**Petticrew Short Bio**

Ellen Petticrew is a Full Professor in the Geography, Earth and Environment Sciences Department and is Research Chair in Landscape Ecology at the University of Northern British Columbia (UNBC) in Canada. Her research focuses on sediment–water interactions in aquatic systems, especially lakes and rivers. Much of her work has focused on riverine sediment flocculation, including the biological implications of fine sediment and marine-derived nutrient interactions and transport in salmon bearing watersheds in northern British Columbia. She has also worked on sediment tracing and fingerprinting using both geochemical and organic (DNA, compound-specific stable isotopes) tracers. Since 2014 a major focus of her work has been on the aquatic impacts of the catastrophic failure of the Mount Polley Mine tailings impoundment in the Quesnel watershed, which contains one of the deepest lakes in North America.

**Title and Abstract for Petticrew, November 17, 2025**

Movement of sediment-associated contaminants to, from and within Quesnel Lake: the continued influence of the 2014 Mount Polley Mine tailings impoundment collapse.

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In August 2014, the tailings storage facility of the Mount Polley gold-copper mine in British Columbia, Canada, failed catastrophically releasing 25 million m3 of contaminated liquids and solids into the environment. This represents the second largest mine spill in the world. Most of this material flowed down Hazeltine Creek, eroding a further 1 million m3 of topsoil and channel material, and was deposited in Quesnel Lake, a large, deep lake that is important for migratory Pacific salmon and other resident fish species such as trout. Since the spill, researchers and students associated with UNBC’s Quesnel River Research Centre (QRRC) and collaborators from Fisheries and Oceans Canada, University of British Columbia and University of Lethbridge have been investigating the effects on the receiving aquatic environment, especially Quesnel Lake and Quesnel River, which flows out of the lake and joins the Fraser River at the community of Quesnel. The main findings to date, focusing on the movement of contaminated sediment within and out of the lake as well as continued post-spill inputs to the lake from Hazeltine Creek will be presented.