

2023/24 Recreational water quality monitoring



Contents

- [2023/24 Recreational water quality monitoring](#)
 - [Contents](#)
- [Disclaimer](#)
- [Overview](#)
 - [Suitability for swimming](#)
- [Methods](#)
 - [Methods for monitoring faecal contamination](#)
 - [Toxic algae sentinel site framework](#)
- [Freshwater *E. coli* results](#)
 - [National Objectives Framework \(NOF\) states](#)
 - [Summary of action guideline breaches for *E. coli*](#)
- [Freshwater toxic algae results](#)
 - [Te Whanganui-a-Tara Whaitua](#)
 - [Ruamāhanga Whaitua](#)
 - [Kāpiti Coast Whaitua](#)
- [Coastal Enterococci results](#)
 - [Microbiological Assessment Categories \(MACs\)](#)
 - [Summary of action guideline breaches for Enterococci](#)
- [Shellfish gathering water quality results](#)
- [Resources](#)
- [Appendix 1 - Monitoring details](#)
- [Appendix 2 - Data tables](#)
 - [Freshwater *E. coli* NOF states](#)
 - [Marine enterococci MAC grades](#)

Disclaimer

This report has been prepared by Knowledge and Insights staff of Greater Wellington (GW) and as such does not constitute Council policy.

In preparing this report, the authors have used the best currently available data and have exercised all reasonable skill and care in presenting and interpreting these data. Nevertheless, GW does not accept any liability, whether direct, indirect, or consequential, arising out of the provision of the data and associated information within this report. Furthermore, as GW endeavours to continuously improve data quality, amendments to data included in, or used in the preparation of, this report may occur without notice at any time.

GW requests that if excerpts or inferences are drawn from this report for further use, due care should be taken to ensure the appropriate context is preserved and is accurately reflected and referenced in subsequent written or verbal communications. Any use of the data and information enclosed in this report, for example, by inclusion in a subsequent report or media release, should be accompanied by an acknowledgement of the source.

For the latest available results go to the [GW environmental data hub](#). Reports for previous years can be found in the [GW document library](#).

Overview

Greater Wellington's Recreational Water Quality Programme monitors water quality to identify health risks from disease-causing organisms and advises the public of these risks. This online report summarises the results of recreational water quality monitoring for the year ending 30 June, 2024. It includes data for:

- Faecal contamination at freshwater and coastal recreational sites
- Toxic algae coverage at freshwater recreational sites
- Faecal contamination in shellfish gathering waters

See [methods](#) and [resources](#) for more details on sampling methodology and useful recreation water quality links.

Suitability for swimming

While faecal contamination is monitored by collecting water samples throughout the year, a [predictive model](#) is used to provide real-time information to the public on the suitability of a site for swimming and other recreational activities. The map below displays monitoring sites which are colour-coded to show the proportion of days predicted as being suitable for swimming.

For the latest recreational water quality risk information, visit the Land Air Water Aotearoa (LAWA) - [Can I Swim Here website](#).

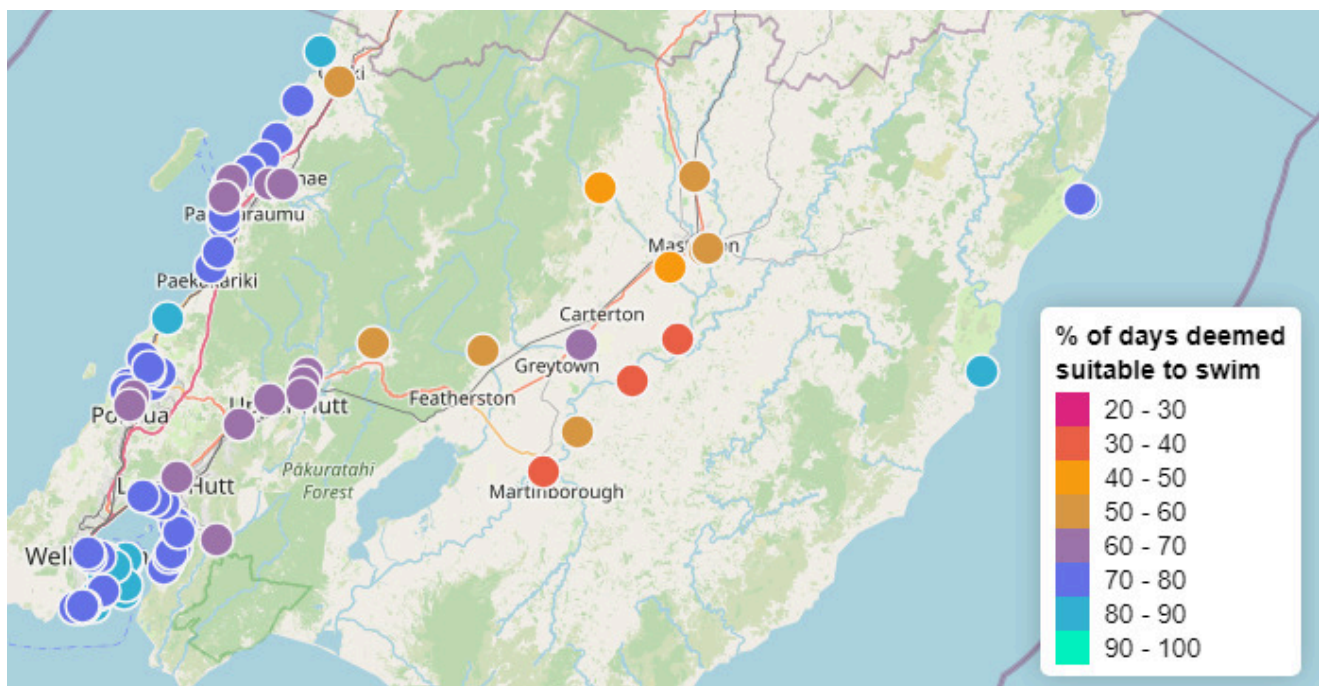


Figure 1: % of days deemed suitable to swim over the **whole** monitoring year.

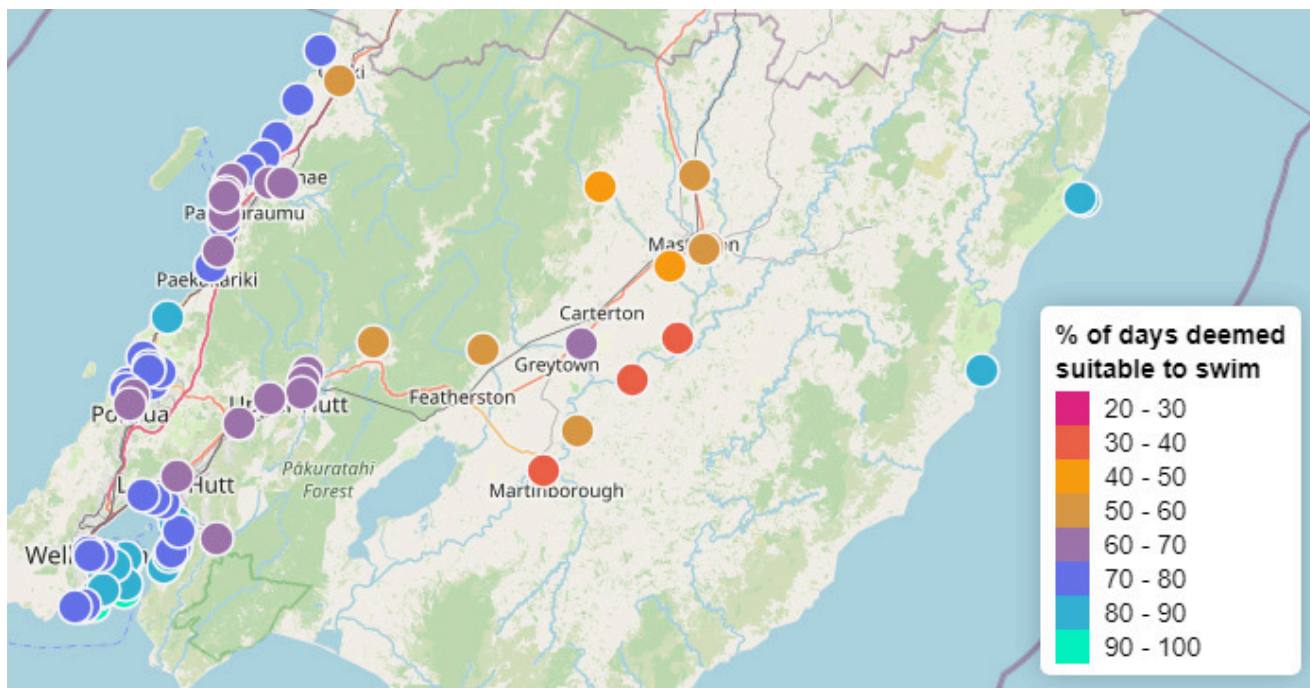


Figure 2: % of days deemed suitable to swim over the **summer** bathing period (start of November to the end of March).

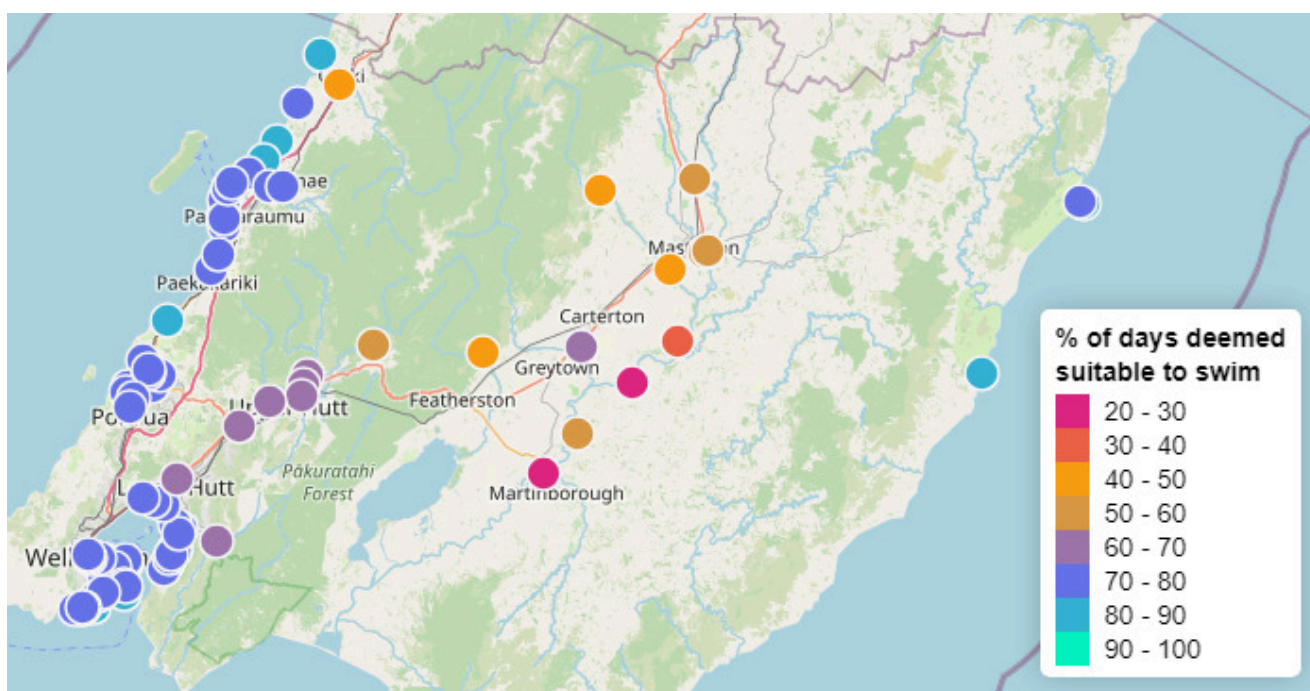


Figure 3: % of days deemed suitable to swim over the **winter** bathing period (April up to the end of October).

Methods

Methods for monitoring faecal contamination

In 2023/24, water samples were routinely collected at 22 freshwater sites and 62 coastal sites during the summer bathing season (November to March inclusive) in accordance with Ministry for the Environment (MfE)/Ministry of Health (MoH) (2003) microbiological water quality guidelines for marine and freshwater recreational areas.

Samples are analysed for faecal indicator bacteria including *E. coli* at freshwater sites, and enterococci at coastal sites. Additionally, 17 coastal sites were sampled fortnightly during the winter period (April to October), as there is significant year-round use at these sites.

To inform the suitability for shellfish gathering, 7 coastal sites are also analysed for faecal coliforms.

Toxic algae sentinel site framework

Toxic algae is monitored regularly at freshwater sites during the summer bathing season (November to March inclusive). During the winter period (April to October inclusive), monitoring occurs monthly.

Toxic algae monitoring follows a two-tier sentinel site network, with sites known to be high risk identified as **Tier-1 Sentinel Sites**. If algal coverage at Tier-1 sites breaches threshold levels, **Tier-2 Sentinel Sites** are also checked. See below for further details about the site network.

There are three observation-based methods for determining toxic algae coverage and informs the toxic algae risk. Monitoring procedures are based on those outlined in [New Zealand Guidelines for Cyanobacteria in Recreational Fresh Waters Interim Guidelines](#):

1. **Transect Assessment.** Transects are completed by using an underwater viewer (bathyscape) at 20 spot observations to estimate toxic algae coverage on the riverbed. An overall percentage is calculated by averaging the observations.
2. **Bankside Assessment.** A bankside average is estimated considering coverage across all areas of the site. This helps assess areas that cannot be safely accessed during transects assessment
3. **Detached mats.** Detached toxic algae mats floating down the river or washed up on the riverbank pose a higher risk because they are more accessible to dogs and small children. Observations are completed to determine the presence of any detached mats at a site.

Tier-1 Sentinel Sites

Classed as sites where toxic algae has been known to historically bloom under optimal weather and river flow conditions.

Monitoring of Tier 1 sites occurs if there had been an accrual period of seven days. An accrual period is defined as the number of days between a freshwater flushing flow (i.e. 6x median flow). At this flushing flow, toxic algae mats are generally washed away and the potential health risk due to the algae is negligible.

Tier-2 Sentinel Sites

Known to bloom when cover at Tier-1 Sites reaches a critical threshold level of (i.e. >15%, defined for the Wellington region only).

Monitoring of Tier 2 sites occurs if a toxic algae coverage greater than 15% is observed at a Tier-1 Sites. Tier-2 site monitoring is restricted to sites within the same geographical area (i.e. Whaitua) where a threshold exceedance was observed.

Other Toxic Algae Sites

Some freshwater recreational sites aren't classed as Tier-1 or Tier-2 as part of the Toxic Algae Sentinel Site Network, however visual observations for toxic algae are still completed at these sites in conjunction with water sampling for faecal risk. If a significant toxic algae bloom is identified at Tier-1 and Tier-2 sites, these other sites may also be monitored to determine the extent of the bloom.

