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Department of Environmental Studies  
Cooperative Institute for Research in Environmental Sciences  
University of Colorado  
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**EDUCATION**

1997 Ph.D., University of California, Santa Barbara, CA Biological Sciences  
1989 B.A., Harvard University, Cambridge, MA Biology, *magna cum laude*

**EXPERIENCE**

2020-present Professor, Environmental Studies, University of Colorado, Boulder, CO  
2014-2021 Director, Western Water Assessment, University of Colorado, Boulder  
2015-2020 Associate Professor, Environmental Studies, University of Colorado, Boulder, CO  
2008-2015 Assistant Professor, Environmental Studies, University of Colorado, Boulder, CO  
2004-2007 Visiting Fellow, Center for Science and Technology Policy Research, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder CO  
2002-2004 Visiting Scientist to Project Scientist II, Environmental and Societal Impacts Group, National Center for Atmospheric Research, Boulder CO  
1997-2002 Program Manager, Carbon Cycle Program, and Associate Program Manager for Ocean-Atmosphere Carbon Exchange Study and Atlantic Climate Change Program, Office of Global Programs, National Oceanic and Atmospheric Administration, Silver Spring, MD.  
1996-1997 National Sea Grant Fellow, International Development, Office of Global Programs, National Oceanic and Atmospheric Administration, Silver Spring, MD

**PROFESSIONAL SERVICE/ACTIVITY HIGHLIGHTS**

2018-present Member, NASA Applied Sciences Advisory Board  
2017-present Domain Editor, Vulnerability and Adaptation, WIRES Climate Change  
2016-present Member, Aspen Global Change Institute Advisory Board, Aspen CO USA  
2019-2021 Member, U.S. National Academy of Sciences, Environment, and Medicine Study Committee, “Developing a Research Agenda and Research Governance Approaches for Climate Intervention Strategies that Reflect Sunlight to Cool Earth”  
2017-2020 Member, Advisory Board, Research Applications Lab., National Center for Atmospheric Research  
2016-2020 Editor, Social Science, Bulletin of the American Meteorological Society (BAMS)  
2013 Review Editor, National Climate Assessment. United States.  
2011-2017 Member, Advisory Board, Advancing Knowledge Systems to Inform Climate Adaptation Decisions (ICAD), European Research Council project based at University of Leeds, UK  
2011-2015 Member, Board of Scientific Counselors (BOSC), Office of Research and Development, U.S. EPA  
2011-2018 Member, Advisory Board, Decision Center for a Desert City, Arizona State University, Tempe AZ  
2011 Co-Chair, AMS Conference on Climate Adaptation, Asheville NC  
2008-2011 Member, UCAR President’s Advisory Committee on University Relations  
2008-2010 Co-Editor of Journal, Weather, Climate and Society

2008-2012	Carbon Cycle Science Working Group (for the US Global Change Research Program)
2008-present	CIRES Fellow
2004-2007	Co-Lead, State of the Carbon Cycle Report (SAP 2.2), Climate Change Science Program
2005-2006	DISsertation Initiative for the advancement of Climate Change ReSearch (DISCCRS) Mentor
2004	SOARS (Significant Opportunities in Atmospheric Research and Science) Mentor
2003-2006	Carbon, Climate and Society Initiative, IGERT Program, University of Colorado, Boulder
2003-2005	North American Carbon Plan (NACP) Implementation Strategy Group
2003-2004	Project Manager, Assessment Initiative, National Center for Atmospheric Research
1999-2002	Co-Chair, Carbon Cycle Interagency Working Group, U.S. Global Change Research Program

## GRANTS AND AWARDS

- PI (Co-Lead), Western Water Assessment: Building resilience to compound hazards in the Intermountain West. NOAA Grant. 2021-2026.
- Visiting Fellow. Center for Climate Adaptation Science and Solutions. University of Arizona, February 2020.
- Co-PI, CU Boulder NC CASC: Driving innovation in co-producing science to help resource managers in the North Central region adapt to a changing world. U.S. Department of Interior Grant, 2018-2023.
- Leverhulme Visiting Professorship, Hosted by University of Oxford, UK. Leverhulme Foundation UK. 2016-2017.
- PI, Grand Challenge Seed Grant: Bringing Innovative Data Science Down to Earth. CU Innovative Seed Grant. 2016-2017.
- Co-PI, Advancing the Use of Drought Early Warning Systems in the Upper Colorado River Basin. NOAA Grant. 2016-2018.
- PI, Western Water Assessment: Building Climate Resilience by Design. NOAA Grant. 2015-2020.
- PI, Balancing Severe Decision Conflicts under Climate Extremes in Water Resource Management. NOAA Grant. 2014-2016.
- PI, Processes of Knowledge Co-production for Climate Adaptation Decision-Making in Semi-Arid Regions. NSF Grant. 2014-2016.
- PI, Identifying Constraints to and Opportunities for Co-production of Climate Information for Improved Food Security Among Agro-pastoral Populations in Tanzania. USAID Grant. 2013-2014.
- PI, Knowledge, Power and the Coproduction of Climate Information for Adaptation to Climate Change in Tanzania. CU Innovative Seed Grant Competition. 2012-2013.
- Co-PI, Carbon management on public lands in the Intermountain West: multi-scale analysis of carbon stock responses to human and natural disturbances. USDA grant. 2011-2014.
- PI, Evaluating adaptive policies for urban water resource management: Interactions between short-term drought responses and long-term climate change adaptation strategies. NOAA Grant. 2010-2012
- PI and Co-Lead, State of the Carbon Cycle Report. NASA Cooperative agreement 2004-2007
- PI, Scales of Decision-Making and the Carbon Cycle. NOAA Grant. 2004-2007
- Co-PI and Exec. Director, Science Policy Assessment and Research on Climate for Decision-Making Under Uncertainty. NSF Grant. 2004-2011.
- CIRES Visiting Fellowship 2004-2007
- NOAA Cash Award, 1998, 1999, 2000, 2001
- Dean John A. Knauss Marine Policy Fellowship, 1995
- National Science Foundation Graduate Fellowship, 1991-1993

