

## **SONIA A. NAGORSKI**

Environmental Science Program  
Department of Natural Sciences  
University of Alaska Southeast  
11120 Glacier Hwy  
Juneau, AK 99801  
E-mail: sonia.nagorski@uas.alaska.edu  
Tel. (907) 635-5353 or (907) 796-6580

### **EDUCATION:**

Ph.D. Geology, 2001. University of Montana, Missoula, MT.  
M.S. Geology, 1997. University of Montana, Missoula, MT.  
B.A. Geology and History, 1994. Amherst College, Amherst, MA.

### **APPOINTMENTS**

**Research Assistant Professor** (1/2005-present). Environmental Science Program, University of Alaska Southeast, Juneau, AK. Conducting research on water quality issues in southeast and southwest Alaska.

**Postdoctoral Researcher** (11/2003-11/2004). Laboratoire de Glaciologie et Géophysique de l'Environnement, Université Joseph Fourier, Grenoble, France. Conducted research on mercury in snow, ice, water, and the atmosphere.

**Environmental Geochemist** (11/2000- 06/2002). Independent contract. Researched the distribution of metal contamination in the mining-impacted Clear Creek watershed, Whiskeytown National Recreation Area, northern CA.

**Geologist.** (06/1997-09/2001). U.S. Geological Survey Mineral Resources Program, Denver, CO. Researched impacts of heavy metal mines on water and streambed sediment quality. Examined hydrochemical variations on seasonal-, event-, and diel-scales within pristine and contaminated streams.

**Teaching Assistant.** (08/1994 -12/1995 and 09/1997-05/1998). University of Montana. Introductory Geology (2 semesters); Hydrogeology (1 semester); Geomorphology (2 semesters).

**Research Assistant.** (01/1996 - 12/1996). University of Montana, Missoula, MT. Researched trace element (emphasis on arsenic) dynamics in the ground water- surface water mixing zone of a mining-contaminated stream.

**Hydrogeology Intern.** (05/1996 - 08/1996). Missoula County Health Department, Missoula, MT. Monitored ground water quality in the Missoula valley, and prepared related technical documents.

**Teaching Assistant.** Amherst College. (09/1991 - 05/1993). Introductory Geology (2 semesters); Paleontology (1 semester).

### **PEER-REVIEWED PUBLICATIONS**

Ferrari, C.P., P.A. Gauchard, A. Dommergue, O. Magand, **S.A. Nagorski**, and 9 others, **2005**. Snow-to-air exchanges of mercury in an Arctic seasonal snow pack. *Atmospheric Environment* 39: 7633-7645.

Gauchard, P-A, K. Aspö, C. Temme, A. Steffen, C. Ferrari, T. Berg, J. Ström, L. Kaleschke, A. Dommergue, E. Bahlmann, O. Magand, F. Planchon, R. Ebinghaus, C. Banic, **S. A. Nagorski**, P. Baussand, C. Boutron, **2005**. Study of the origin of atmospheric mercury depletion events recorded in Ny-Ålsund, Svalbard, Spring 2003. *Atmospheric Environment* 39: 7620-7632.

Planchon, F.A.M., P. Gabrielli, A. Dommergue, P.A. Gauchard, C. Barbante, C.F. Boutron, W.R.L. Cairns, G. Capodaglio, P. Cescon, G. Cozzi, C.P. Ferrari, **S.A. Nagorski**, A. Varga and E.W. Wolff, **2004**. Direct determination of mercury at the picogram per gram levels in polar snow and ice by ICP-SFMS. *Journal of Analytical Atomic Spectrometry* 19: 823-830.

**Nagorski, S.A.**, J. N. Moore, T.E. McKinnon, and D.B. Smith, 2003. Scale-dependent variations in stream water geochemistry. *Environmental Science and Technology*, 37: 859-864.

**Nagorski, S.A.**, T.E. McKinnon, and J.N. Moore, **2003**. Seasonal and storm-scale variations in heavy metal concentrations of two mining-contaminated streams, Montana, USA. Proceedings of the XII International Conference on Heavy Metals in the Environment. *Journal de Physique*, 107, 909-912.

