TRaCK
Tropical Rivers and Coastal Knowledge

MEDIA RELEASE

Wednesday 14 October 2009

Years of sewage outflows damaging Buffalo Creek

The ecological health of Buffalo Creek, a tidal creek near Darwin has been severely damaged by the sewage flowing into it, researchers have found after an intense week of sampling.

'We found very low oxygen levels in the creek and this affects aquatic life,' says Tropical Rivers and Coastal Knowledge (TRaCK) researcher, Dr Michele Burford from Griffith University.

''Fortunately we have not had big fish kills from the lack of oxygen because the creek has big tides – up to eight metres – and the incoming tide brings more oxygen in. But on the outgoing tide these creek-dwellers run out of oxygen.'

The nutrients from the sewage have formed a sediment 'pool' in the creek that is much larger than that found in other creeks the researchers have sampled. The high level of nutrients is causing algal blooms in the water and sediment. The nutrients are also being released from the sediment pool at a rapid rate.

'The size of the sediment pool means that even if sewage outflows into the creek were stopped tomorrow, the nutrients from the sediment will be released into the creek for a very long time to come,' says Dr Burford.

The researchers found a chemical compound specific to sewage up and down the length of the creek, showing that the effects of the sewage extend throughout the whole system.

'If you find that compound in measurable levels in the water and mud you know that that area has been affected by sewage,' says Dr Burford.

'Any increase in sewage into this creek is likely to damage ecological processes even further and affect the animals and plants living in the creek,' says Dr Michael Douglas, Director of the Tropical Rivers and Coastal Knowledge program. ´ "We recommend monitoring oxygen levels as an early warning system and looking at better management of nutrient loads into Buffalo Creek as a priority"

Researchers also looked at sewage levels in Myrmidon Creek near Palmerston and in this larger creek did not find measurable impacts from sewage.

'This project is a good example of taking independent scientific evidence to the community and decision makers to help them make informed decisions for the future of our waterways.'

'TRaCK provides independent advice to decision makers to help them manage our tropical rivers and coasts more effectively,' says Dr Douglas.

'We can use the approach taken in this project to help us improve the way we assess the health of estuaries and tidal waterways in the future.'

This collaborative project on the impacts of urbanisation on Darwin Harbour involved researchers from CSIRO, Griffith University, Geoscience Australia, Charles Darwin University and the Northern Territory Department of the Natural Resources, Environment, the Arts and Sport.

Drawing together more than 70 of Australia's leading social, cultural, environmental and economic researchers, TRaCK focuses on Australia's tropical rivers and estuaries in Queensland, Western Australia and the Northern Territory with a degree of intensity, coordination and integration not previously seen in the region.

TRaCK receives major funding for its research through the Australian Government's Commonwealth Environment Research Facilities; the Australian Government's Raising National Water Standards Program; and the Queensland Government's Smart State Innovation Fund. The Australian Government has also provided support for this project in association with ongoing work for the development of a Water Quality Protection Plan for Darwin Harbour.

For interview

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Media assistance and too receive a copy of the full report:

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Vision opportunities

Dr Michael Douglas will be at Buffalo Creek Boat Ramp and is available for interview onsite from 10am-11am Wednesday 14 October.

Dr Michele Burford will be at Griffith University (Nathan Campus, Brisbane) measuring water samples in the laboratory using scientific equipment.