## PEER-REVIEWED JOURNAL ARTICLES (Underline indicates student author)

40. Dilling, L., Lemos, M.C., Singh, N. (2021). Commentary: First, do no harm: Scaling usable knowledge for just and equitable outcomes. *Global Environmental Change*  
<https://doi.org/10.1016/j.gloenvcha.2021.102404>
39. Henderson, J.\*, **Dilling, L.**, Wilhelmi, O., Morss, R., Rick, U. (2021) “We got in the pilot program to learn from it.” Features of social learning in drought contexts along the Arkansas River in Colorado. *Weather, Climate and Society* 13(4) 729-741. DOI: <https://doi.org/10.1175/WCAS-D-20-0120.1>

38. Page, R. and **L. Dilling** (2020). How experiences of climate extremes motivate adaptation among water managers. *Climatic Change*, doi: [10.1007/s10584-020-02712-7](https://doi.org/10.1007/s10584-020-02712-7)
37. Daly, M. E. and **Dilling, L.** 2019. The politics of ‘usable’ knowledge: Examining the development of climate services in Tanzania. *Climatic Change* 157:61-80. <https://doi.org/10.1007/s10584-019-02510-w>
36. Page, R. and **Dilling, L.** 2019. The critical role of communities of practice and peer learning in scaling hydroclimatic information adoption. *Weather, Climate and Society* 11: 851-862  
<https://doi.org/10.1175/WCAS-D-18-0130.1>
35. **Dilling, L.**, Prakash, A., Zommers, Z., Ahmad, F., Singh, N., De Wit, S., Nalau J., Daly, M., Bowman, K. 2019b. **Invited** Comment: Is adaptation success a flawed concept? *Nature Climate Change*, 8 (8) 572-574: 1758-678x <https://doi.org/10.1038/s41558-019-0539-0> [Invited and reviewed by NCC editors].
34. **Dilling, L.**, Berggren, J., Henderson, J.\* and Kenney, D. 2019. Savior of rural landscapes or Solomon’s Choice? Colorado’s experiment with Alternative Transfer Methods for water (ATMs). *Water Security* 6. <https://doi.org/10.1016/j.wasec.2019.100027> [**Invited** for special issue]
33. Smith, R., Kasprzyk, J., and **Dilling, L.** 2019. Testing the potential of multiobjective evolutionary algorithms (MOEAs) with Colorado water managers. *Environmental Modeling and Software* 117:149-163  
<https://doi.org/10.1016/j.envsoft.2019.03.011>
32. Lemos, M.C., Eakin, H., **Dilling, L.**, and Worl, J. 2019. Ch. 26. Social Sciences, Weather, and Climatic Change. **Invited** contribution to American Meteorological Society 100 year Anniversary Monograph. <https://doi.org/10.1175/amsmonographs-d-18-0011.1>
31. **Dilling, L.**, Daly M., Klein R., Kenney D., Miller K., Ray A., Travis W., Wilhelmi O. 2018. Drought in urban water systems: Learning lessons for climate adaptive capacity. *Climate Risk Management*.  
<https://doi.org/10.1016/j.crm.2018.11.001>
30. **Dilling, L.**, R. Morss, and O. Wilhelmi. 2018. Learning to Expect Surprise: Hurricanes Harvey, Irma, Maria, and Beyond. *Journal of Extreme Events*, Vol. 4, No. 3, doi: 10.1142/S2345737617710014
29. Averyt, K., Derner, J., **Dilling, L.\***, Guerrero R., Joyce L., McNeeley, S., McNie E., Morisette J., Ojima, D., O’Malley, R., Peck, D., Ray, A., Reeves, M., Travis, W. 2018. Regional Climate Response Collaboratives: Multi-Institutional Support for Climate Resilience. *Bulletin of the American Meteorological Society*, May 2018 pp. 891-898. <https://doi.org/10.1175/BAMS-D-17-0183.1> \* *corresponding author*.
28. Wibeck, V., Hansson, A., Anshelm, A., Asayama, S., **Dilling, L.**, Feetham, P.M., Hauser, R., Ishii, A., Sugiyama, M. 2017. Making sense of climate engineering: a focus group study of lay publics in four countries. *Climatic Change* 145:1-2 pp.1-14. <http://doi.org/10.1007/s10584-017-2067-0>
27. Smith, R., Kasprzyk, J., **Dilling, L.** 2017. Participatory Framework for Assessment and Improvement of Tools (ParFAIT): increasing the impact and relevance of water management decision support research. *Environmental Modeling and Software* 95: 432-446. <http://dx.doi.org/10.1016/j.envsoft.2017.05.004>
26. **Dilling, L.**, Pizzi, E., Berggren, J., Ravikumar, A., Andersson, K. 2017. Drivers of Adaptation: Responses to weather- and climate-related hazards in 60 local governments in the Intermountain Western U.S. *Environment and Planning A*, 1-21 DOI: 10.1177/0308518X16688686
25. Kirchoff, C. J., and **Dilling, L.** 2016. The role of US states in facilitating effective water governance under stress and change. *Water Resources Research*, <http://doi.org/10.1002/2015WR018431>

