterns of Systemic-Change Drivers and Adaptive Governance Features, in *Practical Panarchy, Linking Law, Resilience and Adaptive Water Governance of Regional Scale Social Ecological Systems*. B. Cosens and L. Gunderson, eds., 205-228 (New York: Springer).

Benson, M.H. and C. Schultz (2015). Adaptive Management and the Law, in *Adaptive Management of Social-Ecological Systems*. C. Allen, A. S. Garmestani, eds., 39-59 (New York: Springer).

Benson, M.H. (2014). The Rules of Engagement: the Spatiality of Judicial Review, in *Expanding the Spaces of Law*. I. Braverman, D. Delaney, A. Kedar and N. Blomley, eds. 215-237 (Palo Alto: Stanford University Press).

Benson, M.H. and M.E. Hompton (2014). Bringing Resilience to Wildlife management and Biodiversity Protection, in *Social-Resilience and Law*. C. Allen and A. Garmestani, eds. 37-62 (New York: Columbia University Press).

Benson, M.H. (2011). Adaptive Management as a Tool for Negotiating the Energy Water Nexus, in *The Water-Energy Nexus in the American West*. D. Kenney and R. Wilkinson, eds., 179-201 (London: Edward Elgar Publishing Ltd.).

Benson, M.H. (2010). Resource Policy, Adaptive Management and Energy Development on Public Lands, in *Energy Development & Wildlife Conservation in Western North America*. D. Naugle, ed. 195-202 (Washington, D.C.: Island Press).

Other Writings

Benson, M.H. (2020). “Bye Bye Baseline, Goodbye: Rethinking our goals for ecosystem conservation. *Western Confluence Magazine* 10: 39; <http://www.westernconfluence.org>.

Benson, M.H. and R.K. Craig (2014). The End of Sustainability: The realities of the Anthropocene demand a new approach to environmental governance. *Enzia*; <http://ensia.com/voices/the-end-of-sustainability/>.

Ogden, F. and **M.H. Benson**. *Integrated Management of Groundwater and Surface Water Resources: Investigation of Different Management Strategies and Testing in a Modeling Framework*. Report to the Wyoming Water Research Program, National Institutes for Water Resources (NIWR) funded jointly through the U.S. Geological Survey and the State of Wyoming Water Development Commission. (April 2010).

Benson, M.H. *Oil & Natural Gas Technology: Research and Development Concerning Coalbed Natural Gas. "Task 10 – A Legal History of Policy Actions Affecting CBNG Development and Management in Wyoming."* Report on DOE Award No.: DE-FC26-06NT15568. (December 2008).

Benson, M.H. et al. *Water Production from Coalbed Methane Development in Wyoming: A Summary of Quantity, Quality, and Management Options.* Report Prepared for the Office of the Governor State of Wyoming. (December 2005).

Agopian, N. and **M.H. Benson.** *Conservation Easements: Wyoming Update.* Wyoming Open Spaces, University of Wyoming Cooperative Extension. (January 2007).

Benson, M.H. "Perpetuity" -- *What Does It Mean for Conservation Easements and the Wyoming Constitution?* Wyoming Open Spaces, University of Wyoming Cooperative Extension. (November 2004).

Book Reviews

Benson, M.H. (2012). "The Spatial, the Legal and the Pragmatics of World-Making: Nomospheric Investigations." *Antipode*;
http://radicalantipode.files.wordpress.com/2012/05/book-review_benson-on-delaney.pdf.

Benson, M.H. (2010). "Breakthrough: From the Death of Environmentalism to the Politics of Possibility." *Professional Geographer* 62 (1): 146-147.

Works in Progress

Benson, M.H. Conservation Reliant Species as a boundary object for transdisciplinary research (submitted to Idaho Law Review special issue in honor of Dale Goble December 2019).

Invited or Refereed Abstracts and/or Oral Presentations at Professional Meetings

Morgan, M.K. How to Develop Collaborative Research. UNM Team Research Symposium. University of New Mexico. 19 April 2022.

Morgan, M.K. DeBuys panel 2022, Rediscovering Earth - and Hope- in an Age of Loss. A Conversation with William deBuys. University of New Mexico Center for the Southwest, 8 April 2022.

Morgan, M.K. Bridging disciplinary divides in sustainable water resources research. University of New Mexico Grand Challenge in Sustainable Water Resources, 15 April 15, 2021

Morgan, M.K. Public Lands in the Biden Era. Idaho-Wyoming-Utah Bar Association Tri-State conference, 11 March 2021.

