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## **Degrees**

Doctor of Philosophy, Geography, University of Colorado  
Master of Resource Management, Natural Resources Management, Simon Fraser University  
Bachelor of Independent Studies (Honours), Stormwater Management, University of Waterloo

## **Recent employment**

Professor, Department of Political Science and Faculty Fellow, Public Policy Center,  
University of Nebraska, Lincoln, Nebraska, 2007 - present  
Associate Professor and Associate Director (preceded by being Assistant Professor),  
School of Planning, University of Waterloo, Waterloo, Ontario, 2001 - 2007

## **Awards, honors**

Fulbright Canada Distinguished Chair in Environmental Science, Carleton University, Ottawa,  
Ontario, Canada  
Advanced Study Program Faculty Fellowship, National Center for Atmospheric Research,  
Boulder, Colorado  
Gilbert F. White Fellowship, Resources for the Future, Washington, District of Columbia  
Ciriacy-Wantrup Postdoctoral Fellowship in Environmental Economics,  
University of California, Berkeley, California  
Stuart Nesbitt White Research Fellowship, Emergency Preparedness Canada,  
University of Colorado, Boulder, Colorado

## **Research and Scholarship**

### **Areas of interest**

Water resources policy and governance  
Uncertainty and knowledge uptake in public policy decision making  
Science-policy interface  
Comparative environmental policy  
Regional governance

\*co-authored with student(s)

### Refereed publications – forthcoming and published

- Michaels, S.** Forthcoming. Laying the policy groundwork for considering integrated uncertainty. In Mearns, L., Forest, C., Fowler, H., Lempert, R. and Wilby, R. (eds.) *Uncertainty in Climate Change Research: An Integrated Approach*. New York, NY: Springer.
- Cruse, L., Cooper, B, **Michaels, S.** and Connor, J. 2020. Is Australian water policy reform transferable globally, given future climate extremes? *Climate Policy* 20:5:641-651.
- Michaels, S.** and Gruszczynski M. 2016. Venue matters: Deliberating on Missouri River water diversions in congressional committee hearings. *Journal of Contemporary Water Research & Education Issue* 158:August 2016:132-147.
- de Loë, R., Murray, D., **Michaels, S.** and Plummer, R. 2016. Policy transfer among regional-level organizations: Insights from source water protection in Ontario. *Environmental Management* 58:1:31-47.
- Michaels, S.** 2016. Probabilistic forecasting and the reshaping of flood risk management in *Designing Water Disaster Management Policies: Theory and Empirics*. (ed.) Gopalakrishnan, C. New York: Routledge, pp. 41-51. Initially published in *Journal of Natural Resources Policy Research*, 2015, 7:1:41-51.
- Gruszczynski, M.W. and **Michaels, S.** 2014. Localized concerns, scientific argumentation, framing and federalism. *Journal of Natural Resources Policy Research* 6:2-3:173-193.
- Michaels, S.**, Holmes, J. and Shaxson, L. 2014. Science communication and the tension between evidence-based and inclusive features of policy making in *New Trends in Earth Science Outreach and Engagement: The Nature of Communication*. (eds.) Drake, J. L., Kontar, Y. Y. and Rife, G. *Advances in Natural and Technological Hazards Research*. New York, NY: Springer 38:83-92.
- \*Hamm, J.A., PytlikZillig, L.M., Herian, M.N., Tomkins, A.J., Dietrich, H. and **Michaels, S.** 2013. Trust and intention to comply with a water allocation decision: The moderating roles of knowledge and consistency. *Ecology and Society* 18:4:49. [online] URL: <http://www.ecologyandsociety.org/vol18/iss4/art49/>.
- \*Gruszczynski, M.W. and **Michaels, S.** 2012. The evolution of elite framing following enactment of legislation. *Policy Sciences* 45:4:359-384.
- Michaels, S.** and Tyre, A.J. 2012. How indeterminism shapes ecologists' contributions to managing socio-ecological systems. *Conservation Letters* 5:4:289-295.
- Tyre, A.J. and **Michaels, S.** 2011. Confronting socially generated uncertainty in adaptive management. *Journal of Environmental Management* 92:5:1365-1370.
- Michaels, S.** and de Loë, R. 2010. Importing notions of governance: Two examples from the history of Canadian water policy. *American Review of Canadian Studies* 40:4:495-507.
- Michaels, S.** 2009. Matching knowledge brokering strategies to environmental policy problems and settings. *Environmental Science and Policy* 12:7:994-1011.
- Platt, R.H., Beatley, T., **Michaels, S.**, Goucher, N. and Fenstermacher, B. 2008. Urban stream restoration: Recovering ecological services in degraded watersheds in Birch, E.L. and Wachter, S.M. (eds.) *Growing Greener Cities: Urban Sustainability in the Twenty-First Century*. Philadelphia, PA: University of Pennsylvania Press, pp. 127-151.