Action guidelines for the Wellington Region

Greater Wellington has adopted a more conservative action level guideline of 20%, driven by the rapid growth rates of toxic algae experienced in the region and the subsequent need to manage risks to the public. This approach is consistent with the procedures set out in [Brasell and Conwell 2018](#).

In addition to the routine transect assessment as set out in the [Interim Guidelines](#), a bankside assessment was introduced to assess non-wadeable sections of a river site, and where the assessment from a transect method alone was insufficient to assess percentage toxic algae cover.

Full details of methods and guideline comparisons are described in full in the 2017/18 annual technical report (see [Brasell and Conwell 2018](#)).

Freshwater *E. coli* results

Key freshwater *E. coli* monitoring results are presented in the following sections and supplementary tables can be found in [Appendix 2](#).

National Objectives Framework (NOF) states

Microbiological water quality states are reported as National Objectives Framework (NOF) states in accordance with the [2020 National Policy Statement for Freshwater Management](#).

Freshwater NOF states are based on routine sampling over five recreational bathing periods, which run from the start of November to the end of March, with a minimum of 50 samples required to assign a state. “A” can be seen as excellent bathing water quality, while “D” is poor quality with higher risk of *Campylobacter* infection, see these LAWA factsheets on [coastal and freshwater recreation monitoring](#) and [faecal indicator bacteria](#) for more information.

Arrows over the circles in the maps below indicate change in levels from the previous season – i.e. a single up arrow means that this season’s state is one level higher (worse) than last season’s state.

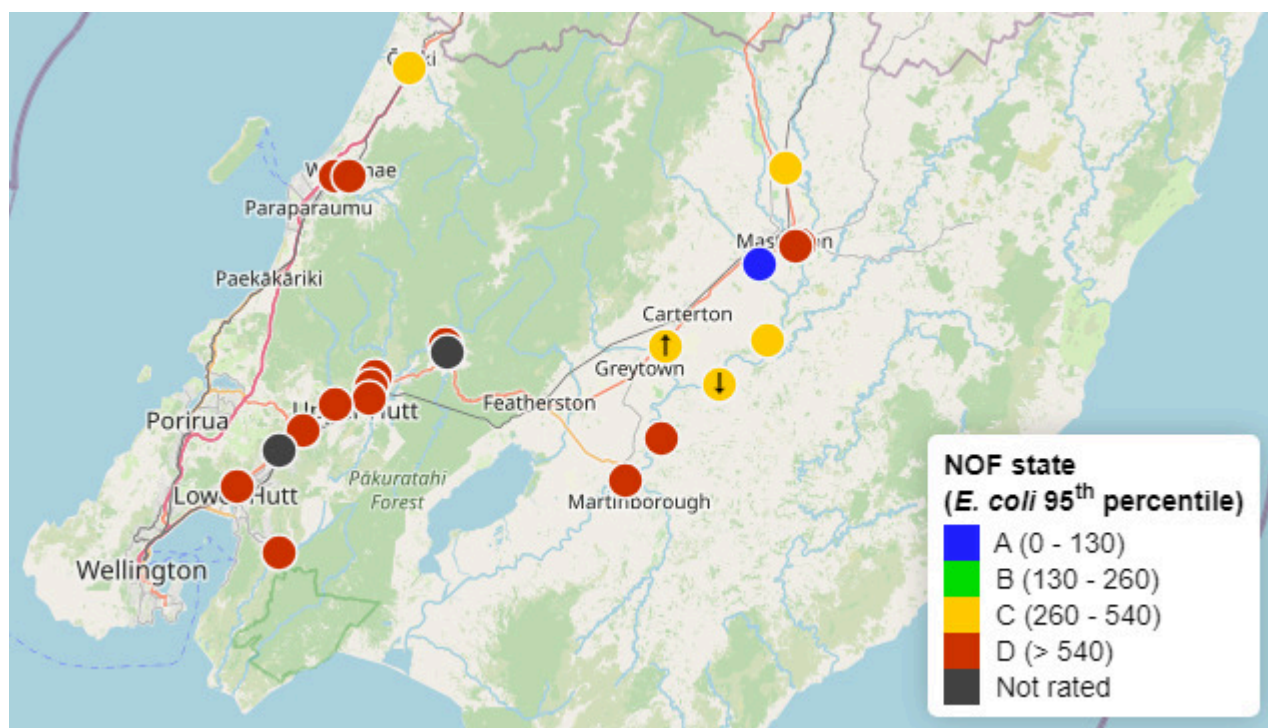


Figure 4: NOF states calculated for samples taken in **all** river flow conditions.

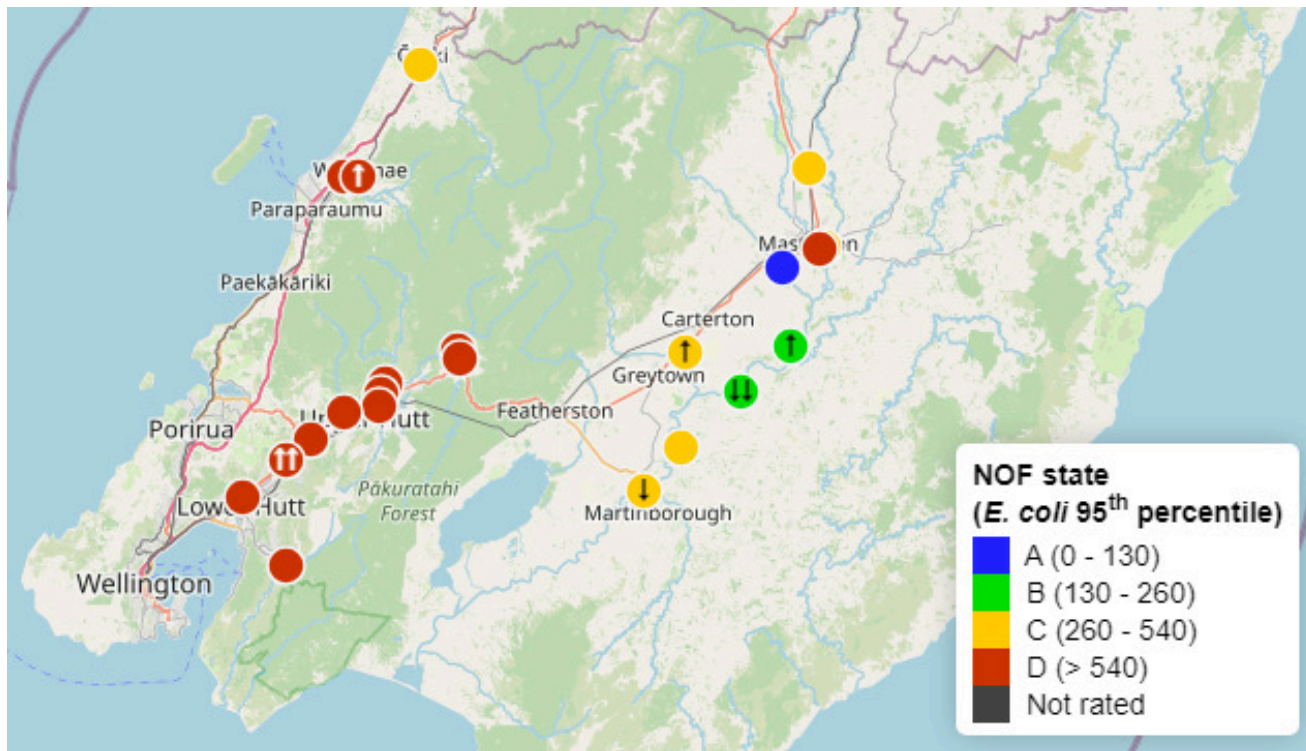


Figure 5: NOF states calculated for samples taken in **low flow** river flow conditions where river flow is less than three times the median of long-term flow. These states do not require the minimum 50 data points, see the appendix data tables for sample numbers when making comparisons.

Summary of action guideline breaches for *E. coli*

Action guideline breaches for *E. coli* (>540 cfu/100mL) from routine surveillance monitoring.

Table 1: The total number of sites that breached guidelines broken down by those sites total number of breaches in the monitoring season.

Total breaches per site	Te Whanganui-a-			Total no. sites	% of sites
	Kāpiti	Tara	Ruamāhanga		
Zero (no breaches)	2	3	8	13	59.1
One	1	4	1	6	27.3
Two	0	2	0	2	9.1
Four	0	1	0	1	4.5
Total monitored sites:	3	10	9	22	

Table 2: Each action-level guideline breache and information on preceding rainfall (mm). Whaitua abbreviations: **RMH**: Ruamāhanga, **TWT**: Te Whanganui-a-Tara, **KC**: Kāpiti Coast.

Whaitua	Date	Location	<i>E. coli</i> count (cfu/100mL)	Rainfall (mm)		
				00-24h	25-48h	49-72h
TWT	2023-12-04	Hutt River at Melling Bridge	1,900	8.6	0.0	0.0
KC	2024-01-23	Waikanae River at Old SH1	695	0.2	0.8	17.0
TWT	2024-01-23	Akatarawa River at Hutt Confluence	800	0.4	1.6	10.0
TWT	2024-01-23	Hutt River at Melling Bridge	3,100	0.0	1.6	6.8
TWT	2024-01-23	Hutt River at Silverstream Bridge	600	0.0	1.6	6.8
TWT	2024-01-23	Pakuratahi River at Hutt Forks	1,500	0.0	6.8	3.4
TWT	2024-01-23	Pakuratahi River at Kaitoke Campground	1,900	0.0	7.0	3.2
RMH	2024-02-19	Ruamāhanga River at Te Ore Ore	600	0.0	0.0	0.0
TWT	2024-03-04	Hutt River at Melling Bridge	2,400	8.6	0.0	0.0
TWT	2024-03-04	Hutt River at Taita Rock	1,200	8.6	0.0	0.0
TWT	2024-03-04	Pakuratahi River at Hutt Forks	1,000	7.0	0.0	0.0
TWT	2024-03-04	Pakuratahi River at Kaitoke Campground	1,300	7.0	0.0	0.0
TWT	2024-03-04	Wainuiomata River at Richard Prouse Park	2,000	2.2	0.2	0.0
TWT	2024-03-18	Hutt River at Melling Bridge	1,700	0.0	9.0	0.0

Freshwater toxic algae results

Summer and Winter toxic algae monitoring results are assessed in accordance with [New Zealand guidelines for cyanobacteria in recreational freshwaters: Interim guidelines \(2009\)](#) and presented in the following charts. The green (●) and blue (●) dots on the charts below show observed toxic algae cover by transect and bankside assessment methods with red circles (○) around them if detached toxic algae mats were present. River flow is shown by the continuous black line (—) and the orange (—) and red (—) dotted lines mark alert (>20%) and action (>50%) levels of toxic algae cover respectively.

Sites are grouped by Whaitua and their monitoring tier in the Sentinel Site Framework, see the [methods section](#) for more information on this framework. Other sites that are monitored for toxic algae but not assigned a tier are included for reference as well.

Note that the y-axes for flow (right side of plots) are on different scales across sites, this is to highlight the possible effect of relative flow events on toxic algae cover rather than comparing absolute rates.

Te Whanganui-a-Tara Whaitua

Tier 1 sentinel sites

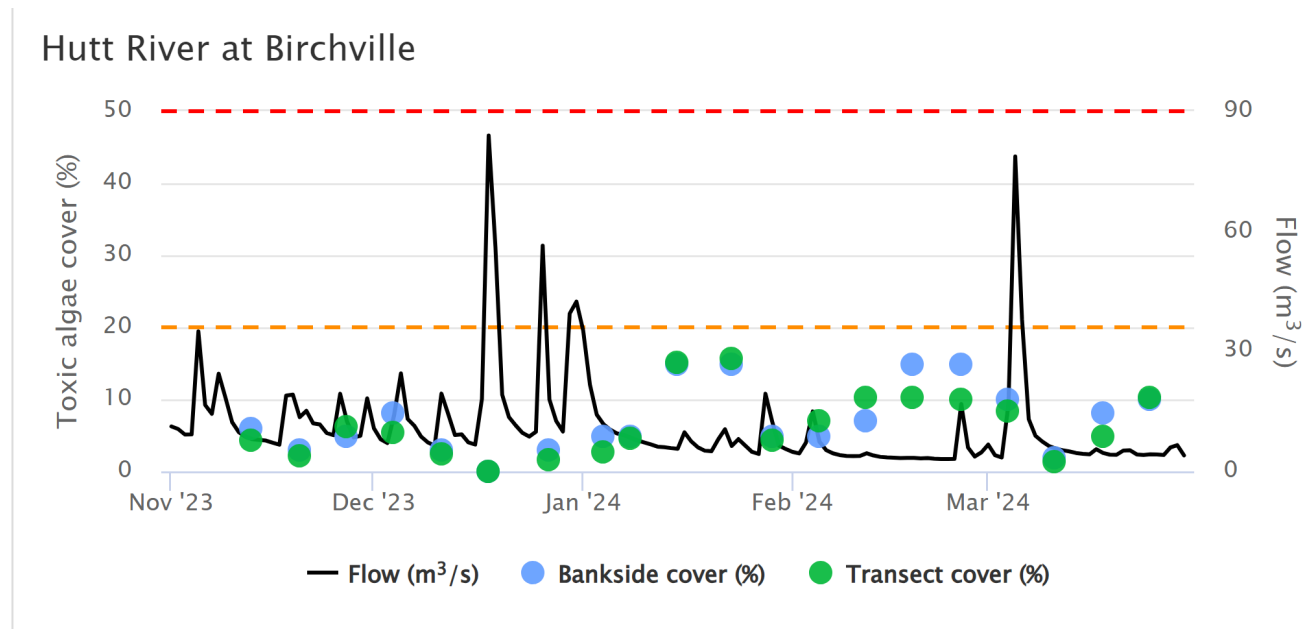


Figure 6: Toxic algae cover and flow for **Hutt River at Birchville**.

Hutt River upstream of Silverstream Bridge

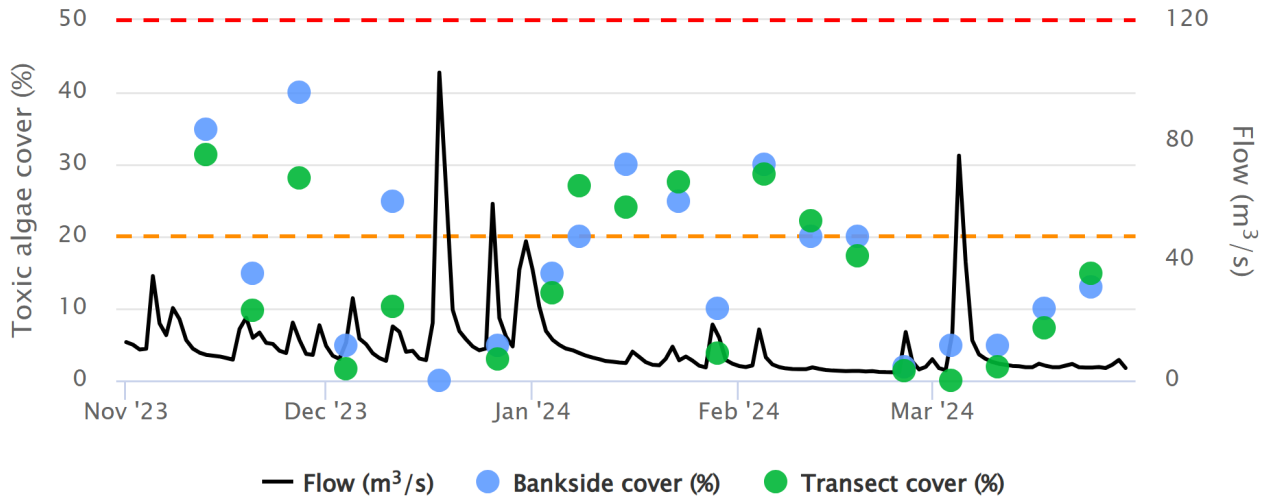


Figure 7: Toxic algae cover and flow for **Hutt River upstream of Silverstream Bridge**.

