

Taranaki Regional Council monitors water quality at 41 sites across the region from November to March to check whether it's safe to swim during the summer months. This report card covers the 2023/24 Can I Swim Here? season.

Weekly samples are collected from rivers, lakes and beaches, with freshwater sites tested for

Escherichia coli (E. coli) and marine sites tested for enterococci. These bacteria are indicators of faecal contamination in the water which can present a health risk at sites used for recreation.

The Council also monitors benthic and planktonic cyanobacteria every fortnight at some of these sites.

#### KĀORE E TAEA TE KAUKAU **KA TAEA TE KAUKAU ME TŪPATO UNSUITABLE FOR SAFE TO SWIM CAUTION ADVISED SWIMMING** The monitoring result met Slightly elevated result at High bacterial or algal count national water quality the time of testing. exceeding national guidelines at the time of Water quality generally guidelines at time of testing. Safe to swim! suitable for swimming. testing.

Figure 1: Quick guide to the traffic light system used for the weekly assessment of Can I Swim Here? sites.

Weekly monitoring results, long-term grades and permanent health warnings for Taranaki are updated on our website: <a href="mailto:trc.govt.nz/can-i-swim">trc.govt.nz/can-i-swim</a>. Further information regarding faecal indicator bacteria and cyanobacteria can also be found on the LAWA website: <a href="mailto:lawa.org.nz">lawa.org.nz</a>.

# Ngā whakataunga ngārara kiko mata (ngā awa me ngā roto) *E. coli* results (rivers and lakes)

E. coli are an indicator of faecal contamination in freshwater. Although E. coli doesn't always make people sick, it is often found alongside other harmful pathogens that can make people sick and are therefore a useful measure of the suitability of rivers and lakes for recreation.

At the time of sampling, 238 (47%) samples taken from freshwater recreational sites indicated that water quality was suitable for swimming, while 107 (21%) samples had levels of *E. coli* where caution was advised. Conditions were found to

be unsuitable for swimming at the time of sampling in 159 (32%) samples.

Lake Herengawe and Lake Rotorangi at Pātea Dam had the best water quality of all monitored sites (Figure 3), while the Te Hēnui Stream had the poorest water quality, with permanent health warnings in place at this site. Other locations with permanent health warnings and rāhui can be found on the LAWA website.



Figure 2: Guideline E. coli values for swimming and recreation at freshwater sites.

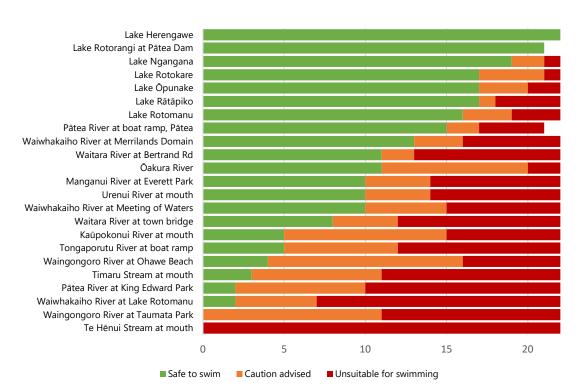


Figure 3: Results of weekly E. coli samples at freshwater sites for the 2023/24 Can I Swim Here? season.

## Ngā whakataunga ngārara kōpiropiro (takutai) Enterococci results (beaches)

Enterococci bacteria are an indicator for faecal contamination in marine waters. Similar to *E. coli*, enterococci are often found alongside other harmful pathogens that can make people sick, however, enterococci persist longer in saltwater and are therefore a better measure of the risk to human health.

At marine sites, 315 of 377 (83%) samples indicated water quality was suitable for

swimming at the time of sampling, while 25 (7%) samples had levels of enterococci where caution was advised. Conditions were found to be unsuitable for swimming at the time of sampling in 37 (10%) of samples. Fitzroy Beach had the best water quality out of all monitored beaches this summer, while Waitara East Beach had the worst (Figure 5).



Figure 4: Guideline enterococci values for swimming and recreation at marine and coastal sites.

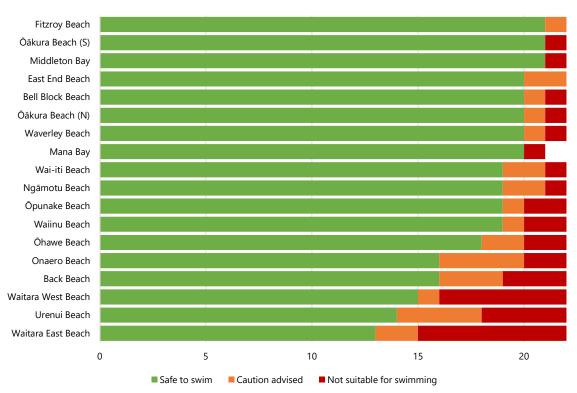


Figure 5: Results of weekly enterococci samples at marine sites for the 2023/24 Can I Swim Here? season.