**Refereed publications (continued)**

- \***Michaels, S.**, McCarthy, D. and Goucher, N. 2007. Information management for water resources: Concepts and practice in Hanna, K. and Slocombe, D.S. (eds.) *Integrated Resource and Environmental Management: Concepts and Practice*. Don Mills, ON: Oxford University Press, pp. 220-235.
- \***Michaels, S.**, Goucher, N. and McCarthy, D. 2006. Policy windows, policy change and organizational learning: Watersheds in the evolution of watershed management. *Environmental Management* 38:6:983-992.
- \***Michaels, S.**, Goucher, N. and McCarthy, D. 2006. Considering knowledge uptake within a cycle of transforming data, information and knowledge. *Review of Policy Research* 23:1:267-279.
- Michaels, S.** 2005. Addressing landslide hazards: Towards a knowledge management perspective in Glade, T., Anderson, M. and Crozier, M. (eds.) *Landslide Hazard and Risk*. London: John Wiley & Sons, Ltd., 311-328.
- \*Goucher, N. and **Michaels, S.** 2004. Creating organizational knowledge for the transition to sustainability in Biermann, F., Campe, S. and Klaus, J. (eds.) Proceedings of the 2002 Berlin Conference on the Human Dimensions of Global Environmental Change "Knowledge for the Sustainability Transition. The Challenge for Social Science" Free University, (Berlin, Germany, December 6 and 7, 2002), Global Governance Project: Amsterdam, Berlin and Oldenburgh, pp. 370-375.
- \*Goucher, N. and **Michaels, S.** 2004. Looking for evidence of organizational knowledge creation in watershed management in Lemieux, C.J., Nelson, J.G., Beechey, T.J. and Troughton, M.J. (eds.) Protected Areas and Watershed Management, Proceedings of the Parks Research Forum of Ontario (PRFO) Annual General Meeting 2003, University of Western Ontario, (London, Ontario, May 8 and 9, 2003), pp. 269-274.
- Michaels, S.** and Headley, W. 2004. Actively searching for hazards information. *Natural Hazards Review* 5:1:10-17.
- Michaels, S.** 2003. Perishable information, enduring insights? Understanding quick response research in Monday, J. (ed.) *Beyond September 11: An Account of Post-Disaster Research*. Boulder, Colorado: University of Colorado, Natural Hazards Center, pp. 15-48. Available at <http://www.colorado.edu/hazards/sp/sp39/>.
- Michaels, S.** 2003. Information technology firms respond to the immediate aftermath of the September 11, 2001 terrorist attacks in Monday, J. (ed.) *Beyond September 11: An Account of Post-Disaster Research*. Boulder, Colorado: University of Colorado, Natural Hazards Center, pp. 459-480. Available at <http://www.colorado.edu/hazards/sp/sp39/>.
- \*Niles, J.R. and **Michaels, S.** 2002. Knowledge management, flooding, the watershed approach and the City of Waterloo, Ontario, Canada in Newkirk, R. (ed.) Facing the Realities of the Third Millennium: 9<sup>th</sup> Annual Conference Proceedings of The International Emergency Management Society (Waterloo, Ontario, May 14-17, 2002), pp. 383-388.
- Michaels, S.**, Mason, R. and Solecki, W. 2001. Participatory research on collaborative environmental management: Results from the Adirondack Park. *Society and Natural Resources* 14:3:251-255.
- Michaels, S.** 2001. Making collaborative watershed management work: The confluence of state and regional initiatives. *Environmental Management* 27:1:27-35.

