



River Water Quality

Natural Environment Regional
Monitoring Network¹ (NERMN)

¹ The NERMN is our State of the Environment monitoring network.

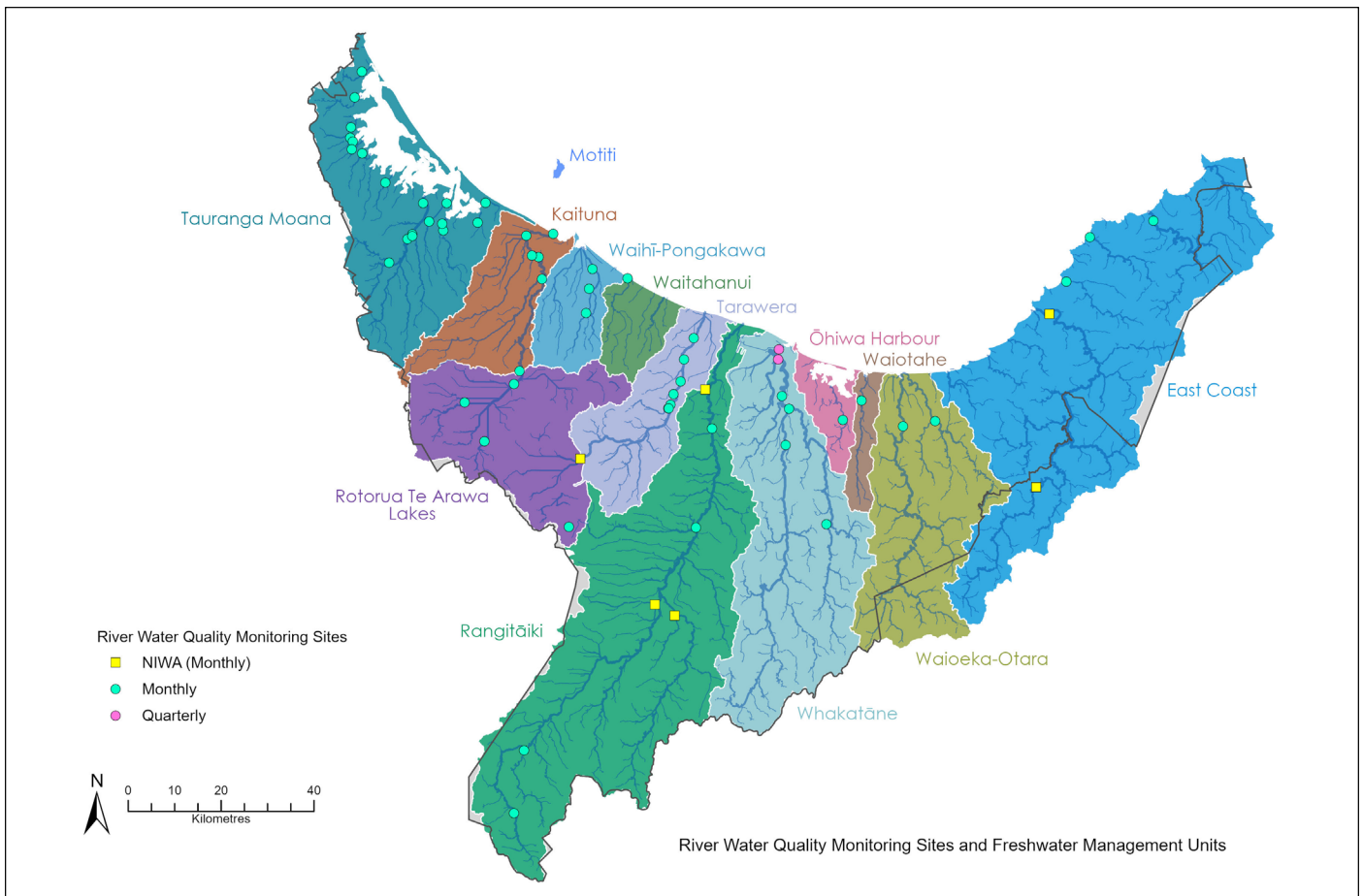


Figure 1: Location of NERMN estuary water quality sites in the Bay of Plenty. The grey line indicates the BOPRC boundary.