Benson, M.H. Resilience as a lens for water governance. New Mexico Water Dialogue, Albuquerque, New Mexico, 9 January 2020.

Benson M.H. U.S. Future Leaders Energy and Natural Resources, Laramie, Wyoming, 4 October 2019.

Benson M.H. Resilience Habits. Fourth Annual Resilience Colloquium (RC4), University of New Mexico, Albuquerque, New Mexico, 6-7 August 2019.

Benson M.H. My theory of change. University of New Mexico Department of Geography Seminar Series, Albuquerque, New Mexico, 22 February 2019.

Benson M.H. Government, governance and the changing role of water law. University of Wyoming College of Law Trelease Dinner, Laramie, Wyoming, 14 November 2017.

Benson, M.H. Grazing 2.0: the Valles Caldera National Preserve. Idaho Law Review Symposium on Public Lands Grazing, Boise, Idaho, 30 March 2017.

Benson, M.H. Resilience: a narrative for Anthropocene? Graduate Student Association of the Ecosystem Science & Management Department Seminar Series, Texas A&M University, College Station, Texas, 7 March 2017.

Benson, M.H. Being a naturalist in the Anthropocene. Keynote Address at Bernalillo County Open Space Master Naturalist Annual Meeting, Albuquerque, New Mexico, 12 November 2015 (\$100 honorarium).

Benson, M.H. Valles Caldera: a case study in neoliberal public land management. Innovations in Public Land Management: Economics, Law, and Policy. Property and Environment Research Center Workshop, Bozeman, Montana, 19-21 May 2016.

Benson, M.H. Resilience and its critics. Sustainability Conference of American Legal Educators. Armstrong Hall, Sandra Day O'Connor College of Law. Arizona State University, Tempe, Arizona, 13 May, 2016.

Benson, M.H. Resilience: a research paradigm for the Anthropocene. First University of New Mexico Resilience Colloquium Albuquerque, New Mexico, 10 May, 2016.

Benson, M.H. Shifting public land management paradigms: lessons from the Valles Caldera National Preserve, Geography and Environmental Studies Symposium Series. Albuquerque, New Mexico, 15 April, 2016.

Benson, M.H. Welcome to the Anthropocene, Global and National Security: Rapidly Evolving Challenges, Albuquerque, New Mexico, 5 April, 2016.

Benson, M.H. Lecture on law, ontology and the Anthropocene. University North Texas, Denton, Texas, 17-18 February 2016 (\$250 honorarium).

Benson, M.H. Procedural rules, spatial consequences: why all geographers are legal geographers. University of Arizona Department of Geography and Development Colloquium Series, Tucson, Arizona, 4 December, 2015.

Benson, M.H. Shifting public land management paradigms: lessons from the Valles Caldera National Preserve. Navigating New Mexico Public Land Issues. New Mexico State Bar Association, Albuquerque, New Mexico, 18 December 2015.

Llewellyn, D. (presenter), **M.H. Benson**, K. Yuhas and P. Johnson. Shifting the water resource management paradigm by increasing adaptive capacity for water storage in the American Southwest. 5th Annual Upper Colorado River Basin Water Forum., Colorado Mesa University, Grand Junction, Colorado, 28-29 October 2015.

Benson, M.H. Regime Change for New Mexico Forests. First Annual Sustainability Conference of American Legal Educators. Arizona State University College of Law, Tempe, Arizona, 7-9 May 2015.

Benson, M.H. A Framework of Resilience. 16th Water Assembly Conference Albuquerque, New Mexico, 21 March 2015.

Benson, M.H. Adaptive governance in a time of uncertainty. Carpe Diem West's Healthy Headwaters' Ninth Convening, Albuquerque, New Mexico, 4 November 2014.

Benson, M.H. Water resilience in a time of uncertainty: using a resilience lens. Utton Transboundary Resources Center Workshop on Resilience in a time of Uncertainty, University of New Mexico College of Law, Albuquerque, New Mexico, 9 October 2014.

Benson, M.H. The end of sustainability? An Environment Law Institute Research Webinar, 8 July 2014; <http://www.eli.org/events/end-sustainability>.

Benson, M.H. Reconceptualizing social-ecological relations – is resilience the new narrative? Journal of Environmental and Sustainability Law Symposium Environmental Law 4.0: Adaptive and Resilient. University of Missouri School of Law, Columbia Missouri, 14 February 2014.

