

Date: 5 Dec 2018

To: Thelma Marr, Acting Environmental Health Unit Manager, Shoalhaven City Council

Dear Thelma,

I trust this e-mail finds you well... thank you for your detailed replies to various concerns raised in Conjola Community Association (Conjola CCB) correspondence to Council dated 23rd October 2018 regarding water quality readings for Lake Conjola. This aside, the Conjola CCB takes this opportunity to provide further comment(s) on explanations offered by Council.

To which end, please find following those various Council explanations prompting additional comment from the Conjola CCB...

Council explanation... "... For the purpose of human health nitrogen and phosphorous are not required for the assessment of "safe" bathing recreational water and these are not taken as part of the focused sampling that is being conducted weekly at the lake."

Additional Conjola CCB comment... Whilst Conjola CCB acknowledges Council's explanation, Community concerns are not limited to safe limits for recreational swimming but rather the broader issue of assessing the ecosystem health of the estuary, in the absence of consistent monitoring of additional pollutants necessary to do so, as noted by *DEH's Monitoring the Ecosystem Health of Estuaries on the NSW South Coast* in 2012;

"... Councils estuary monitoring programs have historically centred on pressure indicators as nutrients and/or bacterial sampling. Although very useful in monitoring pollution sources and recreational swimming quality, this has not provided Council with information sufficient to determine whether estuary ecosystem health is declining, being maintained or improving... Chlorophyll a and turbidity... are used... as indicators of estuary condition... It was recommended the Councils sample monthly for chlorophyll a and turbidity, and consider fortnightly sampling over summer..."

Council explanation... "... The incremental increases and decreases in faecal coliforms as have been identified in your correspondence are indicative of impacts from surrounding land uses. Increases in faecal coliforms will be commonly experienced after rainfall as contaminants from the land are washed into catchments and into lakes, rivers and beaches. Even in "pristine" environments such as Termeil Lake and Meroo lake (see below) which are surrounded by National park with no residential development adjacent still indicate faecal levels and nitrogen. Lake Conjola is now sewered which has greatly reduced the risk of faecal contamination - any faecal contamination is due to surrounding land uses." and "...These spikes are associated with rainfall events and are most likely attributed to cow, kangaroo and dog faeces entering the lake."

Additional Conjola CCB comment... Again, whilst Conjola CCB acknowledges Council's explanation, Community concerns nonetheless remain given the notable increases in Faecal Coliform readings (3cfu/ml rising to 240cfu/ml) and Enterococci readings (20cfu/mL rising to 210cfu/mL) reported at E-748 Pattimores Lagoon on 4th October, 2018 - albeit off small bases. However, analysis of total rainfall for the period between 24th July and 4th October, 2018 (July 1.2mm / August 18.8mm / September 38.4mm / October 5.8mm) suggests there was little rainfall, with little to no run-off into the catchment given no noticeable increase in lake water level for the same period. As such, the Conjola CCB remains concerned that the source of pollutants at E-748 Pattimores Lagoon may not be attributable to rainfall / run-off, but instead ground swelling / pollutant leaching due to a raised water table usually associated with a closed entrance. A point noted by Earth2Water in their *Third Annual Ground Water Monitoring Report 2012* for the Conjola Regional Sewerage Scheme as follows...

"... The risk of adverse impacts at the site varies due to the sensitivity of each receptor (lagoon, estuary and beach) and groundwater contaminants (primarily nitrogen/phosphorous concentrations). The estuary (moderate risk) and beach (low risk) receptors are relatively close to the trench and associated plume. E2W believe that further precautions are required for the estuary, especially during mouth closure (stagnant water and algal blooms)."

So in summary, the Conjola CCB is of the opinion that the Community's ongoing concern with water quality is justified, notwithstanding Council's explanation for the pollutant measurements reported on the Lake as at 4th

October 2018. Should you require any further information, please do not hesitate to contact either Robyn Kerves - President Conjola Community Association, or myself at your earliest convenience.

Regards, Dirk Treloar - Vice President Conjola Community Association