Pakuratahi River at Kaitoke Campground

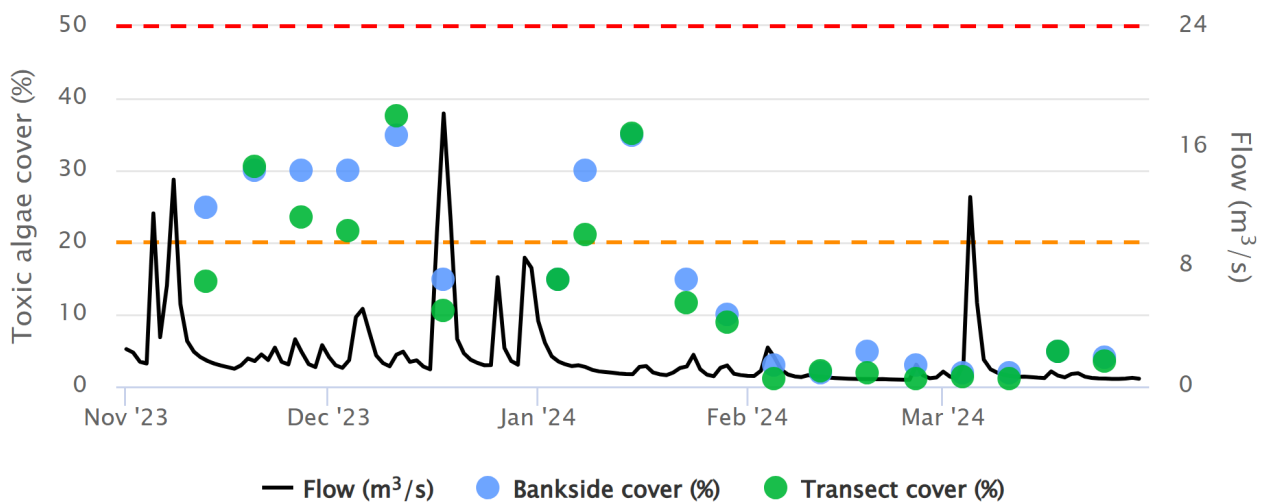


Figure 8: Toxic algae cover and flow for **Pakuratahi River at Kaitoke Campground**.

Tier 2 sentinel sites

Hutt River at Melling Bridge

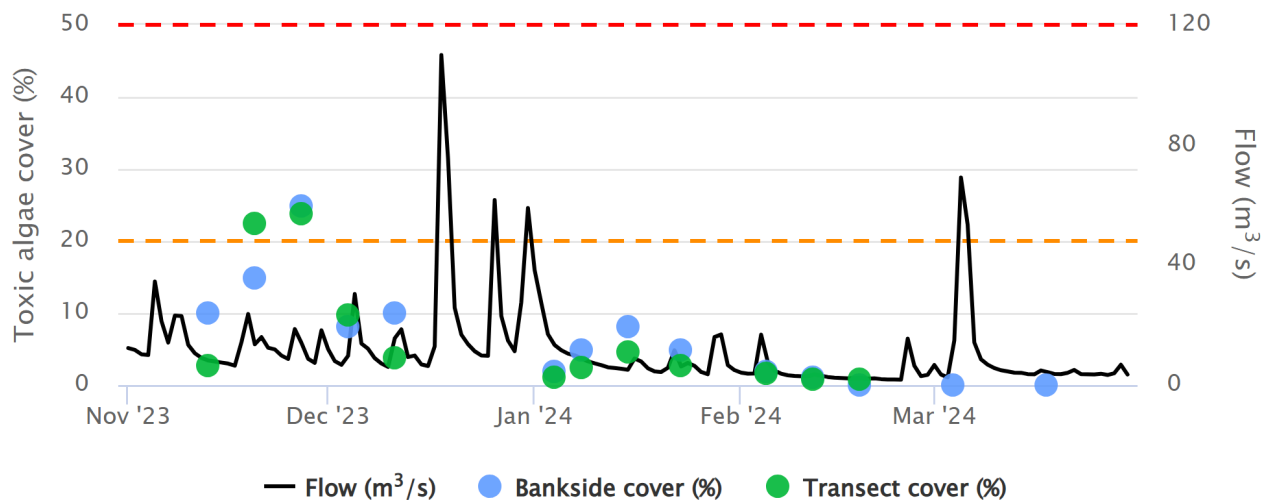


Figure 9: Toxic algae cover and flow for **Hutt River at Melling Bridge**.

Hutt River at Poets Park

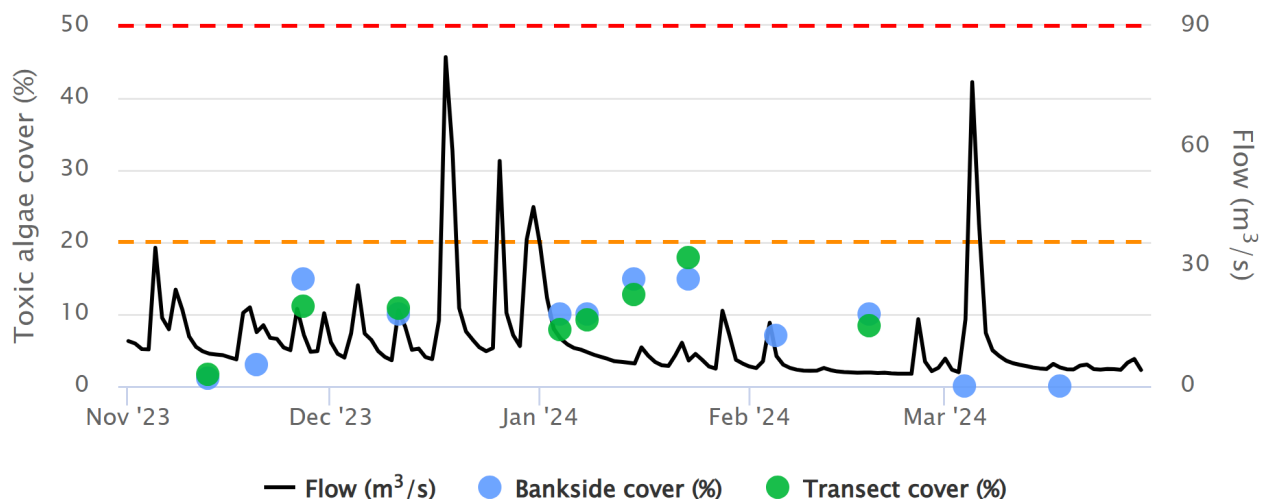


Figure 10: Toxic algae cover and flow for **Hutt River at Poets Park**.

Other sites

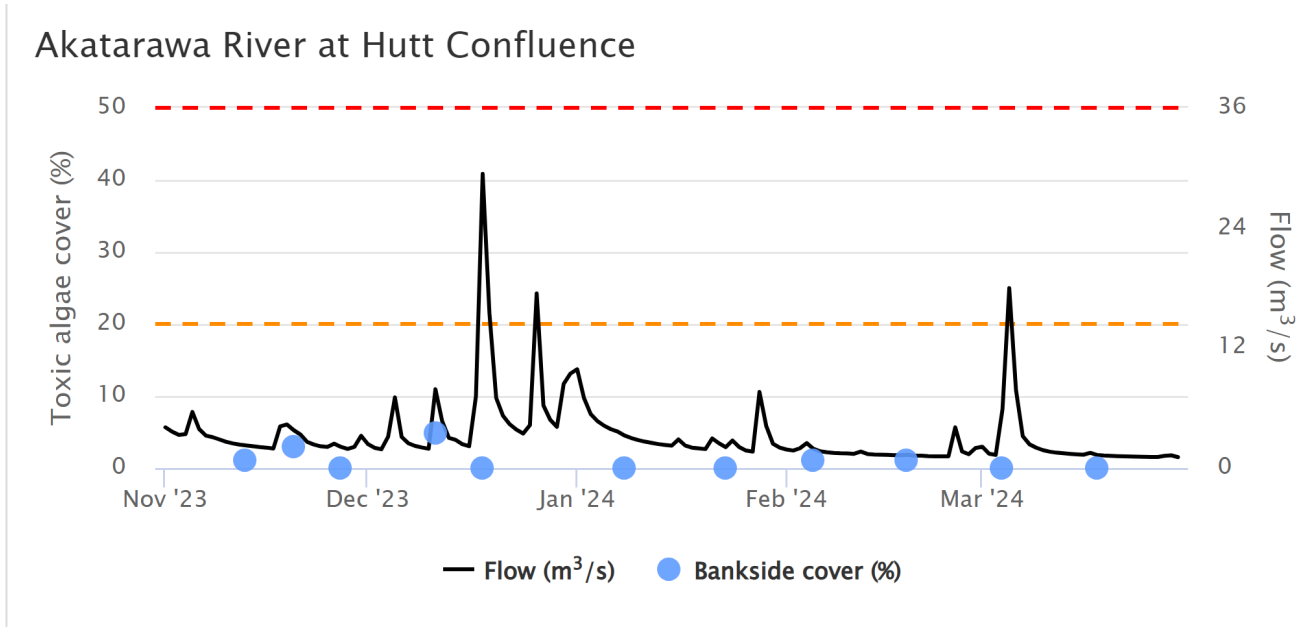


Figure 11: Toxic algae cover and flow for **Akatarawa River at Hutt Confluence**.

Hutt River at Maoribank Corner

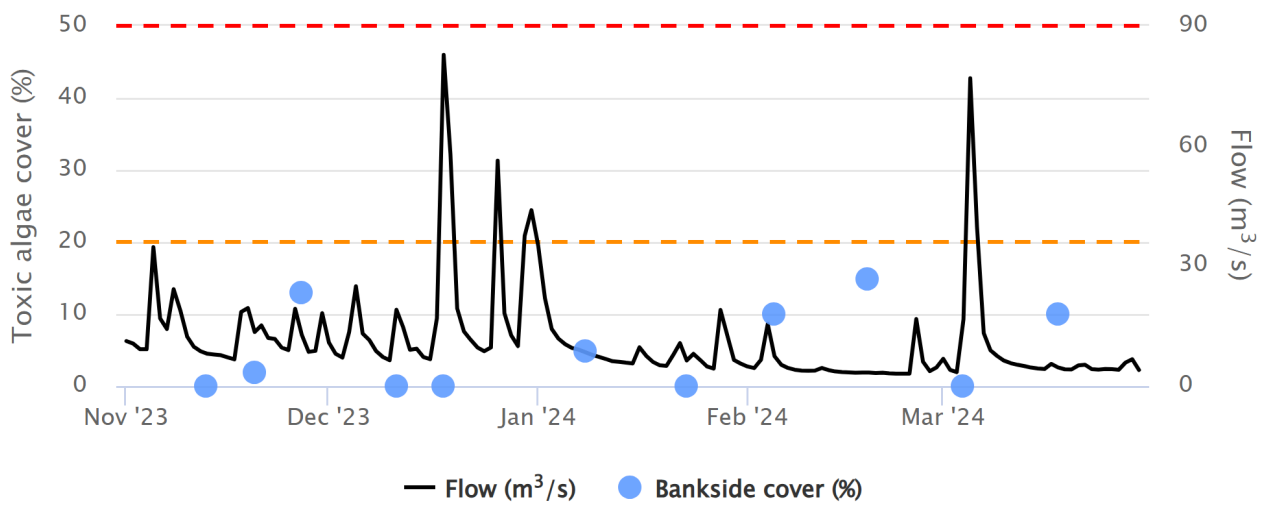


Figure 12: Toxic algae cover and flow for **Hutt River at Maoribank Corner**.

Hutt River at Silverstream Bridge

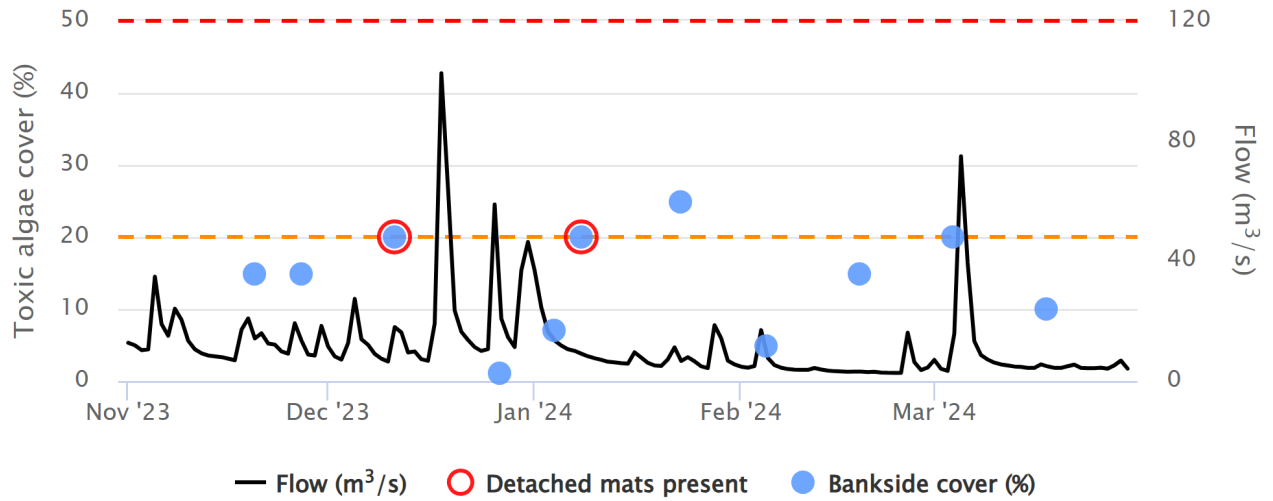


Figure 13: Toxic algae cover and flow for **Hutt River at Silverstream Bridge**.

