



PhD scholarship in New Zealand on braided river N₂O emissions

Nitrous oxide emissions from rivers are poorly understood. This is in part due to the complex biological and hydrological processes controlling how this potent greenhouse gas is produced and emitted. We are currently seeking a PhD student to help us fill this knowledge gap. The candidate will use braided rivers, which include parallel channels with low and high flows and dry gravel bars, as natural laboratories to test how river flow controls nitrous oxide production and emission. This work will involve significant amounts of field work around New Zealand's culturally significant braided rivers, and will combine techniques from biogeochemistry and hydrology. There will be a strong focus on stable isotope techniques ($\delta^{15}\text{N}$, $\delta^{18}\text{O}$, $\Delta^{17}\text{O}$) and in-situ high frequency sensors.

The PhD scholarship is funded by the Royal Society of New Zealand's Marsden Fund ('Untangling the controls on nitrous oxide emissions from braided rivers'). Candidates will be based at [Lincoln University near Christchurch, New Zealand](#), and work in conjunction with the [Waterways Centre](#). Candidates will work under the direct supervision of Dr Naomi Wells (Lincoln University), along with Prof Tim Clough (Lincoln University) and Prof Bradley Eyre (Southern Cross University, Australia).

Applicants must have an Honours or Masters degree, undertaken in English, in a related field such as biogeochemistry, hydrology, environmental chemistry, limnology, or closely related science. The project will involve periods of intensive field measurements, laboratory work, and data processing. Experience with either large data sets or stable isotopes is preferred.

Scholarships will provide a generous tax-free annual stipend of \$35,000 for three years, and tuition fees are waived. Interested applicants should send a CV and short (< 1 page) statement highlighting their research background and interests, with respect to the criteria above, to Dr Naomi Wells (naomi.wells@lincoln.ac.nz). Only short-listed applicants will be notified. Closing date January 28, 2022. Starting date is preferably by June 2022.