Benson, M.H. and B. Cosens. Resilience in water governance: building adaptive capacity within social-ecological systems facing climate change. Transformational Solutions for Water in the West Workshop. Sandia National Laboratories. Albuquerque, New Mexico. 5 September 2013.

Benson, M.H. Regulatory takings—rights or relations? NSF Workshop on the Spatial Constitution. Washington, D.C., 13-14 June 2013.

Benson, M.H. The spatiality of judicial review. University of New Mexico College of Law Spring Faculty Colloquium, Albuquerque, New Mexico, 27 February 2013.

Craig, R.K. (presenter) and **M.H. Benson**. Replacing sustainability. The Next Generation of Environmental & Natural Resources Law, University of Akron School of Law, Akron, Ohio, 29 September 2012.

Benson, M.H. Reconceptualizing social-ecological relations – is resilience the new narrative? University of Nebraska Lincoln, Lincoln, Nebraska, 4 October 2012.

Benson, M.H. Rules of engagement: the spatiality of judicial review. University of Nebraska Lincoln Department of Geography Seminar, Integrative Graduate Education and Research Traineeship program on Adaptive Governance in Stressed Watersheds, Lincoln, Nebraska, 5 October 2012.

Benson, M.H. Resilience thinking—is it changing environmental governance approaches in the United States? University of Nebraska Lincoln College of Law Environmental/Agricultural Law Society, Lincoln, Nebraska, 5 October 2012.

Benson, M.H. and R.K. Craig. Wicked problems: reconceptualizing environmental governance. New Directions in Environmental and Energy Law, Policy, and Geography University of Minnesota, St. Paul, Minnesota, 3-5 May 2012.

Benson, M.H. Rules of engagement: the spatiality of judicial review. Where now? Moving Beyond Traditional Legal Geographies. University at Buffalo, Buffalo, New York, 25-26 April 2012.

Benson, M.H. Geographies of Mt. Taylor: the legal, political and cultural implications of proposed uranium mining development in one of New Mexico's most sacred spaces. Ortiz Center Faculty Symposium, Albuquerque, New Mexico, 16 March 2010.

Benson, M.H. Climate change: implications for environmental and land use planning and management. Collaborative Adaptive Management Network Annual Rendezvous, Tucson, Arizona, 9 March 2010.

Garmestani, A.S. (presenter) and **M.H. Benson**. The “man” in management: adaptive management in law. 70th Midwest Fish and Wildlife Conference, Springfield, Illinois, 7 December 2009.

Benson, M.H. Adaptive management as a mandate: implications for energy development in the Interior West.” Conference on Critical Intersections for Energy and Water Law: New Challenges and Opportunities, Calgary, Alberta, 15 May 2009.

Contributed (unrefereed) Abstracts and/or Oral Presentations at Professional Meetings

Morgan, M. Discourses in the Anthropocene, Association of Environmental Studies and Sciences Annual Meeting, 28 June 2021.

Benson, M.H. Government, governance and the changing role of law, Annual Meeting of the Association of American Geographers, New Orleans, Louisiana, 11 April 2018.

Benson, M.H. Law, ontology and the new materialism, Annual Meeting of the Association of American Geographers, San Francisco, California, 29 March- 2 April 2016.

Benson, M.H. Legal geographies of the Valles Caldera National Preserve, Annual Meeting of the Association of American Geographers, Chicago, Illinois, 21-24 April 2015.

Benson, M.H. Water resources in the Middle Rio Grande: the resource, how it's used, and future challenges. Designing for Resilience in New Mexico, anticipating the real and potential effects of cultural and climatic changes. American Institute of Architects New Mexico Chapter Annual Conference, Albuquerque New Mexico, 28 August 2015 (panel moderator).

Benson, M.H. Regulatory takings: rights or relations? 2014 Joint Meeting of the Southwest and Great Plains-Rocky Mountain Divisions of the Association of American Geographers, Albuquerque, New Mexico, 24 October 2014.

Benson, et al. Adaptive governance and social-ecological system resilience in New Mexico's Rio Grande Valley, Association of Environmental Studies as Sciences Annual Meeting Pace University, New York, New York, 11-14 June, 2014.

Benson, M.H. Procedural rules and their spatial consequences. Law and Society Annual Meeting, Boston Massachusetts, 31 May- 2 June 2013.

Benson, M.H. Compelling government enforcement of environmental protections, Annual Meeting of the Association of American Geographers, Los Angeles, California, 9-12 April 2013.