Hutt River at Taita Rock

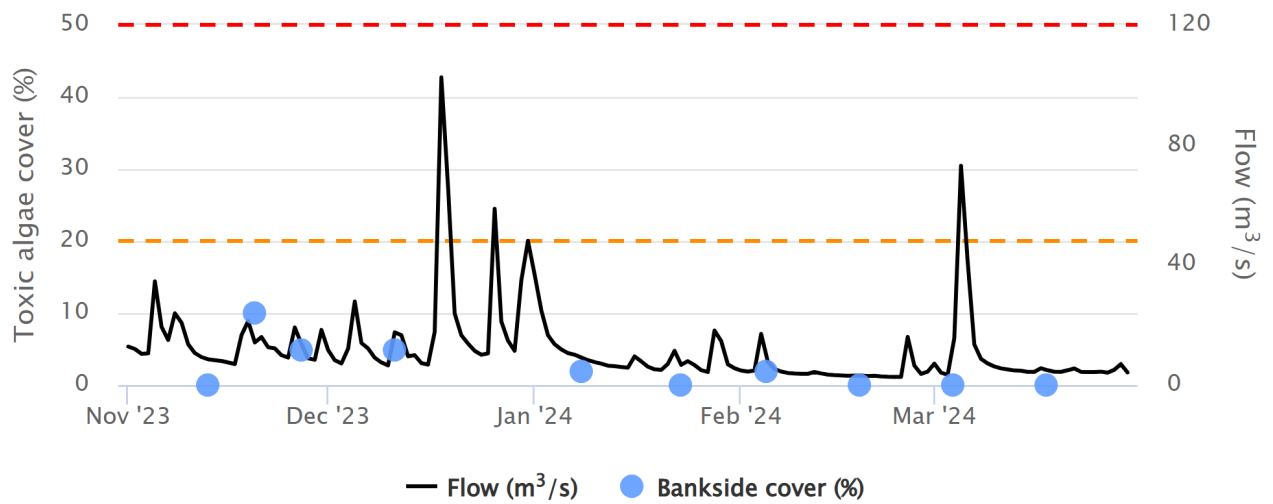


Figure 14: Toxic algae cover and flow for **Hutt River at Taita Rock**.

Pakuratahi River at Hutt Forks

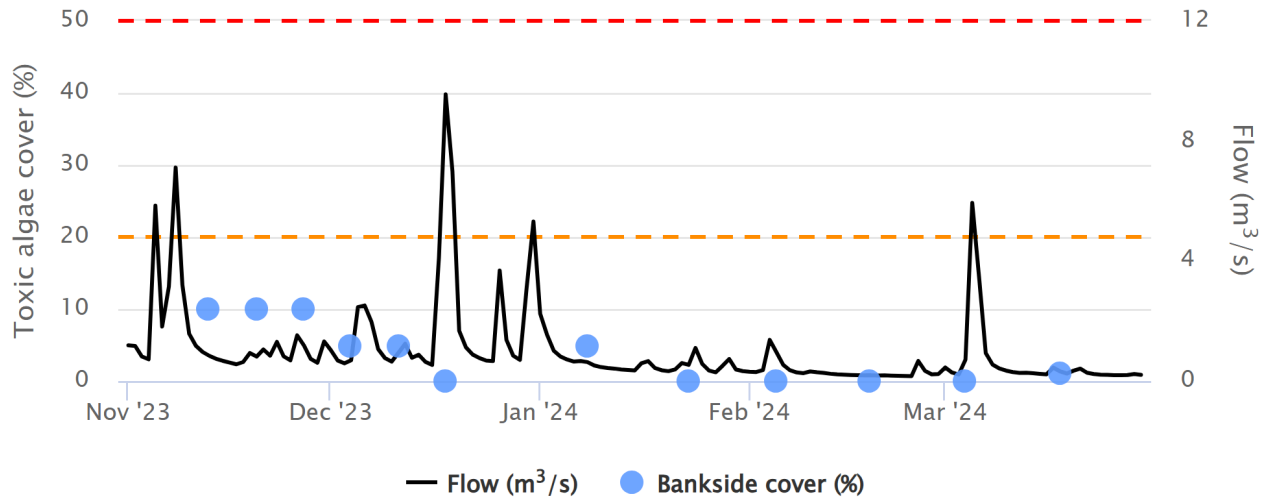


Figure 15: Toxic algae cover and flow for **Pakuratahi River at Hutt Forks**.

Wainuiomata River at Richard Prouse Park

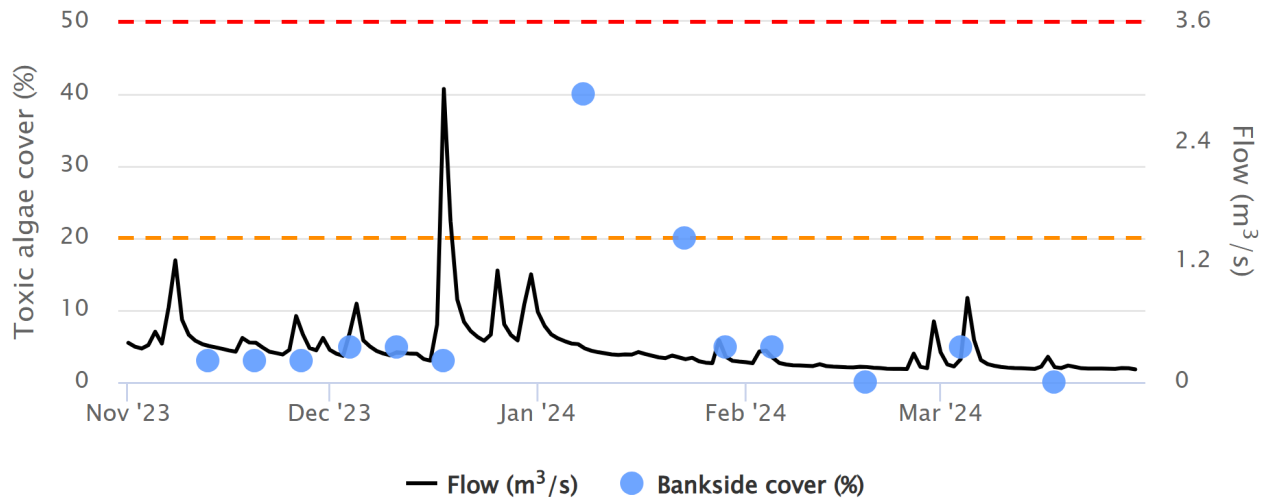


Figure 16: Toxic algae cover and flow for **Wainuiomata River at Richard Prouse Park**.

Ruamāhanga Whaitua

Tier 1 sentinel sites

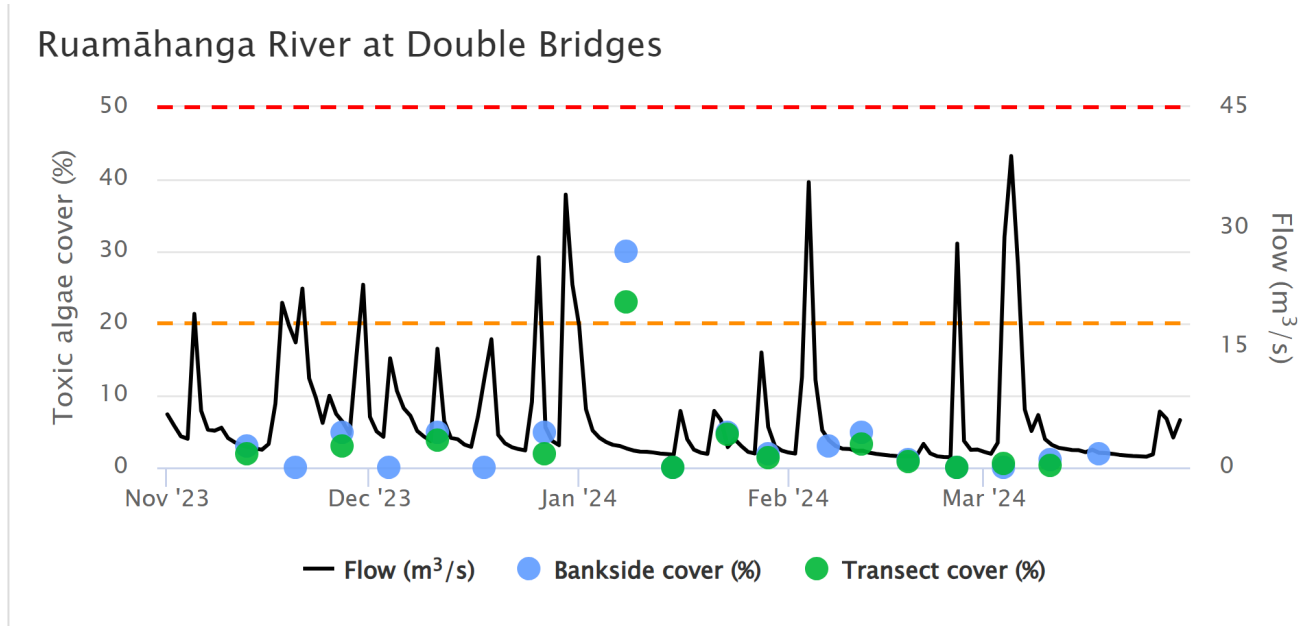


Figure 17: Toxic algae cover and flow for **Ruamāhanga River at Double Bridges**.

Waingawa River at South Road

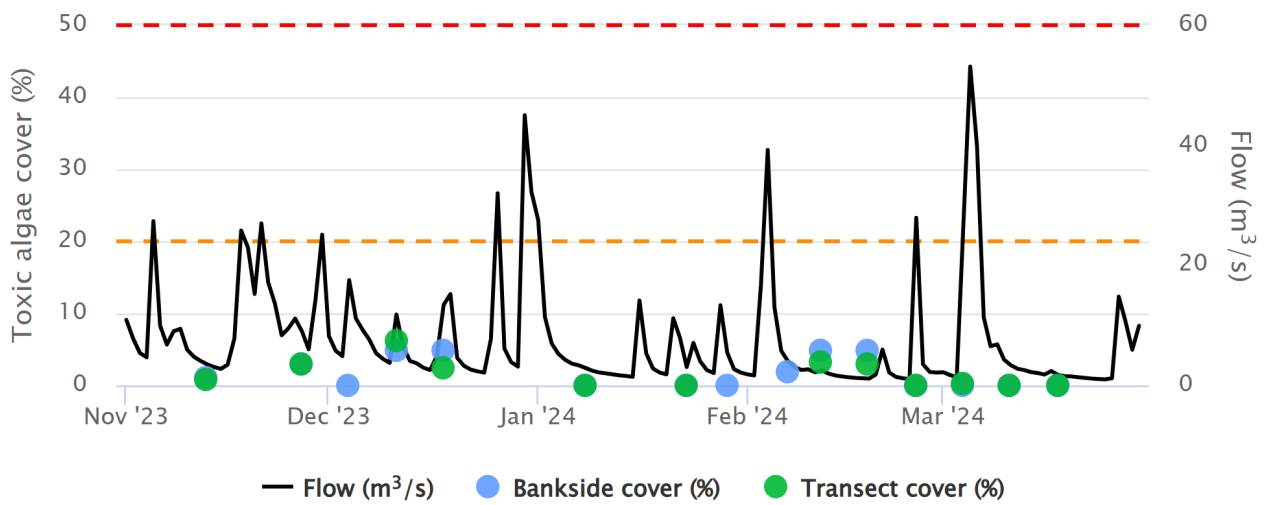


Figure 18: Toxic algae cover and flow for **Waingawa River at South Road**.

Waipoua River at Colombo Road

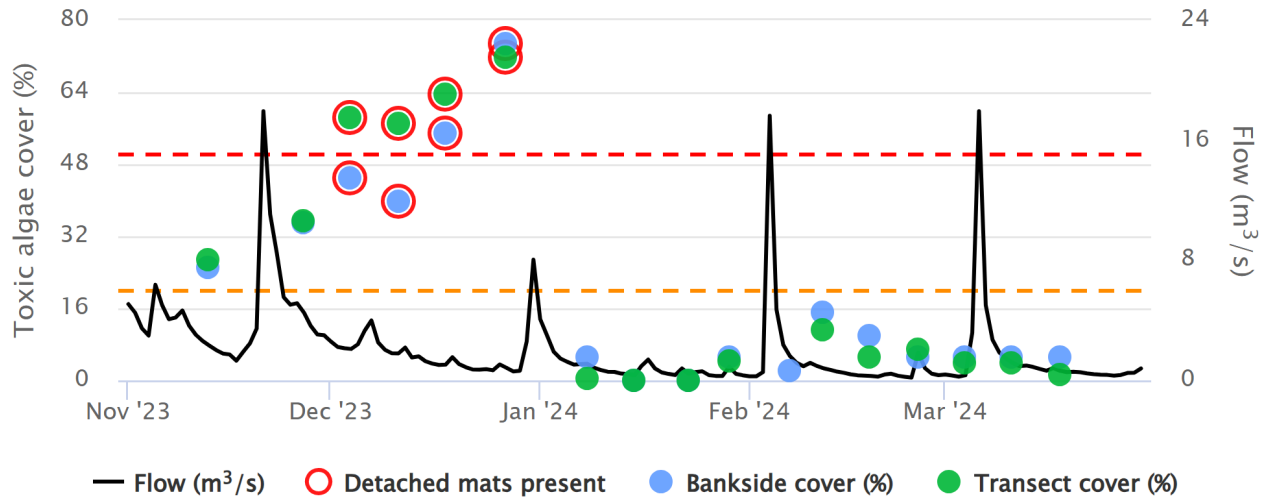


Figure 19: Toxic algae cover and flow for **Waipoua River at Colombo Road**.

Tier 2 sentinel sites

Ruamāhanga River at Kokotau

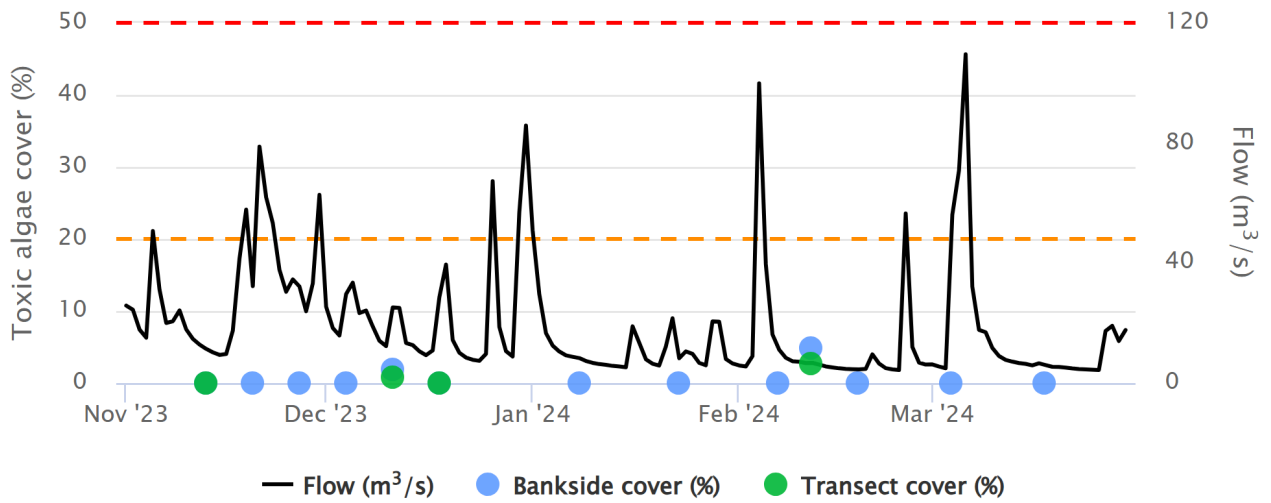


Figure 20: Toxic algae cover and flow for **Ruamāhanga River at Kokotau**.