24. **Dilling, L., Kelsey K.C.**, Fernandez, D.P., **Huang, Y.D.**, Milford, J.B., Neff, J.C. 2016. Managing Carbon on Federal Public Lands: Opportunities and Challenges in Southwestern Colorado. *Environmental Management*, 1–14. <http://doi.org/10.1007/s00267-016-0714-2>
23. **Dilling, L., Daly, M.,** Travis, W., Wilhelmi, O. and R. Klein. 2015. The dynamics of vulnerability: Why adapting to climate variability may not always prepare us for climate change. *WIREs: Climate Change* 2015. DOI: 10.1002/wcc.341
22. **Dilling, L., Lackstrom, K., Haywood, B.,** Dow, K., Lemos, M.C., **Berggren, J., Kalafatis, S.** 2015. What Stakeholder Needs Tell Us about Enabling Adaptive Capacity: The Intersection of Context and Information Provision across Regions in the United States. *Weather, Climate and Society* 7(1):5-17 DOI: 10.1175/WCAS-D-14-00001.1
21. **Dilling, L. and J. Berggren.** 2015. What do stakeholders need to manage for climate change and variability? A document-based analysis from the Intermountain West region of the U.S. *Regional Environmental Change* 15(4):657-667 DOI 10.1007/s10113-014-0668-y
20. **Archie, K.M., L. Dilling,** J.B. Milford, and F.C. Pampel. 2014. Unpacking the ‘information barrier’: Comparing perspectives on information as a barrier to climate change adaptation in the interior mountain West. *Journal of Environmental Management* 133:397-410. DOI 10.1016/j.jenvman.2013.12.015
19. **Dilling, L. and R. Hauser.** 2013. Governing Geoengineering Research: Why, When and How? *Climatic Change* 121(3): 553-565. DOI 10.1007/s10584-013-0835-z
18. **Dilling, L.,** and E. **Failey.** 2013. Managing carbon in a multiple use world: The implications of land-use decision context for carbon management. *Global Environ. Change* 23(1): 291-300. <http://dx.doi.org/10.1016/j.gloenvcha.2012.10.012>
17. **Archie, K. M., L. Dilling,** J. B. Milford, and F. C. Pampel. 2012. Climate change and western public lands: a survey of U.S. federal land managers on the status of adaptation efforts. *Ecology and Society* **17(4)**: 20. <http://dx.doi.org/10.5751/ES-05187-170420>
16. **Ellenwood, M., L. Dilling** and J.B. Milford. 2012. Managing U.S. Public Lands in Response to Climate Change: A view from the ground up. *Environmental Management*. DOI 10.1007/s00267-012-9829-2
15. McNeeley, S. et al. (including **L. Dilling**). 2012. Catalyzing Frontiers in Water-Climate-Society Research: A View from Early Career Scientists and Junior Faculty. *Bulletin of the American Meteorological Society* April 2012. DOI:10.1175/BAMS-D-11-00221.1
14. Morss, R., Wilhelmi, O., Meehl, G., and **L. Dilling.** 2011. Improving Societal Outcomes of Extreme Weather in a Changing Climate: An Integrated Perspective. *Annual Review of Environment and Resources.* 36:16.1-16.25. doi:10.1146/annurev-environ-060809-100145
13. **Dilling, L.** and M.C. Lemos. 2011. Creating usable science: Opportunities and constraints for climate knowledge use and their implications for science policy. *Global Environmental Change* 21:680-689. doi:10.1016/j.gloenvcha.2010.11.006
12. Hale, B. and **L. Dilling.** 2011. Geoengineering, Ocean Fertilization, and the Problem of Permissible Pollution. *Science, Technology and Human Values.* 36(2): 190-212. doi:10.1177/0162243910366150.
11. **Failey, E.** and **L. Dilling.** 2010. Carbon stewardship: Land management decisions and the potential for carbon sequestration in Colorado, USA. *Environmental Research Letters*, 5 doi:10.1088/1748-9326/5/2/024005

10. Lemos, M.C. and **L. Dilling**. 2007. Equity in forecasting climate: Can science save the poor? *Science and Public Policy*, 34(2): 109-116. <https://doi.org/10.3152/030234207X190964>
9. **Dilling, L.** 2007. Towards science in support of decision making: Characterizing the supply of carbon cycle science. *Environmental Science and Policy* 10:48-61. <https://doi.org/10.1016/j.envsci.2006.10.008>
8. **Dilling, L.** 2007. Commentary: The opportunities and responsibility for carbon cycle science in the U.S. *Environmental Science and Policy* 10:1-4.
7. **Dilling, L.** 2007. Toward carbon governance: Challenges across scales in the United States. *Global Environmental Politics*, 7(2): 28-44. <https://doi.org/10.1162/glep.2007.7.2.28>
6. Moser S. and **L. Dilling**. 2004. Making Climate Hot: Communicating the urgency and challenge of global climate change. *Environment* 46: 32-46.
5. **Dilling L.** and M.A. Brzezinski. 2004. Quantifying marine snow as a food choice for zooplankton using stable silicon isotope tracers. *Journal of Plankton Research* 26:1105-1114.
4. **Dilling L.**, Doney S, Edmonds J, Gurney KR, Harriss R, Schimel D, Stephens B, and G. Stokes. 2003. The role of carbon cycle observations and knowledge in carbon management. *Annual Review of Environment and Resources* 28:521-58. <https://doi.org/10.1146/annurev.energy.28.011503.163443>
3. **Dilling L.** and A.L. Alldredge. 2000. Fragmentation of marine snow by swimming macrozooplankton: A new process impacting carbon cycling in the sea. *Deep Sea Res. I* 47:1227-1245.
2. **Dilling L.**, Wilson J., Steinberg D., and A.L. Alldredge. 1998. Feeding by the euphausiid *Euphausia pacifica* and the copepod *Calanus pacificus* on marine snow. *Mar. Ecol. Prog. Ser.* 170: 189-201. doi:10.3354/meps170189
1. **Dilling L.** and A.L. Alldredge. 1993. Can chaetognath fecal pellets contribute to carbon flux? *Mar. Ecol. Prog. Ser.* 92:51-58.