Benson, M.H. The rules of engagement: the spatiality of judicial review. Annual Meeting of the Southwest Division Association of American Geographers, Las Cruces, New Mexico, 25-27 October 2012.

Harris, S., M. Harvey, M. Stone (presenter), R., Morrison, T., Caplan, G. Gustina, G., and **M.H. Benson, M. H.** Flow optimization for geomorphic and ecological improvements in the wild and scenic reach of the Rio Chama, New Mexico. Environmental & Water Resources Institute, American Society of Civil Engineers. Albuquerque, New Mexico, 2012.

Jones, J.A.(presenter), I. Creed, K. Hatcher, R. Warren, **M.H. Benson**, E. Boose, W. Brown, J. Campbell, A. Covich, D. Clow, C. Dahm, K. Elder, C. Ford, N. Grimm, D. Henshaw, K. Larson, E. Miles, K. Moore, S. Sebestyen, A. Stone, J. Vose, M. Williams. Ecosystem processes and human influences regulate streamflow response to climate

change at long-term ecological research sites. LTER 2012 All Scientists Meeting, Estes Park, Colorado, 10-13 September 2012.

Benson, M.H. The geographies of proof: a nomospheric investigation of the allocation of burdens embedded within the 'standing' requirement for environmental cases in the United States, Annual Meeting of the Association of American Geographers, Legal Geography and the Nomosphere, Power and Influence, session 3, New York, New York, 26 February 2012.

Benson, M.H. Burdens and ontologies: the geographies of proof, Law and Society Association Annual Meeting, San Francisco, California, 4 June 2011.

Benson, M.H. Geographies of Mt. Taylor, Association of American Geographers Annual Meeting, Session Geographies of Law and Environmental Regulation II, Seattle, Washington, 13 April 2011.

Benson, M.H. Intelligent tinkering: the Endangered Species Act, resilience theory, and the next generation of environment and natural resource management. Resilience 2011: Resilience, Innovation and Sustainability: Navigating the Complexities of Global Change" Second International Science and Policy Conference, Arizona State University, Phoenix, Arizona, 12 March 2011.

Garmestani, A.S. (presenter) and **M.H. Benson.** Actualizing panarchy within environmental policy: mechanisms for tweaking institutional hierarchies to mimic the social-ecological systems they manage. Law for Social-Ecological Resilience Conference, Stockholm, Sweden, 18 November 2010.

Benson, M.H. and A.S. Garmestani. The institutional integration of emerging theories regarding social-ecological systems. Association for Environmental Studies and Sciences, 2010 Conference, Portland, Oregon, 19 June 2010.

Garmestani, A.S. (presenter) and **M.H. Benson.** Embracing panarchy and building resilience. Association for Environmental Studies and Sciences, 2010 Conference, Portland, Oregon, 19 June 2010.

Miller, S.N. (presenter) and **M.H. Benson.** Assessment of coalbed natural gas active well migration in Wyoming's Powder River Basin: implications for adaptive management, Laramie, Wyoming, 25 May 2010.

Benson, M.H. Governing for resilience: institutionalized perceptions of stationarity and their implications for ecosystem-based adaptive management. American Association of Geographers Annual Conference, Washington, D.C., 18 April 2010.

Benson, M.H. Law and geography: examining intersections of theory and application within legal geography. Panel Discussion. American Association of Geographers Annual Conference Washington, D.C., 18 April 2010.

Benson, M.H. The National Environmental Policy Act: is it time to put teeth back in the tiger? The 32nd Applied Geography Conference, Baton Rouge Convention Center Hotel, Baton Rouge, Louisiana, 29 October 2009.

Benson, M.H. Are we addicted to oil? Lessons from mental health. Western Social Science Association Annual Conference, Albuquerque, New Mexico, 18 April 2009.

Benson, M.H. Influences of law and policy on coalbed methane development in Wyoming's Powder River Basin. Association of American Geographers Annual Meeting, Las Vegas, Nevada, 25 March 2009.

Benson, M.H. Environmental management trends. Panel Discussion. Association of American Geographers Annual Meeting, Las Vegas, Nevada, 25 March 2009.

Benson, M.H. Geologic carbon capture and sequestration: law and policy considerations. Research and Applications in Climate and Energy Workshop, University of Wyoming, Laramie, Wyoming, 23 January 2008.

Benson, M.H. Law on the landscape: how policy choices and legal designations shape the meaning of place. The Red Desert: Among Dead Volcanoes and Living Dunes: A Public Conversation about the Importance of Place, University of Wyoming, Laramie, Wyoming, 28 September 2007.

