



30 March 2017

***Escherichia coli* pollution in Te Waikoropupu Springs reserve**

In the course of our nutrient monitoring work at Te Waikoropupū Springs Friends of Golden Bay became aware that where Fish Creek flows into the Springs reserve it repeatedly had an unpleasant appearance and odour after rain events. We were also aware that in 2014 DoC had removed the drinking water supply provided for tourists at the Springs after unsatisfactory *Escherichia coli* test results and reports of ill effects after drinking from the supply.

FoGB therefore decided to undertake and pay for a programme of *E. coli* testing so as to have objective information on the problem. We took samples during rain events to establish whether the problem was due to farm runoff.

We were shocked by the high *E.coli* levels reported, and brought them to TDC's attention. We received help from TDC in identifying the source, which was confirmed on further analysis to be ruminants, such as cattle.

Our results are shown in the table below. All samples were taken from Fish Creek where it flows into Te Waikoropupū Springs Reserve at the southern boundary. The units are given as 'Most Probable Number' of *E.coli* per 100 ml of water (MPN/100ml) which is the conventional measurement.

Date	<i>E.coli</i> MPN/100ml	Comment
7-11-2016	>2500	Close to max rain
7-12-2016	>2000	Max rain 5 hrs earlier
22-1-2016	>2000	Max rain 12 hrs earlier
26-3-2016	>2000	Max rain 11 & 22 hrs earlier

For reference, the recommended safe level for drinking is less than 1 count per 100 ml. There is a current political controversy over the safe swimming level, and there was an outcry when it was suggested that the 'safe' level could be roughly doubled to 540 per 100 ml. Hence by any possible standards, when tested this water was not only unfit to drink, but also nowhere near fit to swim in.

Te Waikoropupū Springs is arguably Golden Bay's most precious water taonga, yet it is subject to what can only be described as gross faecal pollution.

Questions for further consideration:

- 1) Is this an isolated instance of especially bad faecal pollution, unfortunately affecting this most precious taonga? Or are these *E.coli* levels indicative of general levels of faecal pollution in the Bay's waterways?
- 2) What can be done to address the problem?
- 3) What plans will be put in place to improve matters?

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Fish Creek Catchment