#### PEER-REVIEWED BOOK CHAPTERS

6. Simpson, C., **Dilling, L.**, Dow, K., Lackstrom, K., Lemos, M.C. and R. Riley. 2016. Applying different approaches to assessing needs and decision contexts. In: *Climate in Context: Science and Society Partnering for Adaptation*. Parris, A. and Garfin, G. [Eds.]. Wiley and Sons.
5. Gordon, E., **Dilling, L.**, McNie, E., and A. Ray. 2016. Navigating Scales of Knowledge and Decision Making in the Intermountain West: Implications for Science Policy. In: *Climate in Context: Science and Society Partnering for Adaptation*. Parris, A. and Garfin, G. [Eds.]. Wiley and Sons.
4. **Dilling, L.** 2015. Adaptation. Invited Contribution to: *Research Handbook on Climate Governance*. Bäckstrand, K., and Lövbrand E., Eds., Edward Elgar Publishing, Sweden.
3. **Dilling, L.**, and R. Romsdahl. 2013. Chapter 10: Promoting Adaptation Success in Natural Resource Management Through Decision Support: Lessons from the Great Plains and Rocky Mountain Regions. **Invited** Contribution for *Successful Adaptation to Climate Change: Linking Science and Practice in a Rapidly Changing World*. Moser and Boykoff, Eds. Routledge Press.
2. **Dilling, L.**, Birdsey R., and Y. Pan. 2013. Chapter 18: Opportunities and Challenges for Carbon Management on U.S. Public Lands. **Invited** Contribution for *Land Use and the Carbon Cycle: Science and*

Applications in Human and Environment Interactions. Robinson, Brown, French and Reed, Eds. Cambridge University Press.

1. Moser, S. and **L. Dilling**. 2011. Communicating Climate Change: Closing the Science Action Gap. **Invited** contribution for Oxford Handbook of Climate Change and Society. Dryzek, Norgaard, and Schlosberg, Eds. Oxford University Press.

### BOOK

Moser, S. and **L. Dilling**, Eds. 2007. Creating a Climate for Change: Communicating Climate Change—Facilitating Social Change. Cambridge University Press, Cambridge UK.

### OTHER BOOK CHAPTERS

3. **Dilling, L.** and B. Farhar. 2007. Making it Easy: Establishing Energy Efficiency and Renewable Energy as Routine Best Practice. In: Moser S and Dilling L., Eds. Creating a Climate for Change: Communicating Climate Change—Facilitating Social Change. Cambridge University Press.
2. **Dilling, L.** and S. Moser. 2007. Introduction. In: Moser S and Dilling L., Eds. Creating a Climate for Change: Communicating Climate Change—Facilitating Social Change. Cambridge University Press.
1. Moser, S. and **L. Dilling**. 2007. Toward the Social Tipping Point: Creating a Climate for Change. In: Moser S and L. Dilling, Eds. Creating a Climate for Change: Communicating Climate Change—Facilitating Social Change. Cambridge University Press.

### PEER-REVIEWED NATIONAL REPORTS

5. National Academies of Sciences, Engineering, and Medicine. 2021. *Reflecting Sunlight: Recommendations for Solar Geoengineering Research and Research Governance*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25762>. (Dilling was member of committee and co-author of report)
4. Liverman, D., S. C. Moser, P. S. Weiland, **L. Dilling**, M. T. Boykoff, H. E. Brown, E. S. Gordon, C. Greene, E. Holthaus, D. A. Niemeier, S. Pincetl, W. J. Steenburgh, and V. C. Tidwell. 2013. “Climate Choices for a Sustainable Southwest.” In Assessment of Climate Change in the Southwest United States: A Report Prepared for the National Climate Assessment, edited by G. Garfin, A. Jardine, R. Merideth, M. Black, and S. LeRoy, 405–435. A report by the Southwest Climate Alliance. Washington, DC: Island Press.
3. Michalak, A. et al. (with **L. Dilling**). 2011. A U.S. Carbon Cycle Science Plan. University Corporation for Atmospheric Research. 69 pp.
2. **Dilling, L.**, Mitchell R., Fairman D. M., Lahsen M., Moser S., Patt A., Potter C., Rice C., and S. VanDeveer, 2007: How Can We Improve the Usefulness of Carbon Science for Decision Making? In: The First State of the Carbon Cycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [King, A.W., L. Dilling, G.P. Zimmerman, D.M. Fairman, R.A. Houghton, G. Marland, A.Z. Rose, and T.J. Wilbanks (eds.)]. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, USA, pp. 49-56.
1. CCSP. 2007. The First State of the Carbon Cycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [King, A., **Dilling, L.**, Fairman, D., Houghton, R., Marland, G., Rose, A., Wilbanks, T. (eds.)]. National Oceanic and Atmospheric Administration, Climate Program Office, Silver Spring, MD, USA, National Climatic Data Center, Asheville, NC, USA, 242 pp. [**Dilling** served as Co-Lead of report, Lead Author, and co-Editor]

### OTHER REPORTS

**Dilling, L., K. Clifford, E. McNie, J. Lukas, and U. Rick.** 2018. [Making Research More Usable at CU Boulder](#). Western Water Assessment Report, February, 26 pp.

**Dilling, L.** (as Co-Lead and one of several co-authors). 2010. Usable Science: A Handbook for Science Policy Decision Makers. Published by SPARC, a Decision Making Under Uncertainty project funded by the National Science Foundation.

Denning, A.S. et al. (with **L. Dilling**). 2005. Science Implementation Strategy for the North American Carbon Program. Report of the NACP Implementation Strategy Group of the U.S. Carbon Cycle Interagency Working Group. Washington, DC: U.S. Carbon Cycle Science Program, 68pp. Available online: <http://www.nacarbon.org/nacp/documents.html>

### **BOOK REVIEWS**

**Dilling, L.** 2006. Book review of: Assessments of Regional and Global Environmental Risks: Designing Processes for the Effective Use of Science in Decisionmaking, Edited by Alexander Farrell and Jill Jäger, *Environment* October 2006, p.40.