#### Ngā whakataunga ngārara kānapanapa (ngā awa me ngā roto) Cyanobacteria results (rivers and lakes)

Cyanobacteria exists naturally in freshwater, growing as mats on the rocks of a river bed (benthic) or floating and drifting in lakes (planktonic). During the summer months, increased water temperature, reduced rainfall and increased daylight hours provide ideal conditions for cyanobacteria to grow, sometimes resulting in algal blooms. When in bloom, cyanobacteria can produce toxins that can pose a risk to the health of people and animals entering the water.

Sites monitored for benthic cyanobacteria were suitable for recreational use on 20 of 77 (26%) routine surveys, and elevated to a cautionary status during one (<2%) survey. Conditions were unsuitable for recreation during 56 surveys (73%). Cyanobacteria coverage remained low in the Te Hēnui Stream, while the Waiwhakaiho River at

Merrilands Domain, Waiwhakaiho River at Meeting of the Waters and Waingongoro River at Ohawe Beach were all unsuitable for recreational use due to exposed mats on the edges of these rivers.

Lakes monitored for planktonic cyanobacteria were suitable for recreational use on 62 of 77 routine sampling surveys (80%), and elevated to a cautionary status following nine surveys (12%). Conditions were unsuitable for recreation during six surveys (8%). Lakes Rātāpiko, Ngangana, Rotomanu and Rotorangi were all safe for recreational use throughout the sampling period. Lakes Öpunake, Rotokare and Herengawe all exceeded guideline levels at some point and were monitored more frequently until results returned to a safe level (Figure 8).





Figure 6: Guideline values for benthic cyanobacteria in rivers (conditions may also be unsuitable for swimming where there are detaching mats and/or exposed mats along the river's edge, even if overall coverage is low).



Figure 7: Guideline values for planktonic cyanobacteria in lakes.

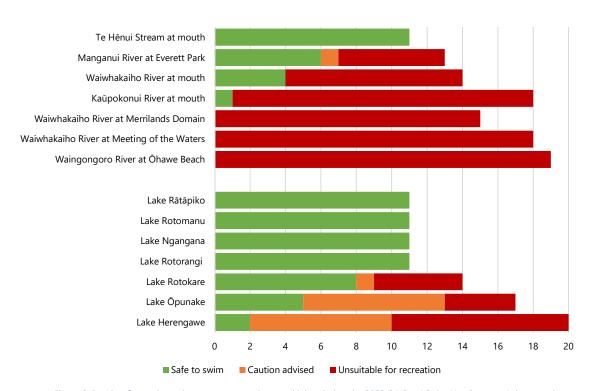


Figure 8: Results of cyanobacteria assessments at rivers and lakes during the 2023/24 Can I Swim Here? season (where results were elevated, sites were monitored more frequently).

## Ngā kounga ki tua Long-term grades

Long-term grades are an indication of whether water quality is generally excellent, good, fair or poor overall during the recreational swimming season. Long-term grades are based on a risk of infection and do not necessarily reflect the conditions on a particular day.

The Council recently changed the way samples are collected so results for *E. coli* and enterococci samples are only available for the last three years (or two years for some newer sites), rather than the recommended five years.

Lake Rotorangi and Lake Herengawe (9%) both have excellent water quality with respect to long-term *E. coli* grades, while the remaining 21 sites (91%) were graded poor (Figure 9). Lake Rotomanu, Lake Rātāpiko, Lake Ngangana and Lake Rotorangi were graded excellent with respect to planktonic cyanobacteria, while Lake Rotokare, Lake Herengawe and Lake Ōpunake were poor. Six marine sites (33%) were fair, while the remaining 12 sites (67%) were graded poor.

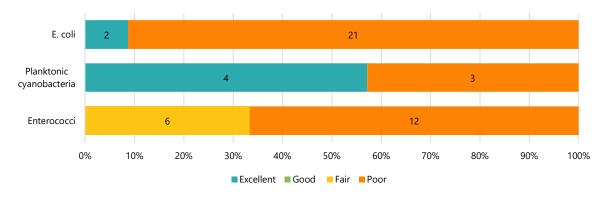


Figure 9: Long-term grades for sites monitored for E. coli, planktonic cyanobacteria and enterococci under the Can I Swim Here? programme.