Ruamāhanga River at Te Ore Ore

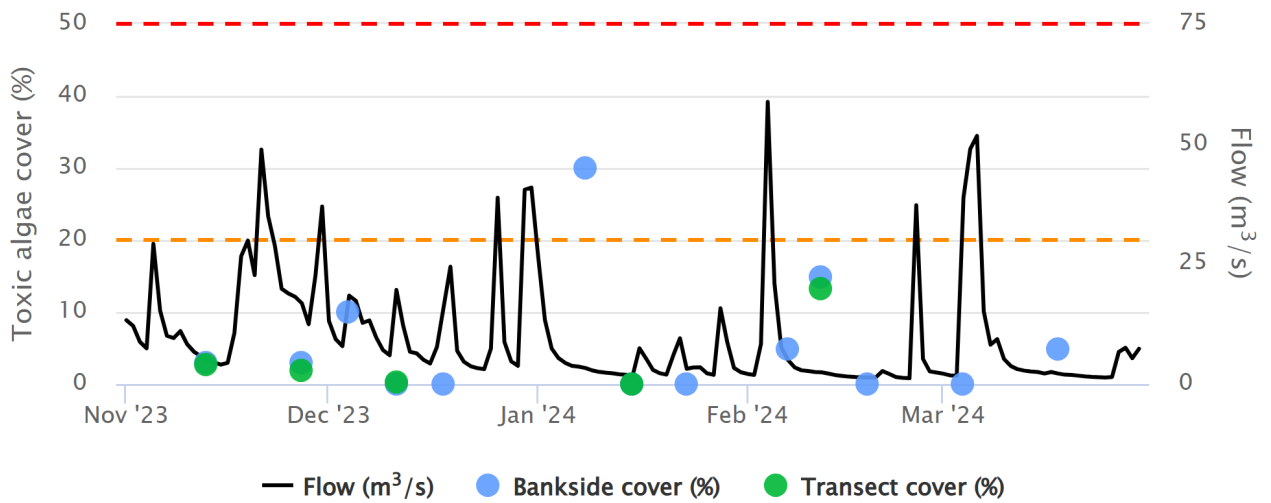


Figure 21: Toxic algae cover and flow for **Ruamāhanga River at Te Ore Ore**.

Ruamāhanga River at The Cliffs

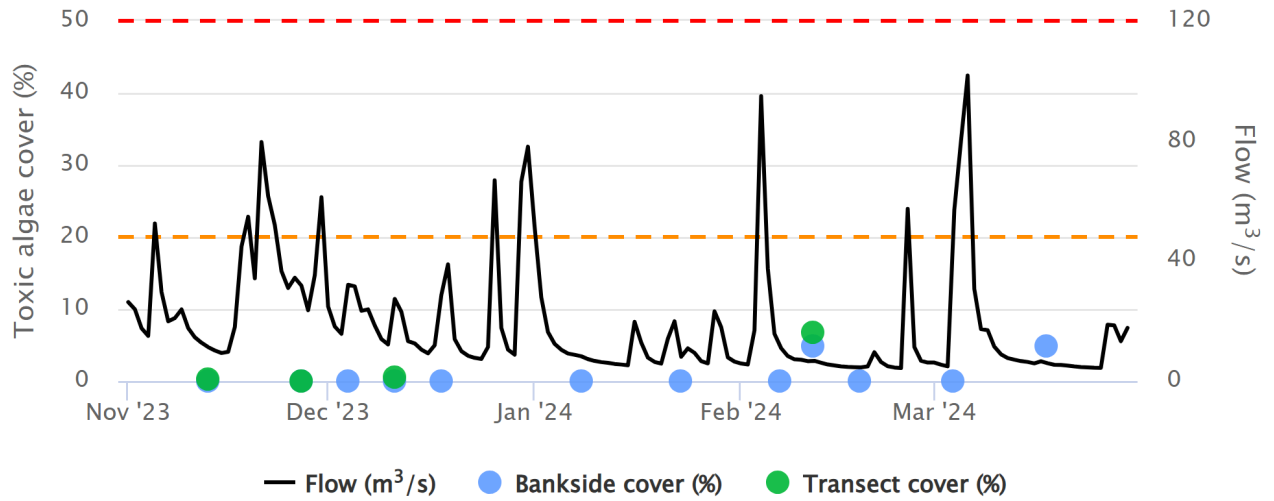


Figure 22: Toxic algae cover and flow for **Ruamāhanga River at The Cliffs**.

Other sites

Ruamāhanga River at Morrisons Bush

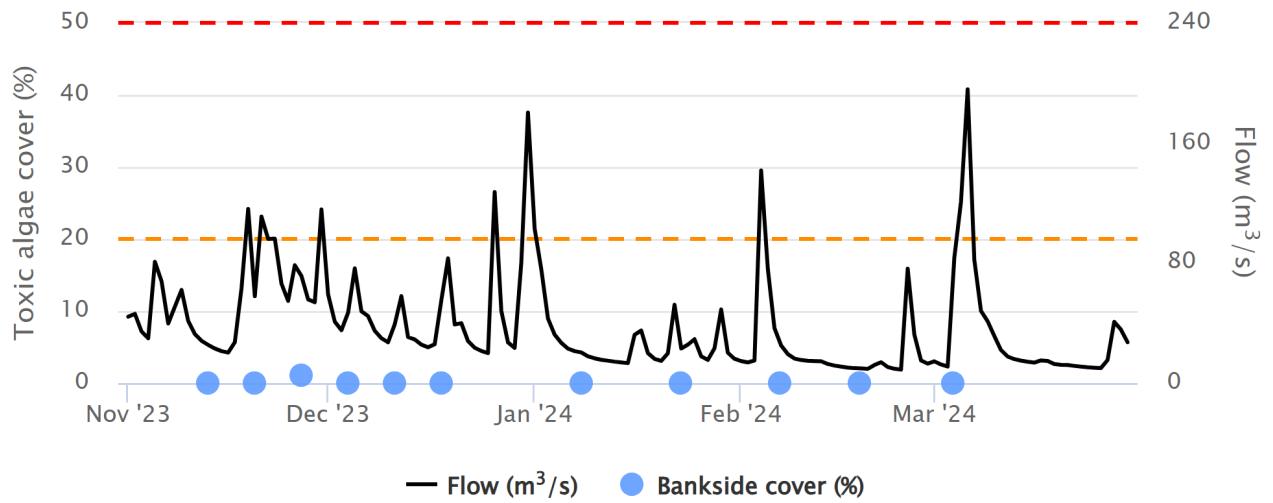


Figure 23: Toxic algae cover and flow for **Ruamāhanga River at Morrisons Bush**.

Ruamāhanga River at Waihenga Bridge

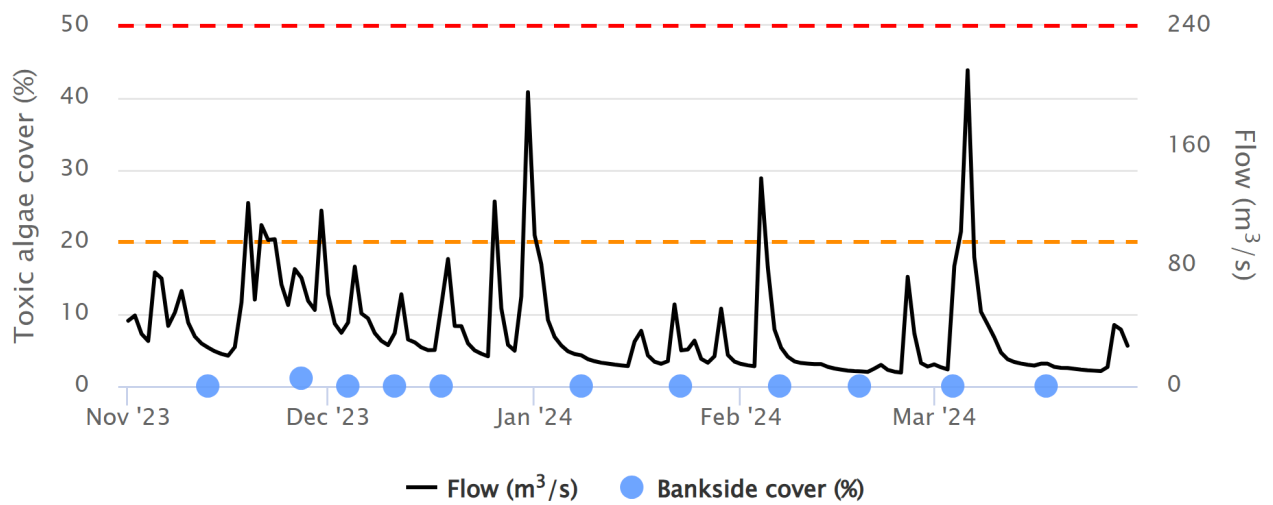


Figure 24: Toxic algae cover and flow for **Ruamāhanga River at Waihenga Bridge**.

Waiohine River at SH2

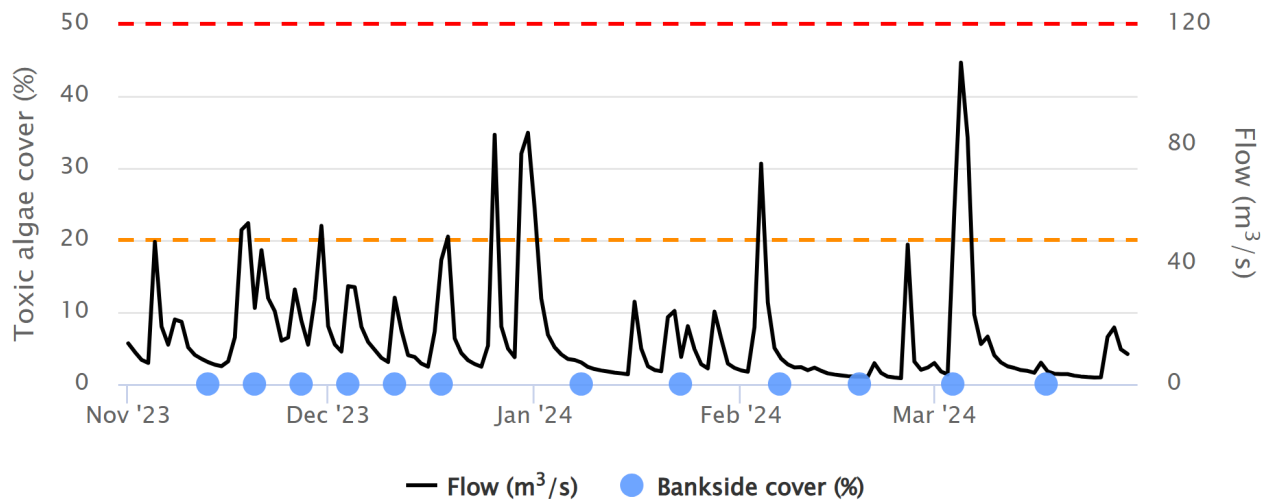


Figure 25: Toxic algae cover and flow for **Waiohine River at SH2**.

Kāpiti Coast Whaitua

Tier 1 sentinel sites

Ōtaki River at Old SH1

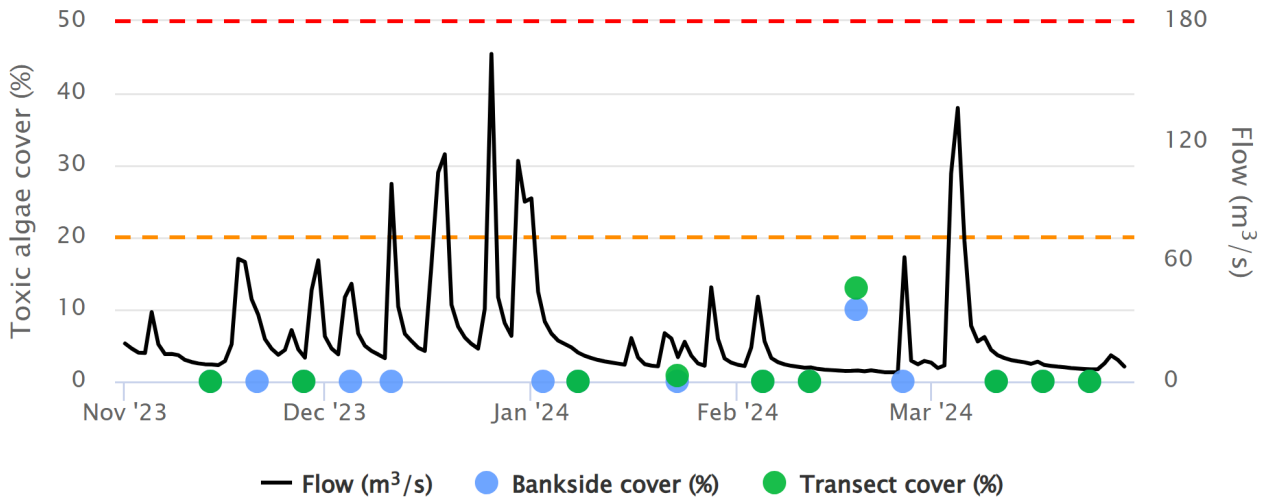


Figure 26: Toxic algae cover and flow for **Ōtaki River at Old SH1**.