Benson, M.H. Assessment of current regulations and recommendations for needed changes. Moderator for Panel Discussion, Wyoming Law Review Symposium on Wyoming Energy Development: A Community and Regulatory Assessment, University of Wyoming College of Law, 13 February 2007.

Benson, M.H. Wildlife & energy development. Public Interest Environment Law Conference, University of Oregon, Eugene, Oregon, 14 March 2007.

Research Funding

Caroline Scruggs, **Melinda Morgan**, Jing Jing Wang, Alexandra Webster, Perspectives on Innovative Approaches in Agriculture to Managing Water Scarcity. UNM Advance Women in STEM Faculty Development Award (\$15,000)(6/20/21-6/2-/22).

Mark Stone, Julie Padowski, Ryan Morrison, Lani Tsinnajinnie (PIs), Janie Chermak, Karletta Chief, **Melinda Morgan**, Jan Boll, Courtney Flint, Richard Rushforth (Senior Personnel). Transforming Rural-Urban Systems: Trajectories for Sustainability in the Intermountain West Research Network. National Science Foundation Sustainable Regional Systems (\$15,000,000)(10/1/21-10/1/26).

Melinda Harm Benson. Law's geographies: procedural rules and spatial consequences. University of New Mexico Resource Allocations Committee. (2/1/13-9/1/14)(\$6,000).

Melinda Harm Benson. Building resilience in water governance: an interdisciplinary investigation into the social-ecological system dynamics of climate change. NSF EPSCoR Western Tri-State Consortium IWG. (1/1/2013-1/1/2014)(\$17,785).

Melinda Harm Benson. Geographies of Mt. Taylor: the Legal, Political and Cultural Implications of Proposed Uranium Mining Development in one of New Mexico's Sacred Spaces. University of New Mexico's Resource Allocations Committee. (1/1/2011-9/30/2011) (\$3,837).

Melinda Harm Benson. Legal and Institutional Barriers to Adaptive Management of Natural Resources in the United States. University of New Mexico Resource Allocations Committee. (2/15/09-9/30/09)(\$1,320).

Fred Ogden and **Melinda Harm Benson.** Integrated Management of Groundwater and Surface Water Resources: Investigation of Different Management Strategies and Testing in a Modeling Framework. University of Wyoming Water Research Program. (3/01/2007-02/28/2010) (\$140,248).

Scott N. Miller, Fred Ogden, Roger Coupal and **Melinda Harm Benson.** Integrating Coalbed Natural Gas Science and Management: Lessons Learned and Ways Forward." U.S. Department of Energy. (6/2/2006 -9/30/2008) (\$183,915).

Unfunded Research Proposals

Mark Stone, **Melinda Harm Benson,** and Jan Boll. PIRE Pre-Proposal. North-South Transect of the Americas: climate change effects on headwater storage and water resources resilience. 2017 (\$4,500,000).

Mahmoud Reda Taha, **Melinda Harm Benson,** Mark Stone. CRISP Type 2: Collaborative Research: Interdependent Dam Infrastructure - A Framework to Realize Resilience of Interdependent Physical, Natural, and Social Infrastructure Systems. National Science Foundation 2017 (\$1,561,622).

Mahmoud Reda Taha, Marsha Baum, **Melinda Harm Benson,** Manuel Montoya, and Mark Stone 2016. NRT-IGE: Resilience – The Dynamics of Bouncing Back. National Science Foundation 2016 (\$487,651).

Mahmoud Reda Taha, **Melinda Harm Benson,** and Mark Stone CRISP Type 2: Collaborative Research: Interdependent Dam Infrastructure - A Framework to Realize Resilience of Interdependent Physical, Natural, and Social Infrastructure Systems. 2016 (\$1,561,622).

Mark Stone, Janie Chermak, **Melinda Harm Benson,** Ryan Morrison, Vanessa Valentin, PhD, Dave Van Horn Impacts of Drought and Wildfires on Water Quality and Availability in the Upper Rio Grande Watershed. Funding Opportunity: National

Priorities: Systems-Based Strategies to Improve The Nation's Ability to Plan And Respond to Water Scarcity and Drought Due to Climate Change, EPAG2014- ORD-L1 PIs:, University of New Mexico, Albuquerque, New Mexico; Project Period and Location: 2015; Albuquerque, NM. Project Cost: \$1,000,000 (\$250,000 non-federal cost share).