Description:

The Toi Moana Bay of Plenty Regional Council River Water Quality Module was set up in 1989 to provide information on regional river water quality state and trends. Today, 57 river and stream sites are monitored by the Regional Council, with a further 6 sites monitored by the National Institute of Water and Atmospheric Research (NIWA).

The sites cover a range of land uses and catchment land cover and include most of the major rivers and streams in the Bay of Plenty. The results from this monitoring is used to:

- report on the state of the environment for water quality in rivers and streams;
- compare measured water quality attributes against national and regional water quality classifications, guidelines or NERMNs;
- detect water quality trends and impacts; and
- identify specific water quality issues.

This monitoring is part of Regional Council's function under s35 of the Resource Management Act 1991.

Purpose:

To provide scientifically defensible information on the important physical, chemical and microbiological characteristics of the natural resources of the Bay of Plenty region. This information is then used as a basis for the preparation of Regional Councils policies and plans, and the monitoring of their suitability and effectiveness.

Managed by Science and Data Services

Last reviewed July 2014 (*Click for link to report*)

Where are the monitoring sites?

The location of all monitoring sites (as at June 2022) is shown in Figure 1. See Table 2 for a full site list.

What's involved in this monitoring?

1. Sites are selected by scientists and technical experts.
2. Sampling is carried out by qualified technicians.
3. Sample analysis is done by Regional Council staff in the council's laboratory in Whakatāne.
4. Data is made publicly available on our [Environmental Data Portal](#) and [LAWA](#).
5. Data analysis and reporting is carried out by Regional Council scientists or external consultants. This information is also made publicly available on our [Environmental Data Portal](#).
6. Review of the monitoring programme is performed by Regional Council's Science Manager.


How often are they tested?

NERMN sites are tested monthly, unless health and safety risks prevent collection on that occasion. We also have 'impact' sites which are downstream of some of the major direct discharges into rivers. Impact sites are either tested monthly or quarterly. See Figure 1 for sites that are sampled quarterly or monthly, and Table 2 for details.

What is tested?

A range of physical, chemical and microbiological (living organisms that can only be viewed under a microscope) attributes are monitored. Detailed in the below table. Note, there may be some site-specific attributes, particularly at impact sites. See next section for where to find the monitoring results.

| Physical attributes | Chemical attributes (units) | Microbiological attributes |
|---|--|----------------------------|
| Water temperature (°C) | Turbidity (FNU or NTU) | <i>E. coli</i> (cfu/100mL) |
| Electrical conductivity (µS/cm) | Total Suspended Solids (mg/L) | |
| pH | Total Nitrogen (mg/L) | |
| Dissolved oxygen (g/m ³ & %) | Nitrate Nitrite Nitrogen (mg/L) | |
| Water clarity (m) | Ammoniacal-Nitrogen (mg/L) | |
| | Dissolved Reactive Phosphorus (mg/L) | |
| | Total Phosphorus (mg/L) | |
| | Water colour measured as absorbance at 440nm | |

 **Table 1: Attributes analysed for the NERMN Estuary Water Quality module.**

Where can I locate the monitoring results?

Results are reported in a range of different ways, reflecting the diverse requirements of end users (see Figure 2). You can check out our real-time data [here](#) or more extensive state of environment reports and snapshots [here](#).