Waikanae River at Jim Cooke Park

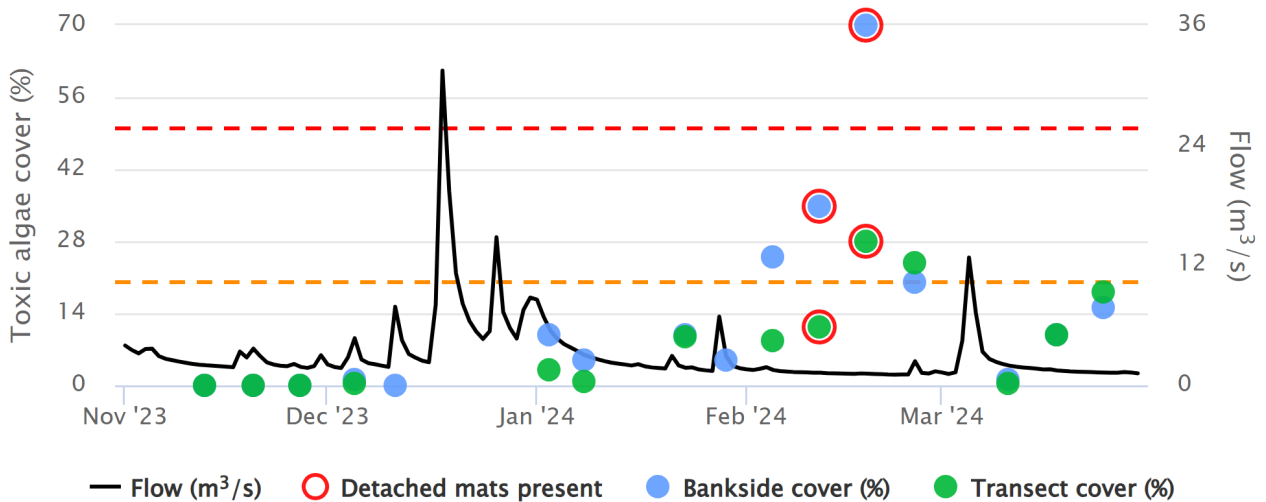


Figure 27: Toxic algae cover and flow for **Waikanae River at Jim Cooke Park**.

Waikanae River at Old SH1

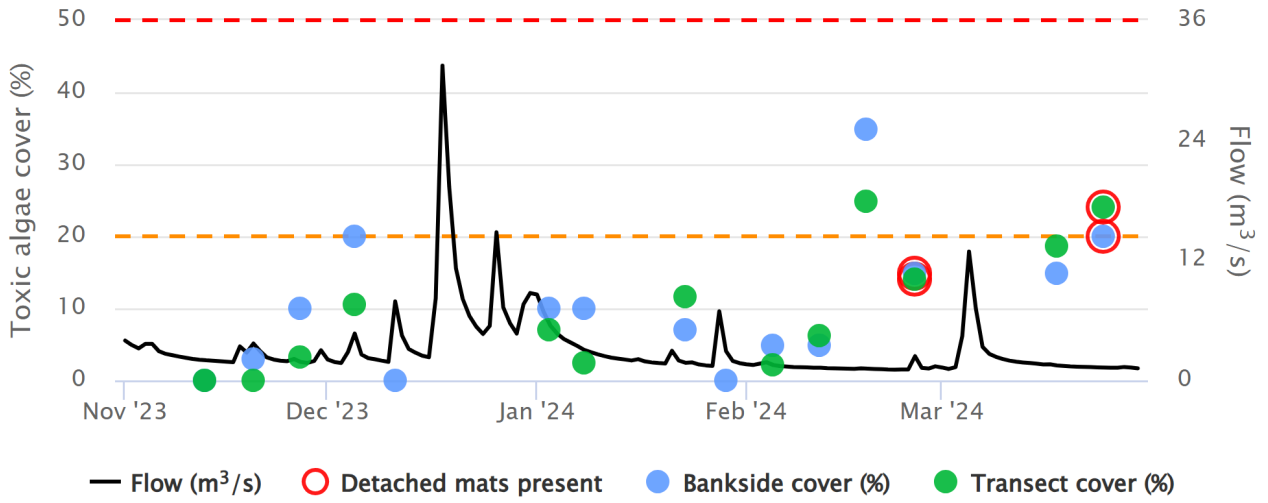


Figure 28: Toxic algae cover and flow for **Waikanae River at Old SH1**.

Coastal Enterococci results

Key coastal enterococci monitoring results are presented in the following sections and supplementary tables can be found in [Appendix 2](#).

Microbiological Assessment Categories (MACs)

Microbiological water quality grades are reported as long-term Microbiological Assessment Category (MAC) grades in accordance with [The Ministry for the Environment & Ministry of Health 2003 Microbiological water quality guidelines for marine and freshwater recreational areas](#).

Coastal MAC grades are based on routine sampling over five recreational bathing periods, which run from the start of November to the end of March, and also for some sites during the winter period where there is significant year-round use. A minimum of 50 samples are required to assign a grade. “A” can be seen as excellent bathing water quality, while “D” is poor quality and potentially harmful, see these LAWA factsheets on [coastal and freshwater recreation monitoring](#) and [faecal indicator bacteria](#) for more information.

Arrows over the circles in the maps below indicate change in levels from the previous season – i.e. a single up arrow means that this season’s grade is one level higher (worse) than last season’s grade.

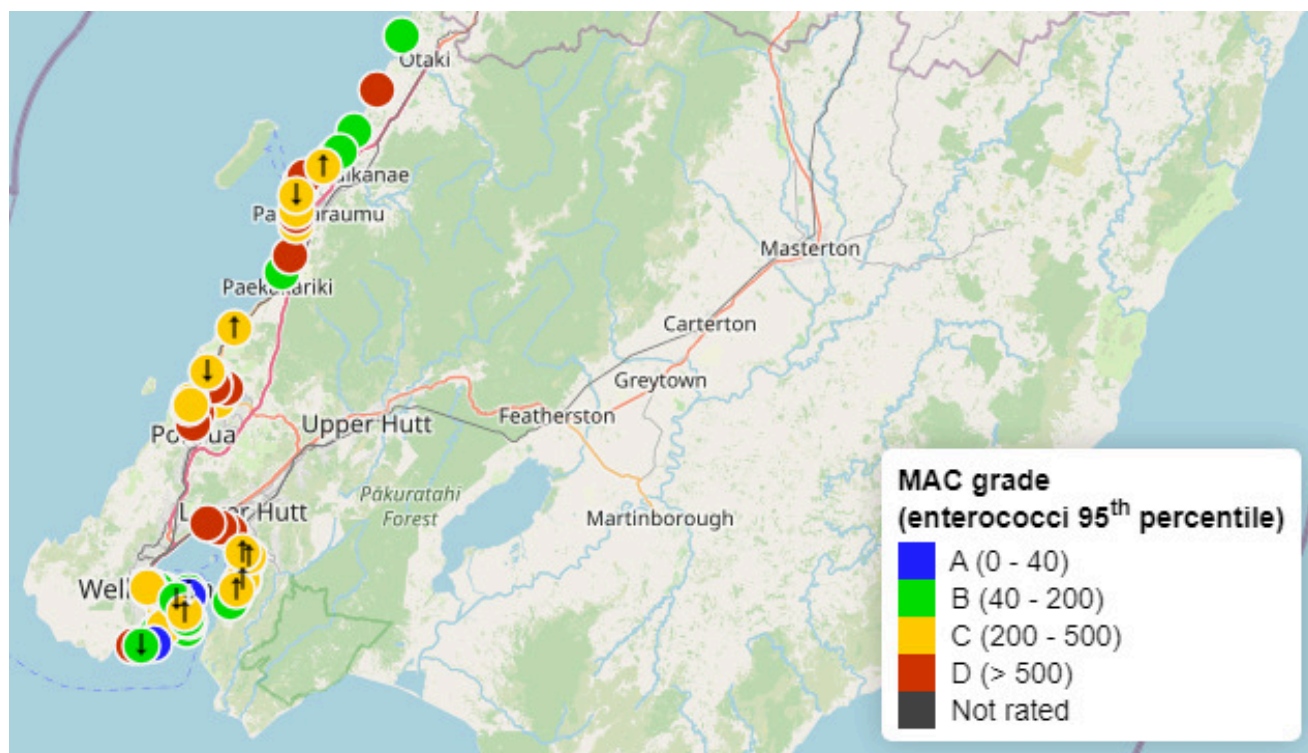


Figure 29: MAC grades calculated for samples taken over the **summer** bathing season (start of November to the end of March).

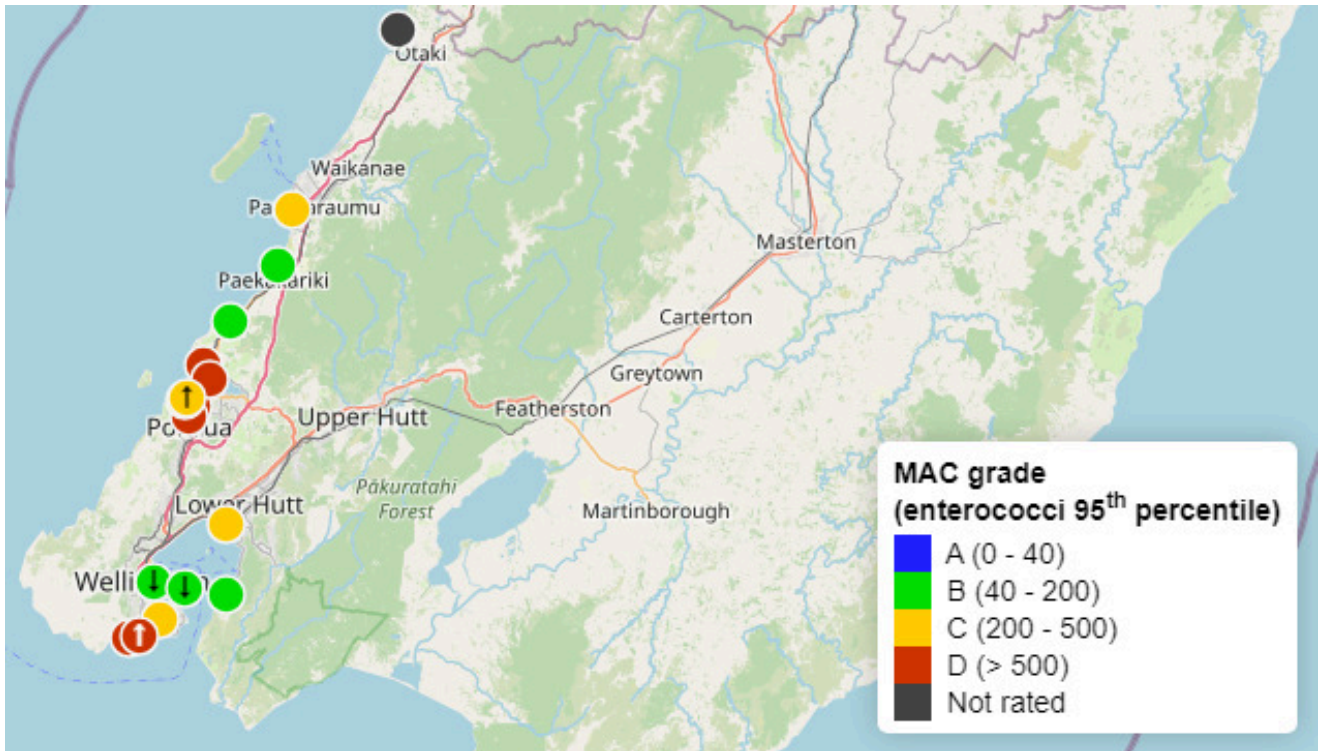


Figure 30: MAC grades calculated for samples taken over the **winter** bathing season (April up to the end of October).

Summary of action guideline breaches for Enterococci

Action guideline breaches for Enterococci (>280 cfu/100mL) from routine surveillance monitoring.

Table 3: The total number of sites that breached guidelines during the **summer** bathing season (start of November to the end of March) broken down by those sites total number of breaches in the summer season.

Total breaches per site	Kāpiti	Te Awarua-o-Porirua	Te Whanganui-a-Tara	Total no. sites	% of sites
Zero (no breaches)	12	9	18	39	62.9
One	2	2	10	14	22.6
Two	1	0	6	7	11.3
Three	0	0	2	2	3.2
Total monitored sites:	15	11	36	62	

Table 4: The total number of sites that breached guidelines during the **winter** bathing season (April up to the end of October) broken down by those sites total number of breaches in the winter season.

Total breaches per site	Kāpiti	Te Awarua-o-Porirua	Te Whanganui-a-Tara	Total no. sites	% of sites
Zero (no breaches)	3	1	3	7	41.2
One	0	3	3	6	35.3
Two	0	1	1	2	11.8
Four	0	1	0	1	5.9
Five	0	1	0	1	5.9
Total monitored sites:	3	7	7	17	

Table 5: Each action-level guideline breache and information on preceding rainfall (mm). Whaitua abbreviations: **TAoP**: Te Awarua-o-Porirua, **TWT**: Te Whanganui-a-Tara, **KC**: Kāpiti Coast.

Whaitua	Date	Location	Enterococci count (cfu/100mL)	Rainfall (mm)		
				00-24h	25-48h	49-72h
TAoP	2023-07-10	Porirua Harbour at Rowing Club	520	0.0	0.0	0.0
TAoP	2023-07-10	Porirua Harbour at Wi Neera Drive Boat Ramp	640	0.0	0.0	0.0
TAoP	2023-07-10	South Beach at Plimmerton	360	4.8	0.0	0.0
TAoP	2023-07-10	Titahi Bay at Toms Road	400	6.0	1.0	0.0
TWT	2023-07-10	Robinson Bay at Nikau Street	600	19.6	3.0	0.0
TWT	2023-07-24	Petone Beach at Kiosk	520	2.8	12.8	0.0
TAoP	2023-07-25	South Beach at Plimmerton	320	12.6	0.0	3.2
TAoP	2023-08-24	South Beach at Plimmerton	6,000	0.0	8.0	1.4
TAoP	2023-09-20	Porirua Harbour at Wi Neera Drive Boat Ramp	790	0.0	0.0	0.0
TAoP	2023-10-18	Titahi Bay at Toms Road	1,500	13.0	0.4	8.8
KC	2023-11-13	Paraparaumu Beach at Maclean Park	1,380	0.0	0.0	0.0
KC	2023-11-13	Paraparaumu Beach at Nathan Avenue	380	0.0	0.0	0.0
TAoP	2023-11-13	Pāuatahanui Inlet at Paremata Bridge	510	0.0	0.0	0.0
KC	2023-11-28	Te Horo Beach at Sea Road	180*	0.0	0.0	3.0
TWT	2023-11-28	Wellington City Waterfront at Shed 6	2,000	0.0	5.4	3.4
TWT	2023-11-28	Wellington Harbour at Taranaki St Dive Platform	6,000	0.0	5.4	3.4
TWT	2023-11-28	Worser Bay	6,000	0.0	5.0	2.2
TWT	2023-12-05	Lowry Bay at Cheviot Road	5,200	11.2	1.4	0.0
TWT	2023-12-05	Rona Bay at N end of Cliff Bishop Park	6,000	11.0	1.6	0.0
TWT	2023-12-05	Sorrento Bay	6,000	11.0	1.6	0.0
TWT	2023-12-11	Wellington City Waterfront at Shed 6	400	0.8	0.0	0.0
KC	2023-12-12	Paraparaumu Beach at Maclean Park	500	2.6	8.0	0.0
KC	2023-12-12	Paraparaumu Beach at Ngapotiki Street	330	0.0	0.0	0.0
TWT	2023-12-18	Petone Beach at Kiosk	700	22.6	0.8	0.0
TWT	2023-12-18	Petone Beach at Sydney Street	560	22.6	0.8	0.0
TWT	2023-12-18	Petone Beach at Water Ski Club	720	22.6	0.8	0.0
TWT	2023-12-29	Robinson Bay at HW Shortt Rec Ground	300	0.0	1.6	0.0
TWT	2023-12-29	Rona Bay at Wharf	500	0.0	1.6	0.0
TWT	2024-01-10	Wellington City Waterfront at Shed 6	1,900	0.0	0.0	4.6
TWT	2024-01-10	Wellington Harbour at Taranaki St Dive Platform	600	0.0	0.0	4.2
TAoP	2024-01-23	Pukerua Bay	290	0.2	0.0	4.0
TWT	2024-03-04	Hataitai Beach	400	0.0	0.0	0.0
TWT	2024-03-04	Island Bay at Reef St Recreation Ground	2,100	0.0	0.0	0.2
TWT	2024-03-04	Lyllall Bay at Onepu Road	300	0.0	0.0	0.0
TWT	2024-03-04	Lyllall Bay at Queens Drive	900	0.0	0.0	0.0
TWT	2024-03-04	Wellington Harbour at Taranaki St Dive Platform	2,000	0.0	0.0	0.0
KC	2024-03-05	Te Horo Beach at Sea Road	200*	15.0	1.4	0.6
KC	2024-03-05	Waikanae Beach at Ara Kuaka Carpark	260*	25.8	12.4	1.0
KC	2024-03-05	Waikanae Beach at Tutere St Tennis Court	180*	25.8	12.4	1.0
TWT	2024-03-05	Days Bay at Moana Road	300	18.8	0.2	0.2
TWT	2024-03-05	Lowry Bay at Cheviot Road	400	18.8	0.2	0.2
TWT	2024-03-05	Petone Beach at Kiosk	400	1.4	0.2	0.2
TWT	2024-03-05	Petone Beach at Sydney Street	1,000	1.4	0.2	0.2