Julie Coonrod, **Melinda Harm Benson**, Janie Chermak, Cliff Dahm, Grant Meyer, Sustainability of a System: Building Resilience in Governance and Water Regimes in the Rio Grande. National Science Foundation Water Climate and Sustainability Program Category I. 2011 (\$149,871).

Mark Stone, **Melinda Harm Benson**, Cliff Dahm and Janie Chermak. Capacity of a Social-Ecological System to Enhance Environmental and Economic Conditions in New Mexico's Rio Chama Watershed. National Science Foundation Coupled Human Natural Systems Exploratory Project. 2011 (\$249,302).

Derek Kauneckis, Barbara Cosens and **Melinda Harm Benson**. Resilience in water governance: building adaptive capacity within social-ecological systems facing climate change." NSF Science Technology and Society Program 2014 (\$489,000).

Melinda Harm Benson. Shifting the Environmental Governance Paradigm: Adaptive Management Methodologies in the United States. National Science Foundation Law and Social Science Program 2010 (\$162,589).

Teaching

Doctoral Advisement

Natalie Cáceres Arteaga (PhD, UNM Latin American and Iberian Studies): Women, rural development and climate change (Fall 2015-Spring 2020), committee member.

Noelle Hart (PhD, Natural Resources), University of Nebraska Lincoln, School of Environment and Natural Resources: "Resilience Thinking and Structured Decision Making in Social Ecological Systems, committee co-chair (Fall 2012-Spring 2015)

Ryan Morrison (PhD, UNM Civil Engineering), "Assessing the impacts of system uncertainty in environmental flow analyses, committee member (Spring 2013-Spring 2014)

Masters Advisement

Savannah ("Annie") Quintana-Eddins (M.S. Geography expected Spring 2023): Tribal Co-Management in New Mexico, advisor

Ellen Loerchner (M.S. Geography 2021): Uneven access to conservation programs: Who participates in private lands conservation and why?, co-advisor with Dr. Marygold Walsh-Dilly

Shannon Pepper (M.S. Geography 2021): Transborder discourse and management of saltcedar (*Tamarix* spp.) in the Chihuahuan desert, committee member

Laurel Ladwig (M.S. Geography 2020, with distinction): Backyard Wildlife Refuges in Albuquerque, NM: an Urban Land Ethic in Practice, committee member

Avery Young (M.S. Water Resources 2017): Rio Chama Adaptive Management, committee member

Tamarac Dyer (M.S. Water Resources 2017): the Canon de Carnué Land Grant and Collaborative Management, committee member

Joshua Page (M.S. Water Resources 2017): Consequences of severing water rights from farmland in the Middle Rio Grande, committee chair

Susanna Diller (M.S. Geography 2017): Human Experience and Social Valuation of Fountain Spaces in Denver and Albuquerque, committee member

Megan Hosterman (M.S. Community and Regional Planning 2016): resilience and recreational access in Santa Fe, committee member

Jordan Stone (M.S. Geography 2017): Environmental Education, committee chair

Kristin Long (M.S. Geography 2017): Urban Planning, committee chair

Kaisa Lappalainen (M.S. American Studies 2015): Wolf Reintroduction and Rural America, committee member

Jordy Hicks (M.S. Geography 2015): Bosque Place Identity, committee chair

Tina Faris (M.S. 2016): resilience and urban cities, committee member

Matt Piccarello (M.S. Water Resources and Community and Regional Planning 2013): A Resilience Based Approach to Natural Resource Management for Santa Clara Pueblo,

Crystiana M Baca-Bosiljevac (M.S. Geography 2014, with distinction): Social-ecological resilience of local food systems, committee chair

Steven Sutton (M.S. Geography 2013): (non thesis), committee member

Martin Martinez (M.S. Geography 2013): (non thesis), committee member

Mark Lawler (M.S. Geography 2013, with distinction): Collaborative processes for adaptive management of New Mexico's Rio Chama, committee chair.

