

Anne Jefferson

Research Interests

Watershed processes; hydrogeology; geomorphology; groundwater-surface water interactions; water resources and climate change; isotope applications in hydrology; water policy and management; science education

Education

- 2006 **Ph.D., Geology, Oregon State University**
“Hydrology and geomorphic evolution of basaltic landscapes, High Cascades, Oregon”
- 2002 **M.S., Water Resources Science, University of Minnesota**
“Early Tertiary and modern hydrologic environments of the Stenkul Fiord area, Ellesmere Island, Canada”
- 2001 **B.A., Earth and Planetary Science, The Johns Hopkins University**
“Pedologic comparison and hydrogen and oxygen isotopic analysis of water extracted from eight soil orders.” University and departmental honors.

Research Experience

- 2007-present **Assistant Professor**, Department of Geography and Earth Sciences, University of North Carolina-Charlotte, Charlotte, NC
- 2006-2007 **Post-doctoral Research Associate**, Oregon State University, Corvallis, Oregon
- 2002-2006 **NSF Graduate Research Fellow**, Oregon State University, Corvallis, Oregon
- 2004-2005 **Graduate Research Assistant**, Oregon State University, Corvallis, OR
- 2000 **Research Assistant**, The Johns Hopkins University, Baltimore, Maryland
- 1999 **Intern**, Smithsonian Inst. National Museum of Natural History, Washington, D.C.
- 1993-1997 **Independent Study**, Winona State University, Winona, Minnesota

Science Education Experience

- 2005-2006 **Instructor**, Willamette Valley Watershed Partnership Project
- 2005-2006 **Advisor**, Undergraduate Thesis, Oregon State University
- 2005 **Instructor**, GEO 102 “The Earth Surface”, Oregon State University
- 2005 **Course Participant**, “Success in the College Classroom”, Oregon State Univ.
- 2004 **Mentor**, High School Science Research Project
- 2002 **Course Participant**, “Teaching in the Geosciences”, Oregon State University
- 2002 **Teaching Assistant**, WRS 5101 “Water Resources: Individuals and Institutions”, University of Minnesota

Water Resources Policy and Management Experience

- 2001-2002 **Webmaster/Editor**, Univ. of Minnesota Water Resources Center, St. Paul, MN
- 2001 **Water Planning Assistant**, Scott County, Shakopee, MN
- 1998 **Intern**, American Rivers, Washington, DC

Grants Received

2007-2008	Nolin, A., Jefferson, A. , Lewis, S. Contributions of Glacier Melt to Upper Hood River Streamflow and Implications of Climate Change. Institute for Water and Watersheds, Oregon State University. \$30,000
2005-2006	Nolin, A., Jefferson, A. , Grant, G. Influence of climate change on water supply in the McKenzie River Basin: Analysis of long-term and spatial hydrologic data. Center for Water and Environmental Sustainability, Oregon State University. \$41,212
2004-2006	Grant, G., Jefferson, A. , Lewis, S. Discharge, source areas, and water ages of spring-fed streams and implications for water management in the McKenzie River Basin. Funded by Eugene Water and Electric Board. \$95,000.
2004-2005	Jefferson, A. Drainage development on highly-permeable basaltic lavas of the Oregon Cascades. Geological Society of America. \$2,800.

Peer-Reviewed Publications

- Jefferson, A.**, Grant, G., and Rose, T., (2006), The influence of volcanic history on groundwater patterns on the west slope of the Oregon High Cascades, *Water Resources Research*, 42, W12411, doi:10.1029/2005WR004812.
- Jefferson, A.**, Grant, G., and Lewis, S., (in press) A river runs underneath it: geological control of spring and channel systems and management implications, Cascade Range, Oregon, *Advancing the Fundamental Sciences: A Conference for Forest Service Physical Scientists*.
- Tague, C., Grant, G., Farrell, M., Choate, J., and **Jefferson, A.** (in press) Deep groundwater mediates streamflow response to climate warming in the Oregon Cascades, *Climatic Change*.

Papers in Review

- Jefferson, A.**, Nolin, A., Lewis, S., and Tague, C., Hydrogeologic controls on streamflow sensitivity to climatic variability, for submission to *Hydrological Processes*, in review.

Awards and Honors

2007	honorable mention, University Council on Water Resources dissertation award
2006	best poster, Oregon State University, Water Resources Open House
2004	writing award, Oregon State University, Department of Geosciences
2004	John Montagne Fund award, Geological Society of America
2002	Graduate Research Fellowship, National Science Foundation
2001	inducted, Phi Beta Kappa
1997	overall grand award winner, International Science and Engineering Fair

Professional Service and Memberships

2006-present	reviewer, Water Resources Research
2006-present	member, International Association of Hydrogeologists
2006-present	member, Association of Women in Science
2003-present	member, Geological Society of America
2002-present	member, American Geophysical Union
2003-2004	secretary, Hydrophiles (Oregon State American Water Resources Association chapter)
2001-2002	member, Water Resources Students in Action (University of Minnesota)