



Media Release

2 February 2012

CODC to undertake dye tests in Lake Dunstan

Central Otago residents should not be alarmed if they see red in the water of Lake Dunstan this month.

The Central Otago District Council (CODC) will undertake dye testing in the Kawarau Arm of the lake to verify initial computer modelling of wastewater plume behaviour.

Treated wastewater from CODC's Cromwell wastewater treatment plant (WWTP) is discharged from wastewater oxidation ponds to the Kawarau Arm of Lake Dunstan through an outfall pipe. Initial computer modelling of the wastewater plume behaviour by hydrological consultants DHI indicated that in summer the warmer treated wastewater would rise to the surface of the colder Lake Dunstan water and travel downstream toward Cromwell.

The Cromwell Community Board asked for the computer model to be verified with dye testing before it reviewed long-term wastewater treatment options under consideration for the Cromwell ward.

The dye tests, which will be conducted by Cawthron Institute experts for the Council, will be carried out below the Cromwell wastewater oxidation ponds' discharge outlet to the Kawarau Arm of Lake Dunstan, 2km upstream from the confluence with the Clutha, in mid- February.

Non-toxic tracer dye (Rhodamine WT) will be discharged at different dilutions from the Cromwell WWTP at a controlled rate and measurements will be taken in order to identify the extent and behaviour of the wastewater discharge plume.

Testing will be carried out from the week of the 13 February but the exact dates and timing will depend on conditions. The period has been selected to coincide with the highest pond temperatures which will provide a worst case scenario plume extent. The tests will not be carried out on weekends or public holidays. Signs will be erected on common public access points near the discharge to advise the public of the testing.

Central Otago Capital Works Programme Manager Peter Greenwood said the Otago Regional Council-consented tests would provide valuable data on the flow characteristics of the wastewater plume below the oxidation ponds outfall.

"The dye being put into the water is bright red, which shows up well in photographic and video recording of the tests, which will take place from the air via helicopter. It is a routine and safe testing method, and is non-toxic so will have no effect on the flora and fauna or the environment surrounding the river," said Mr Greenwood.

Cromwell Community Board Chair Neil Gillespie welcomed the news the testing was set to commence.

“This investigation is essential to enable us to understand the potential effects of the current oxidation pond discharge on the lake and to assist Community Board’s decision-making on the preferred long-term option for Cromwell and Bannockburn,” he said.

“The more complete the information presented to the Community Board, the easier it will be to make a decision in which we and the community can have confidence in for the future of Cromwell.”

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