Erin Marchand (M.S. Geography 2013): survey community perceptions of wolf reintroduction in southern New Mexico, committee chair

Imogen Ainsworth (M.S. Geography 2013): (non thesis), committee chair

Ralph Monfort (M.S. Water Resources 2012): Adaptive Management Methodologies and the Middle Rio Grande Endangered Species Act Collaborative Program, committee chair

Sarrah Kubinec (M.S. Geography 2012): (non thesis), committee chair

John Kavanaugh (M.S. Biology 2011): Brown Bear (*Ursus arctos*) Reintroduction to the American Southwest: A Feasibility Study, committee member

Matt Gagnon (M.S. Geography 2011): Management of the Valles Caldera National Preserve: the Recreationist Perspective, committee chair

Peggy Allison (M.S. Geography 2010): (non thesis), committee member

Drew Ignizio (M.S. Geography 2010): Suitability Modeling and the Location of Utility Scale Solar Power Plants in the United States, committee member

Rick Carpenter (M.S. Geography 2009): Toward Development of a Regional Water Authority: the Buckman Direct Diversion Project Case Study, committee member

Sara Henchey Brosnan (M.S. Water Resources 2009): A Case Study of Shortage Sharing in the San Juan Basin, committee member

B.S./B.A. Honors Thesis Advisement

Brendon Isaiah Nixon (B.S. Geography 2014): Comparison of Albuquerque School Districts' curriculum with national standards.

Andy Loerch (B.S. Geography 2014): Differences in solar insolation caused by shade/objects creating shade Locations where the mixing of artificial and natural snow melt occurs, committee member

David Jacobs (B.S. Geography 2010): The Glass Graveyard, committee member

Chris Sylvan (B.S. Geography 2010): Geography of Confined Feeding Operations in New Mexico, committee member

Classroom Teaching

2021-22

Fall, Natural Resources Seminar, Geog 514 (10 students)
Spring, Integrative Research Design, Geog 602 (5 students)

2020-2021

Fall, Land Use Management, Geog 360 (21 students)
Spring, Sustainability Synthesis, SUST 434 (7 students)

2019-2020

Fall, Environmental Problem Solving, ENR 5000 (8 students)
Spring, Research leave

2017-2019

On leave August 2017-January 2020

2016-2017

Fall, Public Land Management, Geog 463/563 (20 students)
Fall, Problems, Geog 491 (2 students)
Fall, Thesis, Geog 599 (1 student)
Fall, Professional Project, WRP 598 (1 student)
Spring, Seminar in Natural Resource Management, Geog 514 (6 students)
Spring, Nature and Society, Geog 365 (25 students)
Spring, Problems, Geog 491 (1 student)
Spring, Thesis, Geog 599 (1 student)
Spring, Applied Geography Internship, Geog 593 (1 student)
Spring, Masters Project, Geog 597 (1 student)

2015-2016

Fall, Water Resources Management, Geog 462/562 (27 students)
Fall, Seminar in Natural Resource Management, Geog 514 (10 students)
Fall, Professional Project, WRP 598 (1 student)
Spring, Nature and Society, Geog 365 (23 students)
Spring, Geog 599 (1 student)
Spring, Professional Project, WRP 598 (1 student)

2014-2015

Fall, Water Resources Management, Geog 462/562 (30 students)
Fall, Seminar in Natural Resource Management, Geog 514/LAW 593, (9 students)
Fall, Problems, Geog 491 (1 student)
Fall, Professional Project, WRP 598 (1 student)
Spring—sabbatical

2013-2014

Fall, Water Resources Management, Geog 462/562 (30 students)
Fall, Seminar in Natural Resource Management, Geog 514/LAW 593, (15 students)

Fall, Problems, Geog 491(1 student)
Fall, Thesis Geog 599 (1 student)
Spring, Nature and Society, Geog 365 (28 students)
Spring, Public Land Management, Geog 463/563 (19 students)
Spring, Thesis, Geog 599 (1 student)

2012-13

Fall, Environmental Management, Geog 461/561 (19 students)
Fall, Nature and Society, Geog 365 (26 students)
Fall, Internship (1 student)
Fall, Thesis, Geog 599 (2 students)
Spring, Public Land Management, Geog 463/563 (19 students)
Spring, Law and Geography Seminar, Geog 517 (5 students)
Spring, Internship (1 student)
Spring, Problems (1 student)
Spring, Thesis, Geog 599 (2 students)

2011-12

Fall, Environmental Management, Geog 461/561 (19 students)
Fall, Nature and Society, Geog 365 (26 students)
Spring, Water Resources Management, Geog 462/562 (28 students)
Spring, Seminar in Natural Resource Management, Geog 514 (13 students)
Spring, Professional Project, WRP 598 (1 student)

2010-11

Fall, Public Lands, Geog 463/563 (16 students)
Fall, Environmental Management, Geog 461/561 (21 students)
Spring—research semester