**Nagorski, S.A.**, J. N. Moore, T.E. McKinnon, and D.B. Smith, **2003**. Geochemical response to variable streamflow conditions in contaminated and uncontaminated streams. *Water Resources Research*, 39 (2), 1044, doi: 10.1029/2001WR001247.

**Nagorski, S.A.**, J.N. Moore, and D.B. Smith, **2002**. Distribution of metals in water and bed sediment in a mineral-rich watershed, Montana, USA. *Mine Water and the Environment*, 21: 121-136.

**Nagorski, S.A.** and J.N. Moore, **1999**. Arsenic mobilization in the hyporheic zone of a contaminated stream. *Water Resources Research* 35(11): 3441-3450.

## **TECHNICAL REPORTS**

Eckert, G., E. Hood, **S. Nagorski**, and C. Talus, (in review). Assessment of coastal water resources and watershed conditions at Glacier Bay National Park and Preserve, Alaska. National Park Service Water Resources Division Technical Report.

**Nagorski, S.**, E. Hood, L. Hoferkamp (2006) Duck Creek Watershed Protection and Recovery, Final report submitted to Alaska Department of Environmental Conservation for the period August 1, 2005- June 30, 2006. 23 pp.

**Nagorski, S.**, E. Hood, L. Hoferkamp, E. Neal, J. Hudson (2006) Jordan Creek Watershed Protection and Recovery, Final report submitted to Alaska Department of Environmental Conservation for the period August 1, 2005- June 30, 2006. 34 pp.

**Nagorski, S.** and E. Hood (2006) Pederson Hill Creek Watershed Protection and Recovery, Final report submitted to Alaska Department of Environmental Conservation for the period August 1, 2005- June 30, 2006. 12 pp.

Eckert, G., E. Hood, C. Talus, and **S. Nagorski**, 2006. Assessment of coastal water resources and watershed conditions at Sitka National Historical Park, Alaska. National Park Service Water Resources Division Technical Report NPS/NRWRD/NRTR-2006/347. 81 pp.

Hood, E., G. Eckert, **S. Nagorski**, and C. Talus, 2006. Assessment of coastal water resources and watershed conditions at Klondike Gold Rush National Historical Park, Alaska. National Park Service Water Resources Division Technical Report NPS/NRWRD/NRTR-2006/349. 89 pp.

Hood, E., G. Eckert, **S. Nagorski**, C. Talus, 2006. Assessment of coastal water resources and watershed conditions at Wrangell-St.Elias National Park and Preserve, Alaska. National Park Service Water Resources Division Technical Report NPS/NRWRD/NRTR-2006/346. 77 pp.

**Nagorski, S.A.,** J.N. Moore, and D.B. Smith, **2001.** Geochemical baseline studies and relations between water quality and streamflow in the Upper Blackfoot River watershed, Montana: Data for July 1997-December, 1998. U.S. Geological Survey Open-File Report 01-0059, 93 pp.  
<http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-01-0059/>.

**Nagorski, S.A.,** T.E. McKinnon, J.N. Moore, and D.B. Smith, **2000.** Geochemical characterization of surface water and streambed sediment of the Blackfoot River, Montana, during low flow conditions, August 16-20, 1998. U.S. Geological Survey Open-File Report 00-003, 59 pp.

**Nagorski, S.A.,** J.A. Shifflett, J.N. Moore, and D.B. Smith, **1998.** Geochemical baseline studies and relations between water quality and streamflow in the Upper Blackfoot River watershed, Montana: Progress Report for July 1997- March 1998. U.S. Geological Survey Open File Report 98-499, 133 pp.

### **ABSTRACTS PRESENTED AT (INTER)NATIONAL CONFERENCES:**

**Nagorski S.A.,** C. P. Ferrari, F. A. M. Planchon, C. Barbante, P. Gabrielli, C. F. Boutron. Mercury concentrations in a 200-year ice core record from Mont Blanc. American Geophysical Union Fall Meeting. San Francisco, CA, 2004.

