Geophysical Research Abstracts,
Vol. 11, EGU2009-2627, 2009
EGU General Assembly 2009

Impact of land use activities on fine sediment-associated contaminants, Quesnel River Basin, British Columbia, Canada

T.B. Smith and P.N. Owens

University of Northern British Columbia, Environmental Sciences Program, Prince George, British Columbia, V2N 4Z9, Canada (owensp@unbc.ca, fax: +1 250 960-5845)

It is expected that land use activities will influence the quality of water and sediment in rivers and streams draining such land. In turn, it is likely that this will influence aquatic ecology and drinking water quality. Few studies have compared different land use activities on sediment quality simultaneously within the same basin so as to identify the relative importance of land use activities on sediment geochemistry. The effect of various land use activities on the quality of fine-grained sediment was investigated in the Quesnel River Basin (ca. 12,000 km2) in central British Columbia, Canada. Samples of fine-grained sediment were collected monthly during the snow-free season in 2008 using time-integrated sampling tubes at replicate sites representative of forestry, mining and agricultural activities in the basin. Samples were also collected from replicate reference sites that had undergone limited or no disturbance in recent years, and also from the main stem of the Quesnel River. Samples were passed through a 63 μm sieve and analysed for various physical (such as particle size), organic (C and N) and geochemical properties (including nutrients, metals and trace elements). This presentation will describe the results from the 2008 field season.