Whaitua	Date	Location	Enterococci count (cfu/100mL)	Rainfall (mm)		
				00-24h	25-48h	49-72h
TWT	2024-03-05	Robinson Bay at HW Shortt Rec Ground	300	18.8	0.2	0.2
TWT	2024-03-05	Robinson Bay at Nikau Street	500	18.8	0.2	0.2
TWT	2024-03-05	Rona Bay at Wharf	500	18.8	0.2	0.2
TWT	2024-03-05	Sorrento Bay	1,000	18.8	0.2	0.2
TWT	2024-03-05	York Bay	600	18.8	0.2	0.2
TAoP	2024-04-03	Karehana Bay at Cluny Road	1,000	1.8	0.0	0.0
TAoP	2024-04-03	Titahi Bay at South Beach Access Road	300	1.8	0.0	0.0
TAoP	2024-04-17	Porirua Harbour at Wi Neera Drive Boat Ramp	2,400	0.0	0.0	0.0
TWT	2024-05-15	Island Bay at Surf Club	4,800	0.0	0.6	0.0
TAoP	2024-06-11	Porirua Harbour at Wi Neera Drive Boat Ramp	400	0.0	0.0	0.0
TAoP	2024-06-11	South Beach at Plimmerton	400	20.0	0.0	0.0
TWT	2024-06-25	Island Bay at Surf Club	500	0.2	4.4	0.4
TWT	2024-06-25	Ōwhiro Bay	1,700	0.2	4.4	0.4
TAoP	2024-06-26	Porirua Harbour at Wi Neera Drive Boat Ramp	500	0.0	0.0	0.0

Shellfish gathering water quality results

Faecal coliform counts from routine summer monitoring (start of November to the end of March) are benchmarked against the following recreational shellfish-gathering water quality criteria:

- Median faecal coliform content of samples taken over a shellfish-gathering season shall not exceed a Most Probable Number (MPN) of 14 cfu/100 mL, and
- Not more than 10% of samples should exceed an MPN of 43 cfu/100 mL (using a five-tube decimal dilution test)

Both of these criteria must be exceeded (values in **red**) to fail guidelines. See [water quality criteria \(MfE/MoH 2003\)](#) for more information.

Important health risk note

Shellfish are a high-risk food because they are filter feeders, meaning they can easily pick up and store bacteria, viruses, biotoxins or pollutants from contaminated waters. Eating shellfish that have been contaminated can cause serious illness, or even death. As a rule of thumb, we recommend you do not collect or eat shellfish from urban areas, including parts of the coastline that are subject to run-off from nearby urban areas.

The Ministry for Primary Industries (MPI) monitors recreational shellfish harvesting areas throughout New Zealand by testing shellfish for toxins and sea water for toxic algae. Further information and news on any current biotoxin alerts is available on the MPI website [here](#).

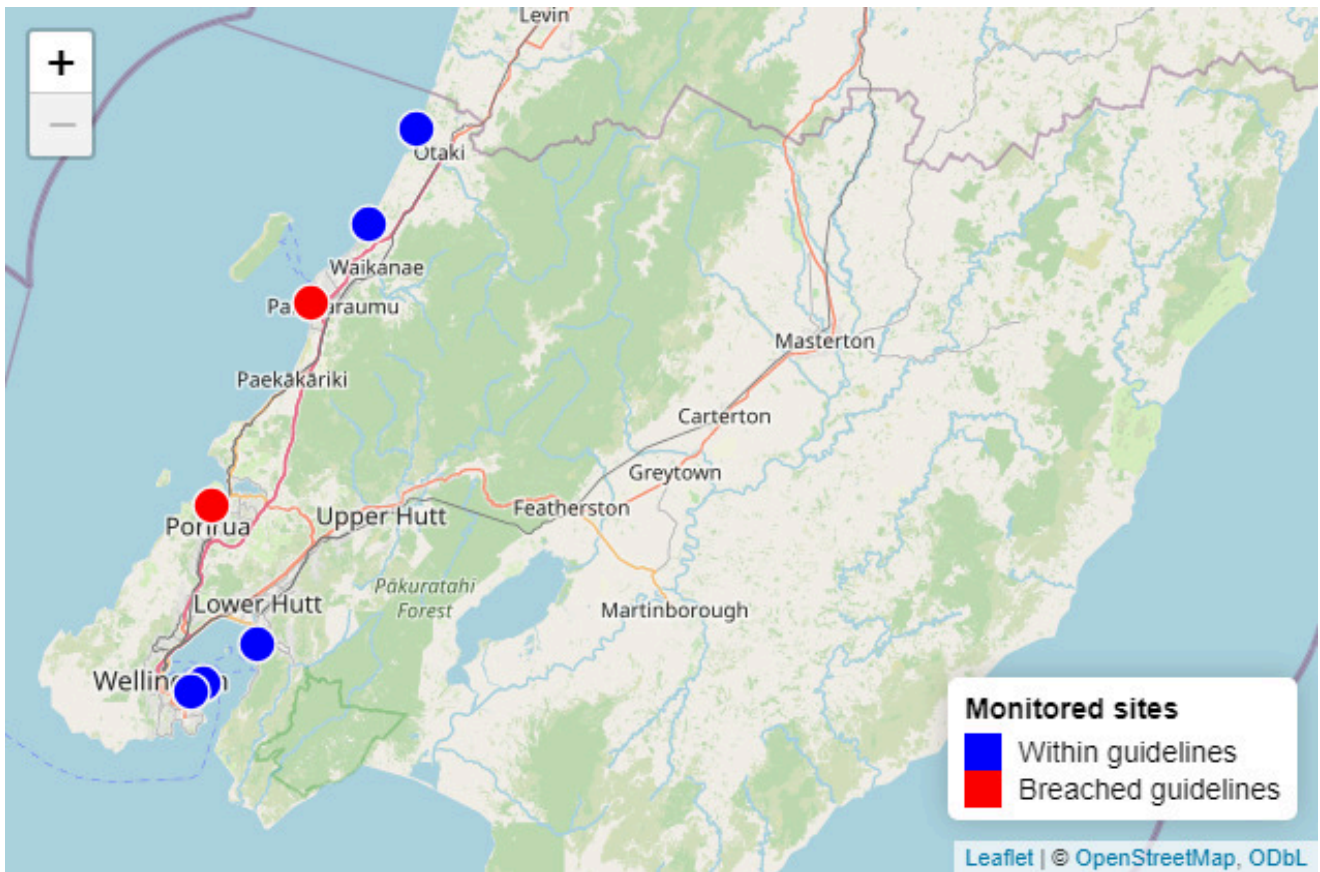


Figure 31: Shellfish gathering water quality monitoring sites coloured by whether they met MfE/MoH 2003 guidelines.

Table 6: Faecal coliform results for the 2023/24 summer season. Bold red cells indicate breaches of water quality criteria.

Whaitua	Site	MfE/MoH guidelines	Median (cfu/100mL)	Maximum (cfu/100mL)	No. (and %) of results >43 cfu/100mL	Total no. of samples
Kāpiti	Ōtaki Beach at Surf Club	Within	10	35	0 (0%)	12
Kāpiti	Peka Peka Beach at Road End	Within	11	62	2 (17%)	12
Kāpiti	Raumati Beach at Tainui Street	Exceeded	26	370	5 (42%)	12
Te Awarua-o-Porirua	Porirua Harbour at Rowing Club	Exceeded	24	490	3 (23%)	13
Te Whanganui-a-Tara	Mahanga Bay	Within	3	800	1 (8%)	12
Te Whanganui-a-Tara	Shark Bay	Within	2	12	0 (0%)	12
Te Whanganui-a-Tara	Sorrento Bay	Within	2	900	1 (8%)	13

Resources

Greater Wellington Regional Council

[Is it safe to swim- Recreational water quality in the Wellington Region](#)

[Water quality and monitoring FAQs](#)

Land, Air, Water Aotearoa (LAWA)

[LAWA summary of the microbiological water quality guidelines](#)

[LAWA Factsheet: what are faecal indicator bacteria?](#)

[LAWA factsheet: potentially toxic algae](#)

NIWA

[Recreational water quality monitoring and reporting in New Zealand. A discussion paper for Regional and Unitary Councils](#)

Appendix 1 - Monitoring details

Table A1.1: Monitoring site information. Whaitua abbreviations: **TAoP**: Te Awarua-o-Porirua, **RMH**: Ruamāhanga, **TWT**: Te Whanganui-a-Tara, **KC**: Kāpiti Coast, **EW** Eastern Wairarapa. Tier refers to toxic algae tier in the Sentinel Site Framework, see the [methods section](#) for more information on this framework.

Whaitua	Site	Rainfall station	Type	Tier	Winter
TWT	Akatarawa River at Hutt Confluence	Akatarawa River at Cemetery	freshwater	other	
TWT	Balaena Bay	Hataitai at Old Post Office	marine		
TWT	Breaker Bay	Miramar at Miramar Bowling Club	marine		
EW	Castlepoint Beach at Castlepoint Stream		marine		
EW	Castlepoint Beach at Smelly Creek		marine		
TWT	Days Bay at Moana Road	Hutt River at Shandon Golf Club	marine		
TWT	Days Bay at Wellesley College	Hutt River at Shandon Golf Club	marine		
TWT	Days Bay at Wharf	Hutt River at Shandon Golf Club	marine		
TWT	Hataitai Beach	Hataitai at Old Post Office	marine		
TWT	Hutt River at Birchville	Hutt River at Te Marua	freshwater	1	
TWT	Hutt River at Maoribank Corner	Hutt River at Te Marua	freshwater	other	
TWT	Hutt River at Melling Bridge	Hutt River at Te Marua	freshwater	2	
TWT	Hutt River at Poets Park	Hutt River at Te Marua	freshwater	2	
TWT	Hutt River at Silverstream Bridge	Hutt River at Te Marua	freshwater	other	
TWT	Hutt River at Taita Rock	Hutt River at Te Marua	freshwater	other	
TWT	Hutt River upstream of Silverstream Bridge	Hutt River at Te Marua	freshwater	1	
TWT	Island Bay at Derwent Street	Berhampore at Nursery	marine		
TWT	Island Bay at Reef St Recreation Ground	Berhampore at Nursery	marine		
TWT	Island Bay at Surf Club	Berhampore at Nursery	marine		Y
TAoP	Karehana Bay at Cluny Road	Taupo Stream at Whenua Tapu	marine		Y
TWT	Lowry Bay at Cheviot Road	Hutt River at Shandon Golf Club	marine		
TWT	Lyall Bay at Onepu Road	Newtown at Mansfield Street	marine		
TWT	Lyall Bay at Queens Drive	Newtown at Mansfield Street	marine		
TWT	Lyall Bay at Tirangi Road	Newtown at Mansfield Street	marine		Y
TWT	Mahanga Bay	Miramar at Miramar Bowling Club	marine		
TWT	Oriental Bay at Band Rotunda	Wellington at Te Papa	marine		
TWT	Oriental Bay at Freyberg Beach	Wellington at Te Papa	marine		
TWT	Oriental Bay at Wishing Well	Wellington at Te Papa	marine		Y
KC	Ōtaki Beach at Surf Club	Ōtaki River at Depot	marine		Y
KC	Ōtaki River at Old SH1	Waitatapia Stream at Taungata	freshwater	1	
TWT	Ōwhiro Bay	Berhampore at Nursery	marine		Y
KC	Paekākāriki Beach at Surf Club	Whareroa Stream at Mackays Crossing	marine		Y
KC	Paekākāriki Beach at Whareroa Road	Whareroa Stream at Mackays Crossing	marine		
TWT	Pakuratahi River at Kaitoke Campground	Pakuratahi River at Centre Ridge	freshwater	1	
TWT	Pakuratahi River at Hutt Forks	Pakuratahi River at Centre Ridge	freshwater	other	
KC	Paraparaumu Beach at Maclean Park	Waikanae River at Water Treatment Plant	marine		
KC	Paraparaumu Beach at Nathan Avenue	Whareroa Stream at Mackays Crossing	marine		
KC	Paraparaumu Beach at Ngapotiki Street	Whareroa Stream at Mackays Crossing	marine		
KC	Paraparaumu Beach at Toru Road	Waikanae River at Water Treatment Plant	marine		