Ferrari, C.P., P.A. Gauchard, A. Dommergue, O. Magand, **S.A.Nagorski,** C.F. Boutron, C. Temme, E. Bahlmann, R. Ebinghaus, A. Steffen, C. Banic, K. Aspmo, T. Berg, F. Planchon, C. Barbante. Hg deposition onto snow surfaces during mercury depletion events in Ny-Alesund (Svalbard) from April to May 2003. Seventh International Conference of Mercury as a Global Pollutant. Ljubljana, Slovenia, 2004. RMZ- Materials and Geoenvironment, 51(2): 1565.

Ferrari, C.P., P.A. Gauchard, A. Dommergue, O. Magand, **S.A. Nagorski,** C.F. Boutron, C. Temme, E. Bahlmann, R. Ebinghaus, A. Steffen, C. Banic, K. Aspmo, T. Berg, F. Planchon, C. Barbante. Atmospheric particle evolution during Hg depletion events. Seventh International Conference of Mercury as a Global Pollutant. Ljubljana, Slovenia, 2004.

**Nagorski, S.A.,** T.E. McKinnon, and J.N. Moore, Seasonal and storm-scale variations in heavy metal concentrations of two mining-contaminated streams, Montana, USA. XII International Conference on Heavy Metals in the Environment. Grenoble, France, 2003.

**Nagorski, S.A.,** McKinnon, T.E., Moore, J.N., and D.B. Smith. Geochemical variability at seasonal to bi-hourly timescales in selected western Montana rivers. American Geophysical Union Fall Meeting, San Francisco, CA, 2000.

**Nagorski, S.A..** A basin-wide scale investigation of the solute and bed sediment geochemistry of the Blackfoot River, Montana. American Geophysical Union Fall Meeting, San Francisco, CA, 1999.

**Nagorski, S.A.** and J.N. Moore. Arsenic mobilization in the hyporheic zone of a contaminated stream. American Geophysical Union Spring Meeting, Boston, MA, 1998.

**Nagorski, S.A.,** and J.N. Moore. Impacts by acidic, metals-rich ground water on surface and hyporheic zone water in Silver Bow Creek, MT, USA. Geological Society of America Annual Meeting, Denver, CO, 1996.

### **FUNDED RESEARCH GRANTS**

**S. Nagorski** and L. Hoferkamp. 2006-2007 (1 yr). Watershed protection and recovery of Jordan Creek, Duck Creek, Lemon Creek, and Vanderbilt Creeks, Juneau, Alaska. Alaska Department of Environmental Conservation (contract through Juneau Watershed Partnership), \$33,712.

**S. Nagorski**, E. Hood. 2006. Technical Assistance in Evaluating, Summarizing, and Developing Monitoring Components of the National Park Service's Southeast Alaska Network Inventory and Monitoring Program. National Park Service. \$42,000.

**S. Nagorski**, E. Hood, G. Eckert, and S. Pyare, 2005-2006 (1 yr) Assessment of coastal water resources and watershed conditions in and adjacent to southwest Alaska National Parks, National Park Service \$87,228.

E. Hood, **S. Nagorski**, and L. Hoferkamp. 2005-2006 (1 yr) Watershed protection and recovery on Jordan Creek, Duck Creek, and Peterson Hill Creek near Juneau, Alaska. Alaska Department of Environmental Conservation (contract through Mendenhall Watershed Partnership), \$22,812.

Connor, C, A. Prakash, R. Walling, **S. Nagorski**. 2005-2008 (3 years). Experiential Discoveries in Geoscience Education (EDGE) project. National Science Foundation \$285,000.

### **TEACHING**

Earth Systems Science Teacher Workshop. June, 2005, and June and August, 2006. Co-instructor.

Geology 105: Historical Geology. Fall 2005, 2006

Chemistry 103 (Laboratory). Fall, 2005, 2006.

Guest lecturer in Historical Geology, Evolution, Hydrology, Biogeochemistry, and Atmospheric Science. 2004/2005 and 2005/2006 academic years.