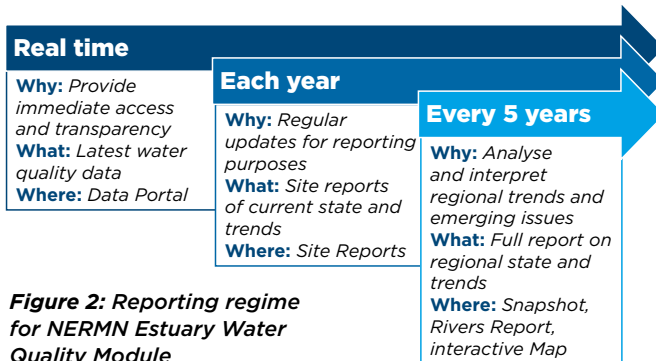



Figure 2: Reporting regime for NERMN Estuary Water Quality Module

Table 2: Full site list as at July 2022. M = Monthly, Q = Quarterly, * = indicates that some monitoring was quarterly prior to period July 2010 to July 2015, ** = Indicates that some monitoring was on a rotation basis prior to period July 2010 to July 2015, V = Volcanic, NV = Non-Volcanic, HG = High Gradient, LG = Low Gradient, P = Pasture, PI = Pasture Intensive, IF = Indigenous Forest, EF = Exotic Forest, U = Urban. 

| NERMN Site number | Site name | Easting | Northing | Freshwater Management Unit | Bio-physical unit | Catchment area (km ²) | Km to sea (stream length) | Sample Frequency | Programme |
|-------------------|-----------------------------|---------|----------|----------------------------|-------------------|-----------------------------------|---------------------------|------------------|-----------|
| RN123610 | Haparapara at SH35 | 2011231 | 5806108 | East Coast | NV-IF | 167 | 1.5 | M | NERMN |
| RO629568 | Kereu at SH35 | 2016299 | 5815685 | East Coast | NV-IF | 141 | 0.6 | M | NERMN |
| QM756918 | Motu at Houpoto SH35 (NIWA) | 2007565 | 5799183 | East Coast | NV-IF | 1377 | 3.7 | M | NIWA |
| QJ471191 | Motu at Waitangirua (NIWA) | 2004713 | 5761919 | East Coast | NV-P | 294 | 95.7 | M | NIWA |
| SO991920 | Raukōkore at SH35 | 2029919 | 5819206 | East Coast | NV-IF | 349 | 3.2 | M | NERMN |
| FO761142 | Kaituna at AFFCO Intake | 1897610 | 5811421 | Kaituna | V-LG-P | 937 | 15.4 | M | Impact |
| FO497605 | Kaituna at Clarkes | 1894979 | 5816054 | Kaituna | V-LG-P | 1138 | 7.8 | M | Impact |
| FN834668 | Kaituna at Maungarangi Rd | 1898345 | 5806689 | Kaituna | V-LG-P | 712 | 22.2 | M | NERMN |
| FO620177 | Kaituna at Te Matai | 1896202 | 5811773 | Kaituna | V-LG-P | 971 | 13 | M | NERMN |
| GO081642 | Kaituna at Te Tumu | 1900764 | 5816420 | Kaituna | V-LG-P | 1198 | 1.6 | M | NERMN |
| MK307635 | Nukuhou at Glenholme Rd | 1963072 | 5776357 | Ōhiwa Harbour | NV-PI | 60 | 11.7 | M | NERMN |
| FD445529 | Otamatea at Wairere Rd | 1894459 | 5705298 | Rangitāiki | V-LG-PI | 120 | 155.9 | M * | NERMN |

