

SONIA A. NAGORSKI

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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.

CURRENT APPOINTMENTS

Research Assistant Professor (1/2005-present). Environmental Science Program, University of Alaska Southeast, Juneau, AK.

Affiliate Professor (5/2009- present). Institute of Northern Engineering, University of Alaska Fairbanks.

Associate Director (8/2009- present) for the University of Alaska Southeast Campus, Alaska University Transportation Center, Institute of Northern Engineering, University of Alaska Fairbanks.

PREVIOUS APPOINTMENTS

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 (11/2001- 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).

TEACHING EXPERIENCE AT UAS

Earth Systems Science Teacher Workshop. June-August 2005, 2006, and 2007. Co-instructor.

Humanities 193: Environment, Ethics, and the UAS Experience. Summer 2007.

Geology 105: Geological History of Life. Fall 2005, Fall 2006, and Fall 2009.

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

Mathematics 055: Introduction to Algebra. Spring, 2007, Fall 2007

Guest lecturer in Historical Geology, Evolution, Hydrology, Biogeochemistry, Atmospheric Science, Introductory Chemistry, Women's Studies, and Environmental Science seminar. 2004-2008.

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-Ålesund, 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

S. Nagorski, D. Engstrom, J. Hudson, D. Krabbenhoft, J. DeWild, E. Hood, and G. Aiken. (in press, 2009) Scale and distribution of global pollutants in Southeast Alaska Network park watersheds. Natural Resource Technical Report NPS/NRWRD/NRTR—2009/XXX. National Park Service, Fort Collins, Colorado.

S. Nagorski, E. Hood, G. Eckert, S. Pyare (2009, in review). Assessment of coastal water resources and watershed conditions at Kenai Fjords National Park (Alaska). Natural Resource Technical Report NPS/NRPC/WRD/NRTR-2009/XXX. National Park Service, Fort Collins, Colorado. Will be available at http://www.nature.nps.gov/water/watershed_reports/WSCondRpts.cfm.

S. Nagorski, E. Hood, G. Eckert, S. Pyare (2008). Assessment of coastal water resources and watershed conditions at Lake Clark National Park and Preserve (Alaska). Natural Resource Technical Report NPS/NRPC/WRD/NRTR-2008/144. National Park Service, Fort Collins, Colorado. Available at http://www.nature.nps.gov/water/watershed_reports/WSCondRpts.cfm. 138 pp.

S. Nagorski, G. Eckert, E. Hood, S. Pyare (2007). Assessment of coastal water resources and watershed conditions at Katmai National Park and Preserve (Alaska). Natural Resource Technical Report NPS/NRWRD/NRTR-2007/372. National Park Service, Fort Collins, Colorado. Available at http://www.nature.nps.gov/water/watershed_reports/WSCondRpts.cfm. 178 pp.

Nagorski, S., L. Hoferkamp, (2007) Jordan Creek and Duck Creek Watershed Protection and Recovery, Final report submitted to Alaska Department of Environmental Conservation for the period August 1, 2006- June 30, 2007. 52 pp.

S. Nagorski, G. Eckert, E. Hood, S. Pyare (2007). Assessment of coastal water resources and watershed conditions at Aniakchak National Monument and Preserve (Alaska). Natural Resource Technical Report NPS/NRWRD/NRTR-2007/371. National Park Service, Fort Collins, Colorado. Available at http://www.nature.nps.gov/water/watershed_reports/WSCondRpts.cfm. 112 pp.

Eckert, G., E. Hood, **S. Nagorski**, and C. Talus, (2006). Assessment of coastal water resources and watershed conditions at Glacier Bay National Park and Preserve, Alaska. Natural Resource Technical Report NPS/NRWRD/NRTR-2006/353. National Park Service, Fort Collins, Colorado. Available at http://www.nature.nps.gov/water/watershed_reports/WSCondRpts.cfm. 129 pp.

Nagorski, S., E. Hood, L. Hoferkamp, E. Neal, J. Hudson (2006) Jordan Creek, Duck Creek, and 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. 34 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, last 5 years only:

(denotes supervised student presenter)*

Nagorski, S., D. Engstrom, J. Hudson, E. Hood, D. Krabbenhoft, J. DeWild, and G. Aiken. Mercury distribution in water and biota in diverse southeastern Alaskan watersheds. American Water Resources Association Spring Specialty Conference, Anchorage, AK, 2009.

Schlosstein, N*., E. Hood, and **S. Nagorski**. Effects of postglacial succession on stream water quality and chemistry in Southeast Alaska. American Water Resources Association Spring Specialty Conference, Anchorage, AK, 2009.

Korzen, N., E. Knuth, C. Connor, E. Hood, and **S. Nagorski**. Sediment flux and changing lake bathymetry in the pro-glacial Mendenhall Lake/River system. American Water Resources Association Spring Specialty Conference, Anchorage, AK, 2009.

Nagorski, S., E. Hood, R. Edwards, D. D'Amore, Do wetlands and salmon influence mercury concentrations in Juneau area streams? American Water Resources Association- Alaska Section Annual Meeting. Juneau, AK, 2008.

Nagorski, S.A., E. Hood, D.P. Krabbenhoft, R. T. Edwards, D. V. D'Amore, G. Aiken, Salmon and wetland influences on streamwater mercury fluxes in southeastern Alaska. American Geophysical Union Fall Meeting. San Francisco, CA. 2007.

Connor, C.L., A. Prakash, M. Brownlee, **S. Nagorski**, R. Walling, EDGE (Experiential Discoveries in Geoscience Education) field course provides Alaskan high school and middle school students with Earth Science and GIS skills for science fair projects and a college experience. American Geophysical Union Fall Meeting. San Francisco, CA, 2006.

FUNDED RESEARCH GRANTS

S. Nagorski and E. Hood. Technical Assistance in Developing the Freshwater Physicochemistry Monitoring Protocol for the National Park Service's Southeast Alaska Network Inventory and Monitoring Program. National Park Service. \$26,555.

S. Nagorski 2007-2008 (1 yr) Watershed Protection and Recovery of Jordan and Vanderbilt Creeks. Alaska Department of Environmental Conservation (contract through Juneau Watershed Partnership), \$21,234.

S. Nagorski 2007-2008 (1 yr). Technical Assistance in Developing Monitoring Protocols for the National Park Service's Southeast Alaska Network Inventory and Monitoring Program. National Park Service. \$30,000.

S. Nagorski and J. Hudson. 2007 (6 months). Scale and distribution of global pollutants (mercury and POPs) in Southeast Alaska Network park watersheds. National Park Service, \$85,264.

S. Nagorski (6 months). The role of wetlands in regulating methylmercury concentrations in southeast Alaskan watersheds. University of Alaska Southeast Research Seed Funding. \$14,255

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, and 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.