**Refereed publications (continued)**

- Michaels, S.** 2001. Participatory process in disaster recovery in Monday, J. (ed.) *Holistic Disaster Recovery*. Boulder, Colorado: Natural Hazards Center, pp. 3-1 – 3-19. Available at [http://www.colorado.edu/hazards/holistic\\_recovery/](http://www.colorado.edu/hazards/holistic_recovery/).
- Michaels, S.** and Kenney, D. 2000. State approaches to watershed management: Transferring lessons between the Northeast and Southwest. Watershed Management Conference 2000 June 21 - 24 2000, American Society of Civil Engineers, Colorado State University, Fort Collins, Colorado, 9 pages.
- Michaels, S.** 1999. Configuring who does what in watershed management: The Massachusetts Watershed Initiative. *Policy Studies Journal* 27:3:565-577.
- Michaels, S.**, Mason, R. and Solecki, W. 1999. The importance of place in partnerships for regional environmental management. *Environmental Conservation* 26:3:159-162.
- Michaels, S.**, Mason, R. and Solecki, W. 1999. Motivations for ecostewardship partnerships: Examples from the Adirondack Park. *Land Use Policy* 16:1:1-9.
- Michaels, S.** and Laituri, M. 1999. Shaping New Zealand's environmental policy: Exogenous and indigenous influences on sustainable management. *Sustainable Development* 7:2:77-86.
- Michaels, S.** and Furuseth, O.J. 1997. Innovation in environmental policy: The National Environmental Policy Act of the US and the Resource Management Act of New Zealand. *The Environmentalist* 17:3:181-190.
- Michaels, S.**, May, P.J., Ericksen, N.J. and Dixon, J.E. 1996. A Regional Government Role in May, P.J., Burby, R.J., Ericksen, N.J., Handmer, J., Dixon, J.E., **Michaels, S.** and Smith, D. I. *Coerce or Cooperate? Rethinking Intergovernmental Environmental Management*. London: Routledge, pp. 108-125.
- Solecki, W.D. and **Michaels, S.** 1994. Looking through the postdisaster policy window. *Environmental Management* 18:4:587-595.
- Michaels, S.** 1993. Weighing science and politics in local decision making about hazards. *Knowledge and Policy* 6:2:3-22.
- Michaels, S.** 1993. Discovering and analyzing earthquake issue networks in British Columbia and Washington State. *Canadian Geographer* 37:2:156-166.
- Michaels, S.** 1992. Issue networks and activism. *Policy Studies Review* 11:3/4 241-258.
- Michaels, S.** 1992. New perspectives on diffusion of earthquake knowledge. *Earthquake Spectra* 8:1:159-175.

**Non-refereed book chapters**

- Bornstein, B.H., Tomkins, A.J., **Michaels, S.**, Samal, A., Nam, Y., Zellmer, S., Hoagland, K. and Olson, D. 2009. Social Justice and Water Sustainability and Management in Kakanowski, A. and Narusevich, M. (eds.) *Handbook of Social Justice*. Hauppauge, NY: Nova Scientific Publishing, pp. 271-282.
- Mason, R. and **Michaels, S.** 2001. Sentimental ecology, science and sustainable ecosystem management in Handmer, J., Norton, T. and Dovers, S. (eds.) *Ecology, Uncertainty and Policy: Managing Ecosystems for Sustainability*. London: Addison Wesley Longman, pp. 66-82.