2009-10

Fall, Public Lands, Geog 463/563 (17 students)
Fall, Environmental Management, Geog 461/561 (20 students)
Spring, Thesis, Geog 599 (1 student)
Spring, Nature and Society, Geog 365 (30 students)
Spring, Seminar in Natural Resource Management, Geog 514 (16 students)
Spring, Thesis, Geog 599 (1 student)
Spring, Professional Project ,WRP 598 (1 student)

2008-9

Fall, Environmental Management, Geog 461/561 (19 students)
Spring, Nature and Society, Geog 499 (13 students)
Spring, Seminar in Natural Resource Management, Geog 499/Law 593 (8 students)

Service

Editorships

Associate editor, *Society & Natural Resources* (2017)

Co-editor with Craig Allen and Ahjond Garmestani of the *Ecology and Society* Special Feature on “Law and Social-Ecological Resilience, Part I” (2013)
<http://www.ecologyandsociety.org/issues/view.php/feature/78>

Reviews books, journals and reports (partial listing)

Routledge (Governing International Environmental Law book proposal, 2021)

Higher Education Policy (2020)

Ecology and Society (2011, 2012, 2013, 2014, 2016, 2017)

Journal of Environmental Management (2010)

Water Resources Research (2009, 2010)

Journal of Natural Resources Policy Research (2011)

Society and Natural Resources (2013)(2021)

Geoforum (2013)

Geographical Research (2022)

Antipode (2013)

Environment and Planning A (2013, 2015, 2016, 2017)

Environmental Science & Policy (2014)

Annals of the Association of American Geographers (2014, 2015)

Ecological Applications (2015, 2015)

Administrative work in Department, College, University Committees

Director, Sustainability Studies Program, Department of Geography and Environmental Studies, 2020-present

Associate Chair, University of New Mexico, Department of Geography and Environmental Studies, 2015-17, 2020-present

Personnel Committee Chair, University of New Mexico, Department of Geography and Environmental Studies, 2015-2017; 2020-present

Member, Curriculum Committee, University of New Mexico, Department of Geography and Environmental Studies, 2015-2017; 2020-present

Search Committee Chair, Lecturer II, Department of Geography and Environmental Studies, 2021

Academic Program Review Team, Department of Economics, University of New Mexico, 2021

UNM 2040 Task Force: Goal Five: Sustainability, 2021

College of Arts and Sciences, Retention Committee, Full Professor Review, 2021

Leadership Team, UNM's Grand Challenge in Sustainable Water Resources, 2020-present

Review Committee, Program for Enhancing Research Capacity (PERC) internal funding, competition. Office of the Vice President for Research, 2021

Steering committee, Resilience Institute Annual Colloquium, 2021

College of Arts and Sciences, Retention Committee, Midprobationary Review, 2020

University Service while Dean at the University of Wyoming, 2017-2020

Chair, Agriculture and Natural Resource Dean Search Committee, 2018-2020

Chair, Interdisciplinary Tenure and Promotion Policy Working Group, 2018-2020

Member, University Research Planning Council, January 2018-2020

Member Centers and Institutes Taskforce, April 2018-2020

Member, University Faculty Engagement & Facilities Taskforce, 2018-2020

Member UW Strategic Improvement Working Group, March 2019-2019

Associate Chair, University of New Mexico, Department of Geography and Environmental Studies, 2015-17

Personnel Committee Chair, University of New Mexico, Department of Geography and Environmental Studies, 2015-2017

Member, Curriculum Committee, University of New Mexico, Department of Geography and Environmental Studies, 2015-2017

Chair, Search Committee, Assistant Professor in GIScience, University of New Mexico, Department of Geography and Environmental Studies, 2015-2016

Director, Undergraduate Studies, University of New Mexico, Department of Geography and Environmental Studies, 2012-2014

Masters Assessment Team Member, Department of Geography, University of New Mexico, September 2008-2009

B.A. Assessment Team Member, Department of Geography, University of New Mexico, September 2008-2009

Member, Faculty Steering Committee, Water Resources Program, University of New Mexico, 2009-2014

Member, University of New Mexico Truman Scholarship Selection Committee, 2014-2017

Member, Search Committee, Water Resource Program Director, Water Resources program, December 2012-2013

Member, Search Committee, University of New Mexico, Department of Geography, Part-time Instructor, September 2012-2013

Member, Search Committee, University of New Mexico, Department of Geography, Department Chair, 2008-10

External Communications Coordinator, Department of Geography, University of New Mexico, September 2008-2012