

Melinda Harm Benson
Department of Geography and Environmental Studies

Employment History

Associate Professor, 2014-present

Assistant Professor, 2008-2014

UNIVERSITY OF NEW MEXICO, GEOGRAPHY AND ENVIRONMENTAL STUDIES DEPARTMENT; affiliated faculty with the College of Law, the Water Resources Program, and Sustainability Studies

Lecturer and Research Scientist, 2004-08

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

Staff Attorney, 2002-04

WESTERN RESOURCE ADVOCATES

Natural Resources Law Institute Fellow, 2001-02

LEWIS & CLARK LAW SCHOOL

Staff Attorney, 1999-2001

LAND AND WATER FUND OF THE ROCKIES (now known as Advocates for the West)

Law Clerk, 1998-99

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

State Affairs Director and Lobbyist, 1992-95

IDAHO CONSERVATION LEAGUE

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 the Public Realm: a Practical and Theoretical Consideration of Plurality*. Advisor: Deborah Baumgold.

Professional Recognition Honors, etc.

Daniel B. Luten Award, Award for Best Paper, Association of American Geography
Energy and Environment Specialty Group, 2011
Selection, Editorial Board, Idaho Law Review, 1997-98
George Warren Scholar, University of Idaho, 1995-98
Harry S. Truman Scholar, Truman Scholarship Foundation, 1988
Century III Leadership Scholar, Shell Oil Company, 1987

Articles in Refereed Journals and Law Reviews

Benson, M.H. (2016). Shifting Public Land Management Paradigms: Lessons from the Valles Caldera National Preserve. *Virginia Environmental Law Review*, 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*; DOI 10.1007/s13412-015-0326-9

Benson, M.H. (2015). Reconceptualizing social-ecological relations – is resilience the new narrative? 21 *Journal of Environmental and Sustainability Law* 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*; <http://dx.doi.org/10.1080/08941920.2014.901467>

Benson, M.H., D. Llewellyn, R. Morrison and M. Stone (2014). Water Governance Challenges in New Mexico's Middle Rio Grande Valley: a Resilience Assessment, *Idaho Law Review* 51:195-228.

Cosens, B.; Gunderson, L.; Allen, C.; **Benson, M.H.** (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

Benson, M.H. and C. Schultz. (2015) “Adaptive Management and the Law.” Adaptive Management of Social-Ecological Systems. Craig R. Allen, Ahjond S. Garmestani, eds. New York: Springer.

Benson, M.H. (2014) “The Rules of Engagement: the Spatiality of Judicial Review” in *Expanding the Spaces of Law* Irus Braverman, David Delaney, Alexander Kedar and Nick Blomley, eds. 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*. Craig Allen and Ahjond Garmestani, eds. 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*. Douglas Kenney and Robert Wilkinson, eds. 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*. David Naugle, ed. Island Press: Washington, D.C.

Other Writings

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).

Benson, M.H. *How to Get What You Want to Know: a Practitioner's Guide to the Freedom of Information Act*, WYOMING LAWYER (October 2003).

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.

Selected Works in Progress

Books

Benson M.H. and R.C. Craig. The End of Sustainability: Resilience, Narrative, and Climate Change in Environmental Governance (book contracted signed in November 2014 with University Press of Kansas for publication in 2017).

Articles in Refereed Journals in Review

Benson, M.H. Law, geography and the Fifth Amendment's aspatial turn (revise and resubmit submitted for review September 2015)

Articles Appearing in Chapters of Edited Volumes in Review

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

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

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 December 18, 2015.

Llewellyn, D., **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. 28-29, Grand Junction, Colorado at Colorado Mesa University, 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, NM 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 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 MO, 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, 27 February 2013.

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

Benson, M.H. Reconceptualizing social-ecological relations – is resilience the new narrative? University of Nebraska Lincoln, 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, 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, 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, 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, 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, NM, 16 March 2010.

Benson, M.H. Climate Change: Implications for Environmental and Land Use Planning and Management. Collaborative Adaptive Management Network Annual Rendezvous, Tucson, AZ, 9 March 2010.