**Dilling, L.** 2003. Book review of: Climate Change Policy: A Survey Edited by Stephen H. Schneider, Armin Rosencranz, and John O. Niles. *Environment* 45 (10):37-38.

### **PRESENTATIONS** (from January 2008. underline indicates student author)

Dilling, L. Invited Speaker, CCRUN Adaptation Webinar: Drivers of Adaptation: Why do some cities take more actions in the face of hazards and others don't? Online Webinar, May 6, 2020.

Dilling, L. Invited CCASS Visiting Fellow Talk. Is Adaptation Success a Flawed Concept? University of Arizona, Tucson, AZ. February 20, 2020.

Dilling, L. Invited Plenary Speaker, Dialogues and Discourse Conference at University of California Davis. November 4, 2019.

Dilling, L. Invited Speaker, Yampa Basin Rendezvous. Steamboat, CO. June 2019.

Dilling, L., Livneh, B., Badger, A., Lukas, J., and Page, R. Advancing the use of drought early warning systems in the Upper Colorado River Basin. CIRES Rendezvous, CU Boulder, May 2019.

Arens, S., Clifford, K., Ehret, S., Dilling, L., Duncan, B., Henderson, J., Rick, U., Lukas, J., Rangwala, I., Page, R. Adapting the VCAPS process to drought planning in the Intermountain West. CIRES Rendezvous, CU Boulder, May 2019.

Dilling, L. Getting real with climate adaptation: New questions for research. Invited talk, Earth Lab symposium, April 18, 2019 CU Boulder.

Dilling, L. Adaptation and surprises: Managing water for a resilient future. Invited Plenary Presentation Hydrologic Sciences Symposium, April 12, 2019 CU Boulder.

Dilling, L. Making research more usable: Notes from the field. Usable Science workshop, CU Boulder, March 8 2019.

Dilling, L. Learning from Decision Making on Drought, Floods and other Hazards: Lessons for Climate Adaptation. Presentation to Scripps Fellows at the Center for Environmental Journalism, CU Boulder, February 20, 2019.

Page, R., Dilling, L. and U. Rick. Scaling knowledge innovation to smaller water providers: A focus on communities of practice. American Geophysical Union, December 12, 2018.

Dilling, L. Advancing the use of drought early warning systems in the Upper Colorado River Basin: Project Overview. SARP Project Workshop, August 1, 2018.

Dilling, L. Beyond Communication: Understanding the decision context for use of drought information in practice. **Invited Presentation**, Natural Hazards Workshop, Broomfield CO July 11, 2018.

Livneh, B., Badger, A., Lukas, J., Page, R. and L. Dilling. Characterizing the robustness of snowpack-based drought indicators in the Upper Colorado River Basin. GEWEX Meeting, May, 2018.

Dilling, L. Watershed Summit Panelist, Denver Botanic Gardens, June 30, 2018.

Dilling, L. Convener, Session on Embracing Complexity: The challenges of measuring and defining adaptation success. Adaptation Futures Conference, Cape Town, South Africa, June 19, 2018.

Dilling, L., and R. Page. Beyond communication: Understanding the decision context for the use of climate information in practice. Invited Talk, American Association of Geographers Annual Meeting. April 10, 2018.

Henderson, J., Dilling, L., Rick, U., Morss, R., and O. Wilhelmi. Dynamics of vulnerability in drought contexts. American Meteorological Society Annual Meeting, Austin TX, January 9, 2018

Dilling, L. The role of place-based, sustained networks for resilient drought management. American Meteorological Society Annual Meeting, Austin TX, January 7, 2018.

Dilling, L. Water security and adaptive capacity for climate: Learning lessons from drought decision making in U.S. urban contexts. **Invited presentation**, American Geophysical Union, New Orleans, LA, December 11, 2017.

Livneh, B. (invited), A.M. Badger, J. J. Lukas, L. Dilling, and R. Page. Characterizing Drought Risk Management and Assessing the Robustness of Snowpack-based Drought Indicators in the Upper Colorado River Basin. American Geophysical Union Fall Meeting, New Orleans, LA, Dec 2017

Kasprzyk JR, Smith, R, Raseman WJ, DeRousseau MA, Dilling L, Ozekin K. Collaborative Workshops for Assessment and Creation of Multi-Objective Decision Support for Multiple Sectors. American Geophysical Union Fall Meeting, New Orleans, December 2017

Dilling, L. Learning from decision making on droughts, floods and others hazards: Lessons for climate adaptation and new directions for research. ENVS Colloquium, University of Colorado Boulder, November 29, 2017.

Page, R and Dilling, L. What decision context tells use about advancing drought information use: Insights from Western Slope water systems. Upper Colorado River Basin Water Forum, Colorado Mesa State University, November, 2017

Livneh, B., A.M. Badger, J. J. Lukas, and L. Dilling. Assessing the robustness of spring snowpack as a drought indicator in the Upper Colorado River Basin under future climate change. Upper Colorado River Basin Water Forum, Colorado Mesa State University, Nov 2017

Dilling, L. Learning Lessons from managing drought: Adaptation in an interconnected, uncertain world. **Invited presentation**, University of Utah, October 3, 2017.

Dilling, L. Urban water systems: Drought response lessons for climate change adaptation. **Invited presentation**, London Climate Change Partnership. July 25<sup>th</sup> 2017.



Dilling, L. Urban water systems: Drought response lessons for climate change adaptation. **Invited presentation**, London School of Economics. July 24<sup>th</sup> 2017.