| NERMN Site number | Site name | Easting | Northing | Freshwater Management Unit | Bio-physical unit | Catchment area (km2) | Km to sea (stream length) | Sample Frequency | Programme |
|-------------------|----------------------------------|---------|----------|----------------------------|-------------------|----------------------|---------------------------|------------------|-----------|
| J1148319 | Rangitāiki at Inlet to Aniwhenua | 1931488 | 5753195 | Rangitāiki | V-LG-EF | 2423 | 64.9 | M | NERMN |
| JK491452 | Rangitāiki at Matahina Dam | 1934919 | 5774526 | Rangitāiki | V-LG-EF | 2817 | 37.4 | M | NERMN |
| IG265664 | Rangitāiki at Murupara (NIWA) | 1922660 | 5736647 | Rangitāiki | V-LG-EF | 1149 | 94.1 | M | NIWA |
| FC231176 | Rangitāiki at SH5 | 1892311 | 5691766 | Rangitāiki | V-LG-P | 104 | 181.8 | M * | NERMN |
| JL350292 | Rangitāiki at Te Teko (NIWA) | 1933508 | 5782922 | Rangitāiki | V-LG-EF | 2883 | 26 | M | NIWA |
| IG691428 | Whirinaki at Galatea (NIWA) | 1926915 | 5734286 | Rangitāiki | NV-IF | 507 | 98.3 | M | NIWA |
| FL356693 | Kaituna at Rotoiti Outlet | 1893562 | 5786935 | Rotorua Te Arawa Lakes | V-LG-P | 624 | 49.6 | M | NERMN |
| G1416337 | Mangakino at Rerewhakaaitu Rd | 1904165 | 5753370 | Rotorua Te Arawa Lakes | V-LG-PI | 7 | 104 | M | NERMN |
| EL174017 | Ngongotahā at SH36 | 1881743 | 5780173 | Rotorua Te Arawa Lakes | V-LG-P | 77 | 67.1 | M | NERMN |
| FL230406 | Ohau Channel at SH33 | 1892304 | 5784064 | Rotorua Te Arawa Lakes | V-LG-P | 500 | 53.8 | M | NERMN |
| EK598179 | Puarenga at FRI | 1885980 | 5771792 | Rotorua Te Arawa Lakes | V-LG-P | 73 | 69.6 | M | NERMN |
| GJ662805 | Tarawera at Lake Outlet (NIWA) | 1906622 | 5768057 | Rotorua Te Arawa Lakes | V-LG-IF | 187 | 58 | M | NIWA |
| JM102399 | Tarawera at Awakaponga | 1931027 | 5793990 | Tarawera | V-HG-EF | 701 | 9.2 | M | NERMN |
| IK555889 | Tarawera at Kawerau Bridge | 1925555 | 5778893 | Tarawera | V-HG-EF | 550 | 30.5 | M | NERMN |
| IL891937 | Tarawera at Otakiri Rd | 1928913 | 5789375 | Tarawera | V-HG-EF | 676 | 11.9 | M | NERMN |
| IL663193 | Tarawera at Onepū Springs Rd | 1926636 | 5781936 | Tarawera | V-HG-EF | 598 | 2.4 | M | Impact |
| IL818464 | Tarawera at SH30 | 1928182 | 5784643 | Tarawera | V-HG-EF | 620 | 18.2 | M | NERMN |
| IK564876 | Tarawera at Boyce Park | 1925589 | 5778832 | Tarawera | V-HG-EF | 550 | 30.5 | M | NERMN |
| IK604969 | Tarawera at Caxton Footbridge | 1926047 | 5779695 | Tarawera | V-HG-EF | 555 | 25.9 | M | Impact |
| BQ966369 | Aongatete at SH2 | 1859660 | 5833690 | Tauranga Moana | V-HG-P | 43 | 3.7 | M** | NERMN |
| DP784306 | Kopurererua at SH2 | 1877840 | 5823064 | Tauranga Moana | U | 73 | 0.6 | M | NERMN |
| DO406909 | Kopurererua at SH29 | 1874065 | 5819093 | Tauranga Moana | V-LG-P | 60 | 6.4 | M | NERMN |
| CO543022 | Ngamuwahine at Old Bridge | 1865432 | 5810228 | Tauranga Moana | V-LG-IF | 41 | 22.4 | M** | NERMN |
| DO047598 | Omanawa at SH29 | 1870477 | 5815980 | Tauranga Moana | V-LG-P | 83 | 10.5 | M | NERMN |
| EP623312 | Rocky at Mangatawa Lane | 1886234 | 5823121 | Tauranga Moana | U | 16 | 1 | M** | NERMN |
| BQ766632 | Te Mania at 87 Sharp Rd | 1857666 | 5836325 | Tauranga Moana | V-LG-P | 12 | 1.7 | M | NERMN |

