



UNSW
SYDNEY

Nuisance and Harmful Algae Science-Practice Partnership

Ecophysiology of Taste- and Odour-Producing Algae

School of Civil and Environmental Engineering

School of Chemical Engineering

UNSW Sydney

Australian water utilities report seasonal taste and odour (T&O) events in their catchments and drinking water reservoirs. These T&O compounds are usually produced by bloom-forming photosynthetic algae that live in the raw water. The prevalence of algal blooms, and hence the likelihood of T&O events, is higher following heavy rainfall (increased nutrient load) and during drought (increased water temperature). This project aims to determine the ecophysiology of key T&O-producing algal species so that we may better predict and manage their blooms. The student will culture algal isolates in laboratory photobioreactors that will simulate the oligotrophic conditions found in drinking water reservoirs. This analysis will identify the environmental conditions when a particular algal species is most likely to bloom and therefore improve our ability to forecast these nuisance blooms. The student will also measure changes in algal T&O production over time to test the hypothesis that production rate increases upon algal cell lysis.

The **Nuisance and Harmful Algae Science-Practice Partnership (NHASP)** with Melbourne Water (<http://www.algae.unsw.edu.au/>) is a multi-party initiative that seeks to more effectively manage algal blooms by introducing smart surveillance and evidence-based, cost-effective policy and asset design for the benefit of the Melbourne region and Australia.

The successful candidate will join the NHASP program. The candidate should have a background in either civil, chemical or environmental engineering (or similar), a demonstrated aptitude for undertaking laboratory/field work, have excellent communication skills and will be expected to interact regularly with industry partners. The student needs to be successful in securing their own primary scholarship via a **Research Training Program (RTP)** or equivalent (<https://research.unsw.edu.au/graduate-research-scholarships>). A secondary top-up scholarship (\$5000) may be available for exceptional applicants.

Further information on the project and scholarship may be obtained from **Dr Bojan Tamburic** (email: b.tamburic@unsw.edu.au). Applications should be submitted (including a cover letter, academic transcript and CV) to Dr Tamburic at UNSW Sydney.