**Selected briefing notes, discussion papers and reports**

- Missouri River Independent Science Advisory Panel (ISAP) (Bartell, S., Farmer, A., Graf, W., Guy, C., Lamberti, G. and Murphy, D.), Independent Social Economic Technical Review Panel (ISETR) (Hayes, D., Loomis, J. and **Michaels, S.**) and Oak Ridge Associated Universities, Third Party Science Neutral (Turner, R.). 2017. Final Report of the Independent External Peer Review of the Draft Missouri River Recovery Management Plan and Environmental Impact Statement, 188 pages.
- Missouri River Independent Social Economic Technical Review Panel (ISETR) (Hayes, D., Loomis, J. and **Michaels, S.**) and Oak Ridge Associated Universities, Third Party Science Neutral (Turner, R.). 2016. ISETR Evaluation of the Missouri River Recovery Management Plan (MRRMP) Adaptive Management (AM) Plan Version 5, 23 pages.
- Missouri River Independent Social Economic Technical Review Panel (ISETR) (Hayes, D., Loomis, J. and **Michaels, S.**) and Oak Ridge Associated Universities, Third Party Science Neutral (Turner, R.). 2014. ISETR Evaluation Lite of Adaptive Management Governance in Draft Adaptive Management Plan version 4, 5 pages.
- Missouri River Independent Social Economic Technical Review Panel (**Michaels, S.**, Hayes, D. and Shabman, L.) and Oak Ridge Associated Universities, Third Party Science Neutral (Turner, R.). 2014. Evaluation of Human Considerations Objectives, Metrics, Methods, and Models for the Missouri River Recovery Management Plan. Performed for U.S. Institute for Environmental Conflict Resolution and Missouri River Recovery Implementation Committee. 14-STRI-1127. 52 pages.
- \***Michaels, S.** and Gruszczynski, M.W. 2013. Uptake of Environmental Science by Legislators in Canada and the United States. Washington, District of Columbia: Research and Academic Relations, Canadian Embassy.
- Michaels, S.** with Herpel, R. and Swainson, B. 2010. Challenges of Collaborative Water-Related Decision Making. Briefing Note #2. Waterloo, Ontario: Canadian Water Network project *Governance for Source Water Protection in Canada*. Reprinted in *Water Currents* Spring 2010 42:3:11&18.
- \***Michaels, S.** and Gruszczynski, M.W. 2009. Environmental science in legislative deliberations. Washington, District of Columbia: Research and Academic Relations, Canadian Embassy.
- Michaels, S.** 2007. Shaping environmental decision making: Incorporating knowledge brokering in different decision making frames. Discussion paper prepared for invitational workshop on brokering knowledge for the environment, September 17 – 20, 2007, L'Auberge du lac à la loutre, Huberdeau, Quebec.
- Goucher, N.P., Lagacé, E., **Michaels, S.** and Schaefer, K. 2007. Towards understanding the linkages between science and source water protection policies in Canada: A survey of provincial and territorial source water protection policies. Burlington, Ontario: Environment Canada.

**Faculty development leave, Summer appointments (from University of Nebraska) and Sabbatical leave (from University of Waterloo)**

Faculty Fellow, Advanced Study Program, National Center for Atmospheric Research, Boulder, Colorado (2013 – 2014)

Visiting Scientist, Climate Science, Applications and Services Program, National Center for Atmospheric Research, Boulder, Colorado (2011; 2012; 2015 Summers)

Visiting Scientist, Institute for the Study of Society and the Environment, National Center for Atmospheric Research, Boulder, Colorado (2005)

**Selected journal reviewing**

*Bulletin of the American Meteorological Society*

*Canadian Water Resources Journal*

*Climate Risk Management*

*Conservation Biology*

*Disasters*

*Ecology and Society*

*Environmental Hazards*

*Environmental Management*

*Environmental Monitoring and Assessment*

*Environmental Science and Policy*

*Evidence and Policy*

*Journal of Environmental Planning and Management*

*International Journal of Emergency Management*

*International Public Management Journal*

*Journal of Environmental Planning and Management*

*Policy and Society*

*Policy Studies Journal*

*Risk*

*Science and Public Policy*

*Society and Natural Resources*