

# STACY M. LANGSDALE

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## RESEARCH INTERESTS

Participatory modeling; Integrated assessment; System dynamics modeling; Water resource management and Watershed planning; Climate change

## EDUCATION

Ph.D.	Resource Management, Environmental Studies University of British Columbia, Canada	2007
M.S.	Hydrology, University of Nevada, Reno, USA	2001
B.S.	Civil Engineering, University of Maryland at College Park, USA <i>Chi Epsilon</i>	1995

## RELEVANT WORK EXPERIENCE

**Graduate Research Assistant** April 2003-June 2006  
**Inst. for Resources, Environment & Sustainability, Univ. of British Columbia** Vancouver, BC  
*(July 2004 – June 2006): Conducted a one-year participatory modeling process to explore water management and climate change in the Okanagan, BC with local experts. Developed an integrated system dynamics model of the Okanagan's water resources.*  
*(April 2003 – June 2004): Developed and led three stakeholder dialogue workshops to discuss the feasibility of climate change adaptation strategies in the Okanagan.*

**Graduate Research Assistant** January 2002-May 2003  
**Department of Civil Engineering, Univ. of British Columbia** Vancouver, BC  
*Developed optimization models for operations management at BC Hydro, hydroelectric facility.*

**Graduate Research Assistant** August 1999-December 2001  
**Desert Research Institute, Division of Hydrologic Sciences** Reno, NV  
*Modeled the hydrology and water quality of the Walker River Basin to test management options for restoring trout habitat. Contributed to development of an Environmental Impact Statement.*

**Teaching Assistant** August 1998-December 1998  
**Graduate Program of Hydrologic Sciences, Univ. of Nevada, Reno** Reno, NV  
*Hydrologic Fluid Mechanics (Graduate Level Course)*

**Design Engineer** May 1996-July 1998  
**Whitman, Requardt and Associates, LLP** Baltimore, MD  
*Developed civil plans for transportation-related projects.*

## **PUBLICATIONS – Refereed Journals & Conference Proceedings**

- Langsdale, S. M., A. Beall, J. Carmichael, S. Cohen, C. Forster, and T. Neale. *Submitted*. Shared Learning through Group Model Building for the Management of Water Resources and Climate Change in the Okanagan River Basin, British Columbia, Canada. *J. of Water Resources Planning and Management*.
- Langsdale, S. M., A. Beall, J. Carmichael, S. Cohen, C. Forster. *Submitted*. An Exploration of Water Resources Futures under Climate Change Using System Dynamics Modeling. *Integrated Assessment*.
- Langsdale, S. *Accepted*. Communication of Climate Change Uncertainty to Stakeholders Using the Scenarios Approach. *J. of Contemporary Water Research and Education*. Universities Council on Water Resources.
- Beall, A., L. Zeoli, A. Ford, R. Jackson, S. Langsdale, P. Otto, W. Siemer, J. Struben, V. Tidwell and N. Videira. 2006. Participatory Modeling for Adaptive Management: Reports from the Field. Proceedings of the 24<sup>th</sup> International Conference of the System Dynamics Society. 23-27 July 2006. Nijmegen, The Netherlands.
- Cohen, S., D. Neilsen, S. Smith, T. Neale, B. Taylor, M. Barton, W. Merritt, Y. Alila, P. Shepherd, R. McNeill, J. Tansey, J. Carmichael and S. Langsdale. 2006. Learning with Local Help: Expanding the Dialogue on Climate Change and Water Management in the Okanagan Region, British Columbia, Canada. *Climatic Change* 75:3. pp 331-358.
- Langsdale, S., A. Beall, J. Carmichael, S. Cohen, C. Forster, and T. Neale. 2006. “Managing Water Resources and Climate Change using Group Model Building.” Proceedings of the American Water Resources Association 2006 Summer Specialty Conference. June 26-28. Missoula, Montana.
- Langsdale, S., J. Carmichael, S. Cohen, and B.J. Lence. “Water Resources Planning through Group Model Building in the Okanagan Valley, British Columbia, Canada.” Proceedings of the 2005 World Water and Environmental Resources Congress, Anchorage, AK, 16-19 May 2005.
- Langsdale, S., J. Carmichael, and S. Cohen. “Group model building of an integrated water management decision support tool.” Proceedings of Water – Our Limiting Resource: Towards Sustainable Water Management in the Okanagan. Canadian Water Resources Association, Kelowna, BC, 23 February 2005.
- Cohen, S., D. Neilsen, and S. Langsdale. “Exploring Options for Adapting Water Management in the Region to Future Climate Change.” Proceedings of Water – Our Limiting Resource: Towards Sustainable Water Management in the Okanagan. Canadian Water Resources Association, Kelowna, BC, 23 February 2005.
- Langsdale, S., S. Cohen, R. Welbourn, and J. Tansey. “Dialogue on Adaptation to Climate Change in the Okanagan Basin, British Columbia, Canada.” Proceedings of the World Water and Environmental Resources Congress: Transitions in Water and Environmental Resource Management.” Salt Lake City, UT, 27 June – 1 July 2004
- Cohen, S., J. Tansey, S. Langsdale, and R. Welbourn. 2004. Learning with Local Help: Expanding the Dialogue on Climate Change and Water Management in the Okanagan Region, British Columbia. 57<sup>th</sup> Canadian Water Resources Assoc. Annual Congress. June 16-18, 2004, Montreal, QC, Canada.
- Langsdale, S. and Tracy, J. “A Whole Model Environment of the Walker River Basin, Nevada.” Conference Proc. for the AWRA Annual Int’l Summer Specialty Conference. June 2001, Snowbird, UT.