Garmestani, A.S. 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

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

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 June 11-14, 2014.

Benson, M.H. Procedural rules and their spatial consequences. Law and Society Annual Meeting, Boston Massachusetts, May 31-June 2 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, 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., 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, CA, 4 June 2011.

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. 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, 12 March 2011.

Garmestani, A.S. 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. and **M.H. Benson.** Embracing Panarchy and Building Resilience: Reworking Environmental Laws to Address Wicked Problems. Association for Environmental Studies and Sciences, 2010 Conference, Portland, Oregon, 19 June 2010.

Miller, S.N. and **M.H. Benson.** Assessment of Coalbed Natural Gas Active Well Migration in Wyoming's Powder River Basin: Implications for Adaptive Management, Energy Resources and Produced Water Conference, 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, 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, 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 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, February 2007.

Benson, M.H. Wildlife & Energy Development. Public Interest Environment Law Conference, University of Oregon, March 2007.

Research Funding

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

“Building resilience in water governance: an interdisciplinary investigation into the social-ecological system dynamics of climate change.” Lead PI, NSF EPSCoR Western Tri-State Consortium IWG Proposal \$17,785.

“Rio Chama-El Vado to Abiquiu Reservoirs: Flow Reoperation to Optimize Ecosystem Function, Water Supply and River-Based Recreation.” Steve Harris, Rio Grande

Restoration. New Mexico Environment Department River Ecosystems Restoration Initiative. (M.H. Benson subcontract for adaptive management implementation and facilitation) (1/1/2011-6/30/2013) \$189,386.

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

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

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

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

Pending Research Funding/In Progress

Collaborator, National Socio-Environmental Synthesis Center (SESYNC) pursuit *Social-Ecological System Resilience, Climate Change and Adaptive Water Governance* (2013-present).

Unfunded Research Proposals

“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 Principal Investigators: Mark Stone, PhD, PE, DWRE, stone@unm.edu, Janie Chermak, PhD, jchermak@unm.edu, Melinda Harm Benson, JD, mhbenso@unm.edu. Ryan Morrison, PhD, PE, rmorriso@unm.edu, Vanessa Valentin, PhD, vv@unm.edu, Dave Van Horn, PhD, vanhorn@unm.edu, Institution: University of New Mexico, Albuquerque, New Mexico Project Period and Location: 02/01/15 to 01/31/18; Albuquerque, NM, Project Cost: \$1,000,000 (\$250,000 non-federal cost share).

“Shifting the Environmental Governance Paradigm: Adaptive Management Methodologies in the United States.” Melinda Harm Benson. National Science Foundation Law and Social Science Program (5/1/2011-6/30/2013) (submitted 8/15/10) (\$162,589).

“Sustainability of a System: Building Resilience in Governance and Water Regimes in the Rio Grande.” Julie Coonrod, Melinda Harm Benson, Janie Chermak, Cliff Dahm, Grant

Meyer, National Science Foundation Water Climate and Sustainability Program Category I. (submitted October 2011)(\$ 149,871).

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

“Geographies of Judicial Review: procedural rules and their spatial consequences.” Melinda Harm Benson. Lead PI. NSF Law and Social Sciences Program (1/15/2014) \$150,000.

“Resilience in water governance: building adaptive capacity within social-ecological systems facing climate change.” Co-PI with Derek Kauneckis, Barbara Cosens. NSF Science Technology and Society Program (2/15/14) \$ 489,000).

Teaching

Doctoral Advisement

Nati Cáceres Arteaga (PhD UNM Latin American and Iberian Studies): women, rural development and climate change (Fall 2015-present), Geography concentration chair

Noelle Chaine, (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 2012-2015)

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

Masters Advisement

Tina Faris, M.S. (Geography expected 2016): resilience and urban cities, committee member (Fall 2015-present).

Jordon Stone (M.S. Geography expected 2017): Environmental Education, committee chair (Fall 2015-present).

Kristin Long (M.S. Geography expected 2017): Urban Planning, committee chair (Fall 2015-present).