Dilling, L. The dynamics of vulnerability: What droughts and flooding can teach us about adapting to climate change. University of Oxford. June 13<sup>th</sup> 2017.

Smith, R., Kasprzyk J.R., Dilling, L., Basdekas, L., Kaatz, L. A Participatory Process to Improve the Relevance and Impact of Decision Support Research: MOEAs on the Front Range of Colorado. World Environmental and Water Resources Congress, Sacramento, CA. May 25, 2017

Dilling, L. Digging deeper into climate adaptation: What the management of drought in U.S. cities can teach us about the dynamics of vulnerability and adapting to climate change. **Invited presentation**, University of Leeds. May 10<sup>th</sup> 2017.

Dilling, L. Drivers of adaptation at the local level: How do differences in worldviews and risk tolerance matter? **Invited presentation**, University of Exeter. March 23<sup>rd</sup> 2017.

Kelsey, K., Dilling, L., Fernandez, D., Huang Y., Milford J., Neff J., Managing Carbon on Federal Lands: Opportunities and Challenges in Southwestern Colorado, 2017 Forest Vegetation Simulator e-Conference, hosted by Forest Management Service Center, Ft. Collins CO, Feb 28 - March 2, 2017. Oral Presentation.

Dilling, L. Surprise and the dynamics of vulnerability: What drought and flooding in urban areas can teach us about climate adaptation. **Invited presentation**, King's Climate Group, King's College London, February 25, 2017.

Lincoln, S., Dilling, L., Ray, A., and Daly, M. Drought, Growth, and Climate Adaptation: A Case Study of Water Management in Las Vegas. American Meteorological Society Annual Meeting, Seattle, WA, January 26-27, 2017.

Smith, R., Kasprzyk J.R., Dilling, L., Basdekas, L., Kaatz, L. Improving the relevance and impact of decision support research: A co-production framework and water management case study. Fall Meeting of the American Geophysical Union, San Francisco, CA, December 2016.

Smith, R., Kasprzyk J.R., Basdekas, L., Dilling, L. Producing regionally-relevant multiobjective tradeoffs to engage with Colorado water managers. Fall Meeting of the American Geophysical Union, San Francisco, CA, December 2016.

Smith, R., Kasprzyk J.R., Dilling, L. Participatory Framework for Assessment and Improvement of Tools (ParFAIT): Increasing the impact and relevance of water management decision support research. Washington, DC. November 16-17, 2016.

Dilling, L., Daly, M.D., Goldman, M.S., Lovell, E. Power and Process: Shaping Knowledge Landscapes for Adaptation in Tanzania. 4S/EASST Annual Meeting. Barcelona, Spain August 31-Sept. 4, 2016.

Lincoln, S., Dilling, L., Ray, A., and Daly, M. Drought, Growth, and Climate Adaptation: A Case Study of Water Management in Las Vegas. Hollings Scholar Summer Colloquium, Washington DC. August 2, 2016.

Dilling, L. Learning from Stakeholder Needs and Enabling Adaptive Capacity: A synthesis from the US West. Climate Adaptation Futures: Fourth International Climate Change Adaptation Conference, Rotterdam, Netherlands, May 8-13, 2016.

Dilling, L. Usable science in a contentious world: Science policy, risk tolerance and moving toward clumsy

solutions. **Invited Presentation**, Sarmiento Symposium, Princeton University, March 2016.

Smith, R., Kasprzyk J.R., Dilling, L. Co-Production with Water Managers to Improve Applicability and Adoption of an Emerging Decision Support Tool. Fall Meeting of the American Geophysical Union, San Francisco, CA, December 2015.

Smith, R., Kasprzyk J.R., Dilling, L. Co-Producing a Many Objective Problem Formulation to Support Water Management in the Front Range. American Water Resources Association Annual Water Resources Conference, Denver, CO, November 2015.

Daly, M. and Dilling, L. A problem-oriented analysis of the Global Framework for Climate Services. Policy Sciences Annual Institute, Washington, DC, October 14, 2015.

Dilling, L. The dynamics of vulnerability: Why adapting to climate variability won't always prepare us for climate change. Upper Colorado River Basin Water Forum, October 28, 2015.

Smith, R., JR Kasprzyk, L Dilling. Co-Producing a Many Objective Problem Formulation to Support Water Management in the Front Range. American Society of Civil Engineers' World Environmental & Water Resources Congress, Austin, TX, May 2015.

Dilling, L. What have we learned about stakeholder needs and enabling adaptive capacity? A synthesis of selected WWA research related to the North Central region. North Central Climate Science Center Open Science Conference, Fort Collins, CO, May 20-22, 2015.

Dilling, L., Morss, R. and O. Wilhelmi. Colorado's September 2013 Floods: What does surprise teach us about vulnerability in high adaptive capacity systems? American Meteorological Society Annual Meeting, Phoenix, AZ, January 4-8, 2015.

Dilling, L., Berggren, J., Ravikumar, A., and K. Andersson. The role of risk perception and other drivers in adaptation to weather- and climate-related hazards at the municipal scale in the US Mountain West. Society for Risk Analysis, Denver, CO, Dec. 9, 2014.

Dilling, L. Adapting to climate change: Does it pose new challenges to governance and public policy? **Invited Presentation** at Climate Governance Handbook Workshop, Linköping, Sweden, May 7-9, 2014.

Dilling, L., Andersson, K., Berggren, J., and Ravikumar, A. Adaptation at the municipal scale in the US Mountain West: What drives action in the face of weather and climate-related hazards? Climate Adaptation Futures: Third International Climate Change Adaptation Conference, Fortaleza, Brazil, May 12-16, 2014.