## **PUBLICATIONS – Reports & Theses**

- Langsdale, S., A. Beall, J. Carmichael, S. Cohen, and C. Forster. 2007. A System Dynamics Model for Exploring Water Resources Futures *in* S. Cohen and T. Neale, (eds.) Participatory Integrated Assessment of Water Management and Climate Change in the Okanagan Basin, British Columbia. Final Report. Vancouver: Environment Canada and University of British Columbia.
- Langsdale, S., A. Beall, J. Carmichael, S. Cohen, C. Forster and T. Neale. 2007. Shared Learning Through Group Model Building *in* S. Cohen and T. Neale, (eds.) Participatory Integrated Assessment of Water Management and Climate Change in the Okanagan Basin, British Columbia. Final Report. Vancouver: Environment Canada and University of British Columbia.
- Tansey, J. and S. Langsdale. 2004. Exploring Anticipatory Adaptation in the Okanagan, BC *in*: Cohen, S., D. Neilsen, and R. Welbourn (eds.) Expanding the Dialogue on Climate Change & Water Management in the Okanagan Basin, British Columbia. Final Report. Environment Canada, Agriculture and Agri-Food Canada and Univ. of British Columbia.
- Cohen, S., J. Tansey, S. Langsdale, D. Nielsen, B. Taylor, S. Smith. 2004. Towards Decision – A Look Ahead *in* Cohen, S., D. Neilsen, and R. Welbourn (eds.) Expanding the Dialogue on Climate Change & Water Management in the Okanagan Basin, British Columbia. Final Report. Environment Canada, Agriculture and Agri-Food Canada and Univ. of British Columbia.
- Langsdale, S.M. 2001. A Systems Approach to Modeling the Walker River Basin in Nevada. M.S. Thesis in Hydrology. Univ. of Nevada, Reno.
- Tracy, J., Carroll, R., and Langsdale, S. 2001. “Preliminary Assessment Strategies to Increase the Flow of Water to Walker Lake and Decrease its Concentration of Total Dissolved Solids.” Desert Research Institute.

## **SELECTED PRESENTATIONS**

- Environmental Water Resources Institute. “Exploring the Future of Water Resources through Group Model Building in the Okanagan Basin, British Columbia, Canada.” World Water and Environmental Resources Congress. Omaha, Nebraska. 21-25 May 2006.
- “Adapting to Climate Change: Options for Water Management in the Okanagan.” Climate & Fisheries Conference: Impacts, Uncertainty and Responses of Ecosystems and Communities. Victoria, BC. 26-28 Oct 2005.
- Land and Water British Columbia's Annual Dam Safety Seminar, Vernon, BC. Invited Speaker. “Group Model Building of a Decision Support Tool for the Okanagan.” 15 March 2005.
- U.S. Army Corps of Engineers, Alexandria, VA. Invited Speaker hosted by Dr. Hal Cardwell. “Participatory Modeling of Climate Change and Water Resources in the Okanagan.” 4 January 2005.
- Washington State University, Environmental Science & Regional Planning Program. Pullman, Washington. Invited Speaker and Visiting Scholar, hosted by Dr. Andrew Ford. 14 July 2004.
- Environmental Water Resources Institute. “A Participatory Approach to Development of a Decision Support Tool.” World Water and Environmental Resources Congress: Transitions in Water and Environmental Resource Management.” Salt Lake City, UT. 27 June – 1 July 2004
- Nevada Water Resources Association. “A Systems Modeling Approach for Restoring Walker Lake.” Annual Conference. Reno, NV. February 8, 2001.
- Geological Society of America. “Optimizing Objectives for Restoring a Terminal Desert Lake.” Annual Conference. Reno, NV. November 16, 2000.

## **PROFESSIONAL ACTIVITIES**

Environmental Water Resources Institute, Visiting Int'l Fellows Committee (2002-present)  
*Co-chair, (2006-present)*  
American Water Resources Association (1998-present)  
*Secretary, UNR Student Chapter, 1999-2000*  
Canadian Water Resources Association (2002-2006)  
System Dynamics Society (2005-present)

## **LEADERSHIP & VOLUNTEER EXPERIENCES**

Resource Management, Environmental Studies Student Society (2004-05)  
*Newsletter Editor, Executive Council Member*  
*Established and produced a newsletter for graduate program students, faculty and staff.*  
Toastmasters International – Washoe Express and Walter Gage Clubs (2000-2004)  
*President, VP Education, Walter Gage Club*  
*Increased member participation at meetings by improving scheduling procedure.*  
*Demand for speaking slots increased from one or less to four or more each meeting.*  
Let's Talk Science (2003-04)  
*Volunteer*  
*Created and conducted lessons for a 3-4 grade class in watersheds and land cover.*  
Learning to Lead – Minerva Foundation Womens' Leadership Conference (June 2003)  
*Selected Delegate*

## **PROFESSIONAL CREDENTIALS**

Professional Engineering License for State of Nevada. Certified January 2002  
Competent Toastmaster Certification. Achieved September 2002.

## **CITIZENSHIP**

United States