Kaisa Lappalainen (M.S. American Studies expected 2015): Wolf Reintroduction and Rural America, committee member (Spring 2013 to present)

Jordy Hicks (M.S. Geography expected 2015): Bosque Place Identity, committee chair (Fall 2013-present)

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

Cristiana 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

Patricia Dominguez (M.S. Water Resources expected 2014): Impact of National Environmental Policy Act analyses on proposed uranium mining on the Cibola National Forest, New Mexico, committee member

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): 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

2008-9

Fall, Geog 461/561, Environmental Management (19)

Spring, Geog 499.05, Nature and Society (13)

Spring, Geog 499.011/Law 593.011: Sem. in Natural Resource Management (8)

2009-10

Fall, Geog 463/563, Public Lands (17)

Fall, Geog 461/561, Environmental Management (20)

Spring, Geog 599 (Thesis) (1)

Spring, Geog 365, Nature and Society (30)

Spring, Geog 514, Seminar in Natural Resource Management (16)

Spring, Geog 599 (Thesis) (1)

2010-11

Fall, Geog 463/563, Public Lands (16)

Fall, Geog 461/561, Environmental Management (21)

Spring—research semester

2011-12

Fall, Geog 461/561, Environmental Management (19)

Fall, Geog 365, Nature and Society (26)

Spring, Geog 462/562, Water Resources Management (28)

Spring, Geog 514, Seminar in Natural Resource Management (13)

Spring WRP 598 (Professional Project) (1)

2012-13

Fall, Geog 461/561, Environmental Management (19)

Fall, Geog 365, Nature and Society (26)

Fall, Internship (1)
Fall, Geog 599 (Thesis) (2)
Spring, Geog 463/563, Public Land Management (19)
Spring, Geog 514, Law and Geography Seminar (5)
Spring, Internship, (1)
Spring, Problems, (1)
Spring, Geog 599 (Thesis) (2)

2013-2014

Fall, Geog 462/562, Water Resources Management (30)
Fall, Geog 514/LAW 593, Seminar in Natural Resource Management (15)
Fall, Geog 491 (Problems) (1)
Fall Geog 599 (Thesis)(1)
Spring, Geog 365 (28)
Spring, Geog 463/563 (19)
Spring, Geog 491 (Problems)
Spring, Fall Geog 599 (Thesis)(1)

2014-2015

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

2015-2016

Fall, Geog 462/562, Water Resources Management (27)
Fall, Geog 514, Seminar in Natural Resource Management (10)
Fall WRP 598 (Professional Project) (1)

Curriculum Development or Teaching Administrative Positions

Environmental Management, Fall 2008
Nature and Society, Spring 2009
Natural Resource Management Seminar, Spring, 2009
Public Land Management, Fall, 2009
Water Resources Management, Spring 2012
Law and Geography Seminar, Spring 2013

Service

Editorships

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>.

Reviewing books, journals reports

Book chapter for Prentice-Hall. (2009)

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

Journal of Environmental Management (2010)

Water Resources Research (2009, 2010)

Journal of Natural Resources Policy Research (2011)

Society and Natural Resources (2013)

Geoforum (2013)

Antipode (2013)

Environment and Planning A (2013) (2015)

Environmental Science & Policy (2014)

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

Ecological Applications (2015, 2015)

Review of Nie & Schultz, Decision-making Triggers, Decision-making Triggers in Adaptive Resource Management [DRAFT REPORT], at request of USDA Pacific Northwest Research Station, 2012

Reviewer of Lutten and Cook Award paper competition, Association of American Geographer's Energy and Environment Specialty Group, 2013

Administrative work in Department College, University Committees

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

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

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

Acting Co-chair, Curriculum Committee, University of New Mexico, Department of Geography and Environmental Studies, Spring 2015

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

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-present

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

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

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

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

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

Affiliated Faculty: UNM College of Law

Affiliated Faculty: UNM Water Resources Program

Affiliated Faculty: UNM Sustainability Studies

Community Service, Memberships, Affiliations, Bar Admission

Member, National Council of the Association of American Geographers Constitution and Bylaws Committee, July 2010-2013

Member, Association of American Geographers, 2008-present

Member, Association of American Geographers Water Specialty Group, 2008-present

Member, Association of American Geographers Energy and Environment Specialty Group, 2008-present

Member, Law and Society Association, 2009-present

Member, Association for Environmental Studies and Sciences, 2009-present

Founding Member, Transdisciplinary Research Group, University of New Mexico, 2008-2010.