| NERMN Site number | Site name | Easting | Northing | Freshwater Management Unit | Bio-physical unit | Catchment area (km2) | Km to sea (stream length) | Sample Frequency | Programme |
|-------------------|------------------------------------|---------|----------|----------------------------|-------------------|----------------------|---------------------------|------------------|-----------|
| BQ708712 | Te Rereatukahia at SH2 | 1857084 | 5837121 | Tauranga Moana | V-HG-IF | 18 | 1.5 | M** | NERMN |
| BR809582 | Tuapiro at Hikurangi Rd | 1858127 | 5845878 | Tauranga Moana | V-HG-IF | 44 | 2.5 | M** | NERMN |
| BQ723939 | Uretara at Henry Rd Ford | 1857235 | 5839394 | Tauranga Moana | V-LG-P | 24 | 3.4 | M** | NERMN |
| BS961133 | Waiau at Waiau Rd Ford | 1859615 | 5851333 | Tauranga Moana | V-HG-P | 23 | 3.2 | M** | NERMN |
| DO686858 | Waimapu 100m d/s SH29 | 1876865 | 5818584 | Tauranga Moana | V-LG-P | 102 | 2.8 | M | NERMN |
| DO712717 | Waimapu at Pukemapu Rd | 1877129 | 5817176 | Tauranga Moana | V-LG-P | 60 | 6.7 | M** | NERMN |
| CP466747 | Waipapa at Old Highway | 1864663 | 5827478 | Tauranga Moana | V-LG-P | 30 | 2.9 | M** | NERMN |
| DP281304 | Wairoa at SH2 | 1872819 | 5823049 | Tauranga Moana | V-LG-P | 449 | 2.4 | M | NERMN |
| CO938527 | Wairoa d/s Ruahihi Power Station | 1869387 | 5815277 | Tauranga Moana | V-LG-P | 308 | 11.8 | M** | NERMN |
| DO045632 | Wairoa 100m u/s Omanawa Confluence | 1870450 | 5816321 | Tauranga Moana | V-LG-P | 315 | 9.8 | M | NERMN |
| EO451883 | Waitao at Waitao Rd | 1884514 | 5818831 | Tauranga Moana | V-HG-P | 30 | 2.6 | M** | NERMN |
| BQ739463 | Waitekohe at SH2 | 1857397 | 5834637 | Tauranga Moana | V-HG-IF | 11 | 3.9 | M | NERMN |
| GN849464 | Pongakawa at Old Coach Rd | 1908494 | 5804645 | Waihi - Pongakawa | V-LG-PI | 102 | 12.3 | M | NERMN |
| GM781934 | Pongakawa at Pumphouse | 1907814 | 5799349 | Waihi - Pongakawa | V-LG-P | 55 | 19.2 | M | NERMN |
| GN922883 | Pongakawa at SH2 | 1909225 | 5808837 | Waihi - Pongakawa | V-LG-PI | 120 | 6.5 | M | NERMN |
| OK300616 | Otara at Browns Bridge | 1983007 | 5776168 | Waiioeka-Otara | NV-IF | 240 | 19.7 | M | NERMN |
| NK608503 | Waiioeka at Mouth of Gorge | 1976081 | 5775032 | Waiioeka-Otara | NV-IF | 780 | 13 | M | NERMN |
| ML715056 | Waiōtahe at Toone Rd | 1967154 | 5780564 | Waiōtahe | NV-IF | 111 | 9.7 | M | NERMN |
| HN674689 | Waitahanui at Otamarakau Marae | 1916743 | 5806891 | Waitahanui | V-HG-P | 118 | 1.4 | M | NERMN |
| LI953392 | Tauranga at Ranger Station | 1959534 | 5753920 | Whakatāne | NV-IF | 211 | 49.7 | M | NERMN |
| LK149881 | Tauranga at Taneatua Bridge | 1951494 | 5778817 | Whakatāne | NV-IF | 480 | 22.9 | M | NERMN |
| KM938159 | Whakatāne 300m d/s SH30 | 1949386 | 5791591 | Whakatāne | NV-IF | 1738 | 1.3 | Q | Impact |
| KL998150 | Whakatāne at Pekatahi Bridge | 1949980 | 5781507 | Whakatāne | NV-IF | 1463 | 17 | M | NERMN |
| LK082095 | Whakatāne at Ruatoki | 1950830 | 5770958 | Whakatāne | NV-IF | 896 | 31.2 | M | NERMN |
| KL919939 | Whakatāne opposite Trident | 1949195 | 5789399 | Whakatāne | NV-IF | 1495 | 6.4 | Q | Impact |