



The research team at work off Avana. PHOTO: Kirby Morejohn. 18071021

Engineers check ocean outfall option

A TEAM of coastal engineers from Australia visited Rarotonga last week to help with the collection of data on nearshore ocean currents and water mixing processes outside the lagoon, as a part of the Mei Te Vai Ki Te Vai (MTVKTV) project.

Water, Waste and Sanitation Unit (WATSAN) director Jaime Short says Cook Islands residents produce 1.8 million litres of wastewater daily. Assuming there are 3000 visitors on the island at any one time, that number increases to 2.4 million litres daily.

An MTVKTV project representative said in May that without a new public wastewater infrastructure and more effective management of on-site treatment systems, current pollution issues at Muri were likely to worsen, and develop in other areas.

The project was launched by the government at the beginning of last year with the purpose of

improving the water quality of the lagoons in Rarotonga and Aitutaki. It includes an environmental monitoring and investigation programme, the introduction of early measures to address water quality issues, the design of infrastructure for improved wastewater management, and the establishment of a Crown-owned water and wastewater authority.

A post on the MTVKTV website said the project had identified two possible ways to dispose of treated wastewater in Rarotonga – on to land, or into the ocean.

Coastal engineers Matt Blacka and Chris Drummond from the University of New South Wales' (UNSW) water research laboratory joined representatives Ministry of Marine Resources personnel to investigate the ocean option.

"The work UNSW was undertaking as part of MTVKTV is an example of the detailed works

being completed to ensure we understand the potential effects and can communicate these to stakeholders," says environmental scientist Anthony Kirk.

The research involved a fluorometric tracer dye being dropped at four locations around the south-eastern coast of Rarotonga. The researchers then monitored the concentration and movement of the dye plume for around 30 minutes at each site.

An Acoustic Doppler Current Profiler (ADCP) was also used to profile currents around each of the sites and to understand how the currents vary at different depths and locations.

"This information is essential to help inform the feasibility of an ocean outfall as a long-term solution for disposal of treated wastewater on Rarotonga," a UNSW release said.

Data sets from the research will be used to improve knowledge of the potential effects of



The data collection programme involved the use of dye to check ocean currents. PHOTO: Lara Ainley. 18071021

mixing and transporting wastewater from an ocean outfall and how to minimise the environmental impacts, should an ocean based outlet be the preferred option.

The chance for landowners to register their expressions of interest for the provision of parcels

of land required for the construction of infrastructure associated with the MTVKTV project and island-wide sanitation upgrade projects ended on June 13.

"MFEM intends to seek agreement on arrangements or conditions including compensation with landowners submitting

expressions of interest for suitable land," an MTVKTV spokesman said.

It is currently unknown which method of disposal is the preferred option, but CINews understands MTVKTV is giving both equal consideration.

■ Liam Ratana