Admitted to Practice in Idaho and Wyoming, U.S. District Court of Idaho, U.S. District Court of Wyoming; U.S. Court of Appeals for the Ninth Circuit

Professional Development

Office of Support for Effective Teaching Workshop. Getting Students to Really Discuss. February 12, 2013

Community and Regional Planning 513. Qualitative Research Methods. University of New Mexico School of Architecture and Planning. Spring 2011

National Science Foundation. EPSCoR NSF Day in New Mexico. 17 March 2011

Office of Support for Effective Teaching Workshop. Designing Courses for Effective Student Learning. 20-21 May 2010

Workshop on Participatory Research sponsored by the Ortiz Center with guest lecturer Carl Wilmsen Ph.D. 20 November 2009

Office of Support for Effective Teaching New Faculty Discussion Group: "What the Best College Teachers Do." Six-week discussion group hosted by the University of New Mexico Office of Support for Effective Teaching, Fall 2009

Faculty Institute. Geography Faculty Alliance Early Career Workshop, One-week residential workshop hosted by the Geography Faculty Development Alliance July 2008, Boulder Colorado

Guest Lectures

Lecture on New Mexico domestic well statute. Groundwater Hydrology, College of Engineering, University of New Mexico, October 2015.

Lecture on Resilience and the End of Sustainability. Environmental Ethics, University of Calgary College of Law, September 2015.

Lecture on Legal Geography, Anthropology 240/550. Power and Culture in the Americas. April 2013

Lecture on Environmental Governance, Geography 364, April 2011, 2012, 2013

Lecture on Environmental Governance in CRP 580 Community Growth and Land Use Planning, April 2009, 2010, 2011

Lecture on Standing as an Environmental Requirement. Art and Ecology. February 2010

Service at Academic Conferences

Session chair and co-organizer. Law and Geography Sessions I, II and III. Association of American Geographers Annual Meeting, San Francisco, California, 9 April 2016.

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).

Session chair and organizer. Law's geographies. 2014 Joint Meeting of the Southwest and Great Plains-Rocky Mountain Divisions of the Association of American Geographers, Albuquerque, New Mexico, 24 October 2014.

Session chair and organizer. Academic Publishing Discussion Panel 2014 Joint Meeting of the Southwest and Great Plains-Rocky Mountain Divisions of the Association of American Geographers, Albuquerque, New Mexico, 24 October 2014.

Session chair and co-organizer. Bridging Practice and Theory with Legal Geography Sessions I, II and III. Association of American Geographers Annual Meeting, 9 April 2013, Los Angeles, California

Session chair, Law and Geography Roundtables I, II The Future of Law and Geography. Association of American Geographers Annual Meeting, 9 April 2013, Los Angeles, California

Session Co-organizer. Law's Geographies Annual Meeting of the Southwest Division Association of American Geographers. 25-27 October 2012, Las Cruces, New Mexico

Session Co-Organizer. Legal Geography and the Nomosphere, Power and Influence, sessions 1, 2 and 3. Annual Meeting of the Association of American Geographers, New York, New York. 24-28 February 2012

Session Co-Organizer. Governance, polycentricity, markets, and multilevel challenges. Resilience 2011: Resilience, Innovation and Sustainability: Navigating the Complexities of Global Change. Second International Science and Policy Conference, Arizona State University Tempe Arizona. 11-16 March 2011

Session Co-Organizer. "Law and Geography: Examining Intersections of Theory and Application within Legal Geography, Sessions 1, 2, and 3. American Association of Geographers Annual Conference Washington, D.C. 18 April 2010

Session Organizer. "Environmental Management Trends. Association of American Geographers Annual Meeting. Las Vegas, Nevada. 25 March 2009.