Dilling, L., Daly M., Klein R., Wilhelmi O., Kenney, D., Travis W., Ray, A., and Miller, K. The Dynamics of Vulnerability and Implications for Climate Change Adaptation: Lessons from Urban Water Management. American Geophysical Union Annual Meeting, San Francisco CA, December 9-13, 2013.

Dilling, L., and M. Daly. Carbon management in Colorado, USA and adaptation in Northern Tanzania: An examination of conditioning factors affecting the ability to deliver knowledge in support of decisions. Annual Policy Sciences Institute, Collegeville PA, October 25-26, 2013.

Dilling, L., Berggren, J., Ravikumar, A., Bardsley, T., and K. Andersson. Adaptation to climate-related hazards in Colorado, Wyoming and Utah: Explaining differences in local responses. 11th Annual CPASW (Climate Prediction Applications Science Workshop) in Logan, UT, April 23-25, 2013.

- Dilling, L. Making adaptive decisions in the face of climate change: Progress, barriers and the role of scientific information. **Invited Colloquium Speaker**, Lewis and Clark College of Law School, Portland Oregon. April 15, 2013.
- Dilling, L., Berggren, J., Ravikumar, A., Bardsley, T., and K. Andersson. Adaptive actions: Why communities take them and implications for vulnerability. National Adaptation Forum, Denver, CO April 3, 2013.
- Dilling, L., Fernandez D., Milford, J., Kelsey, K., Barger, N. and J. Neff. Mapping decision zones for carbon management in the San Juan National Forest. 4th Annual North American Carbon Program All-Investigators Meeting, Albuquerque NM. Feb. 4-7, 2013.
- Dilling, L., Ravikumar A., Berggren J., and K. Andersson. Adaptation to climate-related hazards in Colorado, Wyoming and Utah: Explaining differences in local responses. American Meteorological Society Annual Meeting. Austin, TX. January 7-11, 2013.
- Archie, K., Dilling, L., Milford J, and F Pampel. Climate Change Adaptation in the Western US: Differences in top-down vs bottom-up policy responses. International Conference on the Culture and Politics of Climate Change, University of Colorado Boulder, September 2012
- Dilling, L. **Invited Plenary Presentation**: SREX and moving forward with climate adaptation. Annual Natural Hazards Research and Applications Workshop. Broomfield, CO. July 15, 2012.
- Dilling, L., Daly, M., Klein, R., Wilhelmi O., and Travis, W. The dynamics of vulnerability: Why adapting to climate variability may not always prepare us for climate change. Climate Adaptation Futures: Second International Climate Change Adaptation Conference 2012. Tucson, AZ, May 29-31, 2012.
- Dilling, L. and R. Romsdahl. Defining adaptation success in natural resource management. **Invited Panel presentation** at Climate Adaptation Futures: Second International Climate Change Adaptation Conference 2012. Tucson, AZ, May 29-31, 2012.
- Dilling, L. Ownership of the goal of producing usable science. **Invited Panel presentation** at Climate Adaptation Futures: Second International Climate Change Adaptation Conference 2012. Tucson, AZ, May 29-31, 2012.
- Dilling, L., Andersson K., Ravikumar A., and C. Brown. Local adaptation strategies: Perceptions and responses to hazards by municipalities in Colorado, Wyoming and Utah. ICARUS Conference on Climate Adaptation, New York, New York, May 19-21, 2012
- Dilling, L., Daly M., Klein R., Wilhelmi O., and W. Travis. Dynamics of Vulnerability: Why adapting to climate variability may not always prepare us for climate change. ICARUS Conference on Climate Adaptation, New York, New York, May 19-21, 2012
- Dilling, L. **Invited Presentation**: Some [possibly] heretical notions on what motivates policy action and what the role of communication might be. Forum on the Challenge of Communicating the Climate Change Crisis. World Renewable Energy Forum, Denver, Colorado May 15 2012.
- Dilling, L. Climate adaptation barriers and opportunities in the United States: A focus on policy and decision making at the sub-national scale. Planet Under Pressure International Conference, London, United Kingdom, March 26-29, 2012.
- Dilling, L., Dow K., Lemos M.C., Lackstrom K., Berggren J., Kalafatis S., Haywood B., and R. Henry. **Invited Presentation**: Toward a framework for assessing stakeholder needs in responding to climate change across spatial and temporal scales. American Meteorological Society Annual Meeting. New Orleans, LA. January 22-26, 2012.