Whaitua	Site	Rainfall station	Type	Tier	Winter
TAoP	Pāuatahanui Inlet at Paremata Bridge	Porirua Stream at Tawa Pool	marine		
TAoP	Pāuatahanui Inlet at Water Ski Club	Taupo Stream at Whenua Tapu	marine		
KC	Peka Peka Beach at Road End	Waikanae River at Water Treatment Plant	marine		
TWT	Petone Beach at Kiosk	Hutt River at Shandon Golf Club	marine		Y
TWT	Petone Beach at Sydney Street	Hutt River at Shandon Golf Club	marine		
TWT	Petone Beach at Water Ski Club	Hutt River at Shandon Golf Club	marine		
TAoP	Plimmerton Beach at Bath Street	Taupo Stream at Whenua Tapu	marine		
TAoP	Porirua Harbour at Rowing Club	Porirua Stream at Tawa Pool	marine		Y
TAoP	Porirua Harbour at Wi Neera Drive Boat Ramp	Porirua Stream at Tawa Pool	marine		Y
TWT	Princess Bay	Newtown at Mansfield Street	marine		
TAoP	Pukerua Bay	Taupo Stream at Whenua Tapu	marine		Y
KC	Raumati Beach at Aotea Road	Whareroa Stream at Mackays Crossing	marine		
KC	Raumati Beach at Marine Gardens	Whareroa Stream at Mackays Crossing	marine		Y
KC	Raumati Beach at Tainui Street	Whareroa Stream at Mackays Crossing	marine		
EW	Riversdale Beach Between the Flags		marine		
TWT	Robinson Bay at HW Shortt Rec Ground	Hutt River at Shandon Golf Club	marine		
TWT	Robinson Bay at Nikau Street	Hutt River at Shandon Golf Club	marine		Y
TWT	Rona Bay at N end of Cliff Bishop Park	Hutt River at Shandon Golf Club	marine		
TWT	Rona Bay at Wharf	Hutt River at Shandon Golf Club	marine		
RMH	Ruamāhanga River at Double Bridges	Ruamāhanga River at Mt Bruce	freshwater	1	
RMH	Ruamāhanga River at Kokotau	Waingawa River at Angle Knob	freshwater	2	
RMH	Ruamāhanga River at Morrisons Bush	Waiohine River at Gorge	freshwater		
RMH	Ruamāhanga River at Te Ore Ore	Ruamāhanga River at Mt Bruce	freshwater	2	
RMH	Ruamāhanga River at The Cliffs	Waingawa River at Angle Knob	freshwater	2	
RMH	Ruamāhanga River at Waihenga Bridge	Waingawa River at Angle Knob	freshwater		
TWT	Scorching Bay	Miramar at Miramar Bowling Club	marine		Y
TWT	Seatoun Beach at Inglis Street	Miramar at Miramar Bowling Club	marine		
TWT	Seatoun Beach at Wharf	Miramar at Miramar Bowling Club	marine		
TWT	Shark Bay	Hataitai at Old Post Office	marine		
TWT	Sorrento Bay	Hutt River at Shandon Golf Club	marine		
TAoP	South Beach at Plimmerton	Taupo Stream at Whenua Tapu	marine		Y
RMH	Tauherenikau River at Bucks Road		marine		
KC	Te Horo Beach at Sea Road	Ōtaki River at Depot	marine		
TAoP	Titahi Bay at Bay Drive	Taupo Stream at Whenua Tapu	marine		
TAoP	Titahi Bay at South Beach Access Road	Taupo Stream at Whenua Tapu	marine		Y
TAoP	Titahi Bay at Toms Road	Taupo Stream at Whenua Tapu	marine		Y
KC	Waikanae Beach at Ara Kuaka Carpark	Waikanae River at Water Treatment Plant	marine		
KC	Waikanae Beach at Tutere St Tennis Court	Waikanae River at Water Treatment Plant	marine		
KC	Waikanae Beach at William Street	Waikanae River at Water Treatment Plant	marine		
KC	Waikanae River at Jim Cooke Park	Waikanae River at Water Treatment Plant	freshwater	1	
KC	Waikanae River at Old SH1	Waikanae River at Water Treatment Plant	freshwater	1	
RMH	Waingawa River at Kaituna	Waingawa River at Angle Knob	freshwater		
RMH	Waingawa River at South Road	Waingawa River at Angle Knob	freshwater	1	
TWT	Wainuiomata River at Richard Prouse Park	Wainuiomata River at Wainui Reservoir	freshwater	other	
RMH	Waiohine River at SH2	Waiohine River at Gorge	freshwater		
RMH	Waipoua River at Colombo Road	Waipoua at Westons	freshwater	1	
TWT	Wellington City Waterfront at Shed 6	Wellington at Te Papa	marine		

Whaitua	Site	Rainfall station	Type	Tier	Winter
TWT	Wellington Harbour at Taranaki St Dive Platform	Wellington at Te Papa	marine		
TWT	Whairepo Lagoon	Wellington at Te Papa	marine		
TWT	Worser Bay	Miramar at Miramar Bowling Club	marine		
TWT	York Bay	Hutt River at Shandon Golf Club	marine		

Appendix 2 - Data tables

Freshwater *E. coli* NOF states

Table A2.1: NOF states calculated for samples taken in “All” and “Low” flow conditions. Low flow is considered less than three times the median of long-term flow, and these states do not require the minimum 50 data points so please take this in to account when making comparisons. Arrows next to NOF states indicate change in levels from the previous season – i.e. a single up arrow means that this season’s state is one level higher (worse) than last season’s state. See the [results section](#) for more details.

Whaitua abbreviations: **RMH**: Ruamāhanga, **TWT**: Te Whanganui-a-Tara, **KC**: Kāpiti Coast.

Whaitua	Site	Flows	95 th % of <i>E. coli</i>	NOF state	Samples this year	Total samples
KC	Ōtaki River at Old SH1	All	278	C	12	72
KC	Ōtaki River at Old SH1	Low	269	C	9	61
KC	Waikanae River at Jim Cooke Park	All	985	D	9	69
KC	Waikanae River at Jim Cooke Park	Low	828	D	8	57
KC	Waikanae River at Old SH1	All	695	D	11	71
KC	Waikanae River at Old SH1	Low	693	D↑	10	59
TWT	Akatarawa River at Hutt Confluence	All	589	D	12	61
TWT	Akatarawa River at Hutt Confluence	Low	596	D	11	54
TWT	Hutt River at Birchville	All	1,909	D	12	61
TWT	Hutt River at Birchville	Low	1,793	D	11	52
TWT	Hutt River at Maoribank Corner	All	1,270	D	11	60
TWT	Hutt River at Maoribank Corner	Low	1,186	D	10	51
TWT	Hutt River at Melling Bridge	All	2,175	D	12	59
TWT	Hutt River at Melling Bridge	Low	2,400	D	11	50
TWT	Hutt River at Poets Park	All	979	D	12	61
TWT	Hutt River at Poets Park	Low	871	D	11	52
TWT	Hutt River at Silverstream Bridge	All	744	D	12	61
TWT	Hutt River at Silverstream Bridge	Low	888	D	11	52
TWT	Hutt River at Taita Rock	All	710	Not rated	12	24
TWT	Hutt River at Taita Rock	Low	815	D↑↑	11	21
TWT	Pakuratahi River at Hutt Forks	All	1,050	D	12	60
TWT	Pakuratahi River at Hutt Forks	Low	1,140	D	11	48
TWT	Pakuratahi River at Kaitoke Campground	All	1,750	Not rated	12	35
TWT	Pakuratahi River at Kaitoke Campground	Low	2,815	D	11	27
TWT	Wainuiomata River at Richard Prouse Park	All	1,250	D	12	60
TWT	Wainuiomata River at Richard Prouse Park	Low	1,450	D	11	52
RMH	Ruamāhanga River at Double Bridges	All	262	C	12	61
RMH	Ruamāhanga River at Double Bridges	Low	360	C	9	46
RMH	Ruamāhanga River at Kokotau	All	476	C↓	12	58
RMH	Ruamāhanga River at Kokotau	Low	218	B↓↓	12	52
RMH	Ruamāhanga River at Morrisons Bush	All	714	D	12	59
RMH	Ruamāhanga River at Morrisons Bush	Low	340	C	12	54

Whaitua	Site	Flows	95 th % of <i>E. coli</i>	NOF state	Samples this year	Total samples
RMH	Ruamāhanga River at Te Ore Ore	All	780	D	12	61
RMH	Ruamāhanga River at Te Ore Ore	Low	360	C	11	53
RMH	Ruamāhanga River at The Cliffs	All	338	C	12	60
RMH	Ruamāhanga River at The Cliffs	Low	222	B↑	12	54
RMH	Ruamāhanga River at Waihenga Bridge	All	1,185	D	12	59
RMH	Ruamāhanga River at Waihenga Bridge	Low	532	C↓	12	54
RMH	Waingawa River at South Road	All	79	A	12	61
RMH	Waingawa River at South Road	Low	53	A	11	52
RMH	Waiohine River at SH2	All	349	C↑	11	57
RMH	Waiohine River at SH2	Low	460	C↑	9	46
RMH	Waipoua River at Colombo Road	All	1,199	D	12	61
RMH	Waipoua River at Colombo Road	Low	1,000	D	12	55

Marine enterococci MAC grades

Table A2.2: MAC grades calculated for samples taken in the summer (start of November to the end of March) and winter bathing periods (outsider of summer). Arrows next to MAC grades indicate change in levels from the previous season – i.e. a single up arrow means that this season’s grade is one level higher (worse) than last season’s grade. Sites with too few data points are not rated (**N/R**), see the [results section](#) for more details.

Whaitua abbreviations: **TAoP**: Te Awarua-o-Porirua, **TWT**: Te Whanganui-a-Tara, **KC**: Kāpiti Coast.

Whaitua	Site	Season	95 th % of Enterococci	MAC	Samples this year	Total samples
KC	Ōtaki Beach at Surf Club	Summer	123	B	12	61
KC	Ōtaki Beach at Surf Club	Winter	92	N/R	14	21
KC	Paekākāriki Beach at Surf Club	Summer	94	B	12	66
KC	Paekākāriki Beach at Surf Club	Winter	78	B	14	70
KC	Paekākāriki Beach at Whareroa Road	Summer	1,041	D	12	61
KC	Paraparaumu Beach at Maclean Park	Summer	842	D	12	61
KC	Paraparaumu Beach at Nathan Avenue	Summer	412	C	12	61
KC	Paraparaumu Beach at Ngapotiki Street	Summer	591	D	12	61
KC	Paraparaumu Beach at Toru Road	Summer	437	C↓	12	61
KC	Peka Peka Beach at Road End	Summer	166	B	12	61
KC	Raumati Beach at Aotea Road	Summer	432	C	12	61
KC	Raumati Beach at Marine Gardens	Summer	1,014	D	12	66
KC	Raumati Beach at Marine Gardens	Winter	306	C	13	68
KC	Raumati Beach at Tainui Street	Summer	234	C	12	61
KC	Te Horo Beach at Sea Road	Summer	1,000	D	12	60
KC	Waikanae Beach at Ara Kuaka Carpark	Summer	245	C↑	12	60
KC	Waikanae Beach at Tutere St Tennis Court	Summer	149	B	12	60
KC	Waikanae Beach at William Street	Summer	135	B	12	60
TAoP	Karehana Bay at Cluny Road	Winter	565	D	16	60
TAoP	Karehana Bay at Cluny Road	Summer	463	C↓	13	72
TAoP	Pāuatahanui Inlet at Paremata Bridge	Summer	378	C	13	73
TAoP	Pāuatahanui Inlet at Water Ski Club	Summer	1,083	D	13	73
TAoP	Plimmerton Beach at Bath Street	Summer	628	D	13	73

Whaitua	Site	Season	95 th % of Enterococci	MAC	Samples this year	Total samples
TAoP	Porirua Harbour at Rowing Club	Summer	1,820	D	13	74
TAoP	Porirua Harbour at Rowing Club	Winter	3,030	D	16	69
TAoP	Porirua Harbour at Wi Neera Drive Boat Ramp	Summer	2,680	D	13	73
TAoP	Porirua Harbour at Wi Neera Drive Boat Ramp	Winter	3,715	D	16	57
TAoP	Pukerua Bay	Winter	44	B	16	60
TAoP	Pukerua Bay	Summer	216	C↑	13	72
TAoP	South Beach at Plimmerton	Summer	759	D	13	73
TAoP	South Beach at Plimmerton	Winter	794	D	16	71
TAoP	Titahi Bay at Bay Drive	Summer	285	C	13	84
TAoP	Titahi Bay at South Beach Access Road	Summer	458	C	13	81
TAoP	Titahi Bay at South Beach Access Road	Winter	300	C	16	64
TAoP	Titahi Bay at Toms Road	Summer	218	C	13	85
TAoP	Titahi Bay at Toms Road	Winter	373	C↑	16	75
TWT	Ōwhiro Bay	Summer	1,051	D	12	77
TWT	Ōwhiro Bay	Winter	1,200	D	14	58
TWT	Balaena Bay	Summer	315	C	12	76
TWT	Breaker Bay	Summer	51	B	12	76
TWT	Days Bay at Moana Road	Summer	272	C	13	78
TWT	Days Bay at Wellesley College	Summer	208	C↑	13	78
TWT	Days Bay at Wharf	Summer	148	B	13	78
TWT	Hataitai Beach	Summer	254	C	12	76
TWT	Island Bay at Derwent Street	Summer	142	B↓	12	76
TWT	Island Bay at Reef St Recreation Ground	Summer	896	D	12	76
TWT	Island Bay at Surf Club	Summer	574	D	12	77
TWT	Island Bay at Surf Club	Winter	1,200	D↑	14	67
TWT	Lowry Bay at Cheviot Road	Summer	256	C↑	13	77
TWT	Lyll Bay at Onepu Road	Summer	165	B	12	76
TWT	Lyll Bay at Queens Drive	Summer	149	B	12	76
TWT	Lyll Bay at Tirangi Road	Summer	452	C	12	78
TWT	Lyll Bay at Tirangi Road	Winter	344	C	14	67
TWT	Mahanga Bay	Summer	148	B↓	12	76
TWT	Oriental Bay at Band Rotunda	Summer	423	C	12	76
TWT	Oriental Bay at Freyberg Beach	Summer	51	B	12	76
TWT	Oriental Bay at Wishing Well	Summer	200	B	12	78
TWT	Oriental Bay at Wishing Well	Winter	155	B↓	14	67
TWT	Petone Beach at Kiosk	Summer	660	D	13	80
TWT	Petone Beach at Kiosk	Winter	322	C	14	68
TWT	Petone Beach at Sydney Street	Summer	920	D	13	78
TWT	Petone Beach at Water Ski Club	Summer	574	D	13	78
TWT	Princess Bay	Summer	23	A	12	76
TWT	Robinson Bay at HW Shortt Rec Ground	Summer	156	B	13	78
TWT	Robinson Bay at Nikau Street	Summer	101	B	13	80
TWT	Robinson Bay at Nikau Street	Winter	200	B	14	68
TWT	Rona Bay at N end of Cliff Bishop Park	Summer	474	C	13	78
TWT	Rona Bay at Wharf	Summer	249	C↑	13	79
TWT	Scorching Bay	Summer	28	A↓	12	78
TWT	Scorching Bay	Winter	128	B↓	14	67

Whaitua	Site	Season	95 th % of Enterococci	MAC	Samples this year	Total samples
TWT	Seatoun Beach at Inglis Street	Summer	220	C	12	76
TWT	Seatoun Beach at Wharf	Summer	173	B	11	75
TWT	Shark Bay	Summer	185	B↓	12	76
TWT	Sorrento Bay	Summer	356	C↑	13	77
TWT	Wellington City Waterfront at Shed 6	Summer	1,365	D	12	73
TWT	Wellington Harbour at Taranaki St Dive Platform	Summer	1,800	D	12	74
TWT	Whairepo Lagoon	Summer	404	C	12	74
TWT	Worser Bay	Summer	253	C↑	11	75
TWT	York Bay	Summer	233	C	13	77