- Dilling, L. Matching the production of scientific knowledge to needs across scales: The implications of climate adaptation decision making for science policy. 2011 Atlanta Conference on Science, Technology and Innovation Policy. Atlanta, GA September 15-17, 2011.
- Dilling, L. Facilitating Usable Science: Experience from the use of seasonal climate forecasts. **Invited Presentation** for the American Chemical Society Annual Meeting, Denver, CO. August 28 – September 1, 2011.
- Dilling, L., Dow K., Lemos M.C., Lackstrom K., Berggren J., Kalafatis S., Haywood B., and R. Henry. Building and comparing stakeholder databases and networks across RISAs. American Meteorological Society Conference on Climate Adaptation. Asheville, NC. July 18-20, 2011.
- Kirchhoff, C. and L. Dilling. Science Informing Policy? Understanding Drivers and Constraints to Improved Water Management in a Changing Climate. Asheville, NC. July 18-20, 2011.
- Berggren, J. and L. Dilling. Analyzing expressed stakeholder needs in the Western Water Assessment RISA. American Meteorological Society Conference on Climate Adaptation. Asheville, NC. July 18-20, 2011.
- Archie, K. and L. Dilling. The role of information in climate change adaptation on Western Public Lands. American Meteorological Society Conference on Climate Adaptation. Asheville, NC. July 18-20, 2011.
- Morss, R., Wilhelmi O., Dilling L., Hayden M. H., and G. Meehl. Extreme weather and community-based climate adaptation: An integrated framework with an application to extreme heat. American Meteorological Society Conference on Climate Adaptation. Asheville, NC. July 18-20, 2011.
- Daly, M., Klein, R., Dilling L., Travis W., Kenney D., Wilhelmi O., Miller K., and A. J. Ray. Evaluating Interactions of Drought and Climate Change Adaptation Policy for Urban Water Resource Management. American Meteorological Society Conference on Climate Adaptation. Asheville, NC. July 18-20, 2011.
- Daly, M., Klein, R., and L. Dilling (Presenter). **Invited Presentation:** Urban water management and Adaptation to Climate Change: Preliminary research on how responses to drought condition adaptive capacity. University Council on Water Resources. Boulder, CO July 14, 2011.
- Kirchhoff, C. and L. Dilling. Managing Water Resources in a Changing Climate: Understanding Drivers and Constraints to Adaptation Policy and Planning across Scales and Levels of Decision Making, Colorado Conference on Earth System Governance, Fort Collins, CO. 17-20 May 2011.
- Archie, K. and L. Dilling. Climate Change Adaptation and Western Public Lands: Do Decision Makers Have the Information and Tools They Need to Govern? Colorado Conference on Earth System Governance, Fort Collins, CO. 17-20 May 2011.
- Kirchhoff, C. and L. Dilling. Managing Water Resources in a Changing Climate: Understanding Drivers and Constraints to Adaptation Policy and Planning across Scales and Levels of Decision Making Association of American Geographers. Association of American Geographers. Seattle, WA. April 12-16, 2011.
- Archie, K. and L. Dilling. Climate Change Adaptation and Western Public Lands: Do Decision Makers Have the Information and Tools They Need to Govern? Association of American Geographers. Seattle, WA. April 12-16, 2011.
- Dilling, L. When is geoengineering research “just research”? The role of research framing in light of the use of technology. Gordon Research Conference on Science and Technology Policy, Waterville NH, August 8-13, 2010.

- Dilling, L. The weakest link: The uptake of knowledge on vulnerability into decision making. Climate Adaptation Futures Conference, Gold Coast, Australia. June 29-July 1, 2010.
- Dilling, L. Lessons Learned but not Applied: Adaptation Knowledge and Policy Uptake. ICARUS (Initiative for Climate Adaptation Research and Understanding through the Social Sciences) Workshop on Climate Variability and Adaptation: Theory and Cases Workshop held at Beckman Institute, University of Illinois, Urban Champaign, Feb 10-13, 2010.
- Dilling, L. **Invited Presentation:** Providing policy-relevant information for greenhouse gas management: Perspectives from science and technology policy research. American Geophysical Union, San Francisco, December 16, 2009.
- Dilling, L. **Invited Plenary Speaker:** "Social Science and Decision Support in Carbon Cycle Science Planning", Ocean Carbon and Biogeochemistry Program Summer Meeting, Woods Hole, MA July 20, 2009
- Dilling, L. The urgency of the climate change challenge: Is governance “getting in the way” of progress? Oral Presentation, The IARU International Scientific Congress on Climate Change, Copenhagen, Denmark, March 10-12, 2009.
- Dilling, L. and E. Failey. Land use decision making as a driver of carbon sequestration at multiple scales: A Colorado case study'. **Plenary Presentation**, North American Carbon Program Principle Investigators' Meeting, San Diego, CA, February 20th, 2009.
- Dilling, L. U.S. science policy for climate change adaptation: A preliminary evaluation. Oral presentation at the American Meteorological Society Annual Meeting, Phoenix AZ, January 14th, 2009.
- Dilling, L. and E. L. Failey. Management of carbon across sectors and scales: Insights from land use decision making. Oral presentation at the American Geophysical Union Fall meeting, San Francisco, CA, December 19th, 2008.
- Dilling, L. **Invited Presentation:** Communicating about climate change: Moving beyond the myths toward more effective strategies for societal engagement. Colorado State University Department of Atmospheric Science, December 3, 2008.
- Dilling, L. Carbon management strategies. **Invited presentation** for the Denver Regional Council of Governments. Nov. 20<sup>th</sup>, 2008.
- Dilling, L. Climate change, adaptation strategies and the use of information. **Invited presentation** for the Denver Regional Council of Governments. Nov. 19<sup>th</sup>, 2008.
- Dilling, L. A new direction for global climate change governance. Poster presentation, Energy Initiative Symposium, Nov. 17<sup>th</sup>, 2008, University of Colorado, Boulder.
- Dilling, L. **Invited presentation:** "The Usefulness of Carbon Science for Decision-Making," at "Designing Climate Change Policy: Implementing California AB 32," University of Southern California. May 21-22, 2008.
- Hale B. and L. Dilling. “Carbon Sequestration, Ocean Fertilization, and the Problem of Permissible Pollution”, Presentation to Energy & Responsibility: A Conference on Ethics and the Environment. University of Tennessee, Knoxville, April 10-12, 2008.

Dilling, L. Societal aspects of prediction. **Invited presentation** at IMDA workshop, ATOC program, University of Colorado, Boulder. April 2008.

Dilling, L. "Scales of decision-making in land use and carbon management," University of Colorado, Department of Geography – Colloquia Spring 2008. February 28, 2008.

Dilling, L. Carbon sequestration as a policy option for addressing climate change: technical and governance perspectives. Center for Environmental Journalism Colloquium. Feb. 2008.

Dilling, L. Creating a climate for Change: Rethinking communication and climate change, CU Environmental Engineering, February 8, 2008.

Dilling, L. Climate Change Communication Challenges, panel for CU's "Focus the Nation: Campus Teach-in on Global Warming" January 31, 2008.

### **PROFESSIONAL MEMBERSHIPS**

American Geophysical Union; American Meteorological Society; The Society for the Policy Sciences; Association for Environmental Studies and Sciences