2021 Coastal Annual Report Cards

Estuaries, Open Coast, Hātea River, and Tidal Creeks Site Photos Credit: Biospatial Limited

Report Cards - Estuaries

Site	LAT	Lon
Omapere	-35.534301	173.385618
Rawene	-35.391658	173.505258
Horeke	-35.355413	173.590211
Kaiwaka Point	-35.771049	174.355236
Portland Wharf	-35.800902	174.347842
Tamaterau	-35.795061	174.398203
One Tree Point	-35.817634	174.453832
Ruakaka Estuary	-35.900113	174.451893
Waipū Estuary	-35.995526	174.476550
Waipū Lagoon	-35.996929	174.481046
Mangawhai Boatramp	-36.087273	174.590327
Tern Point Channel	-36.114456	174.600841
Burgess Island	-36.182556	174.049299
Five Fathom Channel	-36.260046	174.153478
Oruawharo River	-36.305963	174.303177
Hargreaves Basin	-36.295150	174.389202
Te Hoanga Point	-36.216955	174.332149
Те Кориа	-36.201460	174.277451
Kapua Point	-36.174596	174.233617
Waikare Inlet	-35.307213	174.168588
Tapu Point	-35.310589	174.128367
Te Haumi	-35.297088	174.101344
Paihia	-35.278509	174.095936
Waitangi Estuary	-35.271767	174.079595
Te Puna Inlet	-35.157451	173.999131
Doves Bay	-35.195978	174.035862
Wainui Island	-35.201074	174.005696
Russell	-35.261959	174.120118
Aurere Estuary	-34.984677	173.426827

Omapere

Water Quality Report Card 2021

Omapere is located near the entrance of the Hokianga Harbour on the west coast of the Northland Peninsula. Since January 2021, Northland Regional Council have been collecting monthly water quality samples at Omapere to measure the health of the estuary and determine its' suitability for recreational activities and shellfish consumption.



This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.

Ecosystem Health

Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	7.4	ACHIEVED
Chlorophyll-a	Median < 0.004 mg/L	0.0016	ACHIEVED
Total nitrogen	Median < 0.22 mg/L	0.10	ACHIEVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.014	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.019	ACHIEVED
Total phosphorus	Median < 0.03 mg/L	0.014	ACHIEVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.007	ACHIEVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	2.9	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	<10	ACHIEVED
Shellfish consumption			
Parameter	Standard	Result	Status
	a a the second s		

 $90^{\text{th}} \text{ percentile} \leq 43 \text{MPN}/100 \text{ml}$

Median ≤ 14MPN/100ml



ACHIEVED

ACHIEVED

13.4

3.3

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Faecal coliforms

Rawene

Water Quality Report Card 2021

Rawene is in the middle reaches of the Hokianga Harbour, on the west coast of the Northland Peninsula. Since January 2021, Northland Regional Council have been collecting monthly water quality samples at this estuary to measure ecosystem health and determine the sites' suitability for recreational activities and shellfish consumption.



This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.

Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.84	ACHIEVED
Chlorophyll-a	Median < 0.004 mg/L	0.0038	ACHIEVED
Total nitrogen	Median < 0.22 mg/L	0.23	NOT ACHIEVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.016	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.060	NOT ACHIEVED
Total phosphorus	Median < 0.03 mg/L	0.038	NOT ACHIEVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.014	ACHIEVED
Water clarity			

Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	13.7	NOT ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	20	ACHIEVED

Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	200	NOT ACHIEVED
	Median ≤ 14MPN/100ml	28	NOT ACHIEVED



Horeke

Water Quality Report Card 2021

Horeke is in the inner reaches of the Hokianga Harbour on the west coast of the Northland Peninsula. Since January 2021, Northland Regional Council have been collecting monthly water quality samples at Horeke estuary to measure ecosystem health and determine the sites' suitability for recreational activities and shellfish consumption.



This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.

Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.26	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0041	NOT ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.28	NOT ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.024	NOT ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.054	NOT ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.039	NOT ACHIEVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.013	ACHIEVED

Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	12.8	NOT ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	44	ACHIEVED

Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	330	NOT ACHIEVED
	Median ≤ 14MPN/100ml	68	NOT ACHIEVED



Kaiwaka Point

Water Quality Report Card 2021

Kaiwaka Point is in the upper Whāngārei Harbour, immediately downstream from the Hātea River which contributes freshwater input. Since 2008, Northland Regional Council have collected water quality samples at this site to measure the health of the estuary and determine its' suitability for recreational activities and shellfish consumption.



This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.

Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	3.9	NOT ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0023	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.22	NOT ACHIEVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.016	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.042	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.031	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.018	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	5.18	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	15	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	16	ACHEIVED
Faecal collionns			

Median ≤ 14MPN/100ml



ACHIEVED

3.3

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Portland Wharf

Water Quality Report Card 2021

Portland Wharf is situated in the upper the Whāngārei Harbour. Since March 2008, Northland Regional Council have been collecting water quality samples at this estuary to measure ecosystem health and determine the sites' suitability for recreational activities and shellfish consumption.



This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.

Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.8	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0025	ACHIEVED
Total nitrogen	Median < 0.22 mg/L	0.21	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.016	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.013	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.026	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.013	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	6.74	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	21	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100m	l 6.6	ACHEIVED
Faecal collforms	Median ≤ 14MPN/100ml	1.7	ACHEIVED



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Tamaterau

Water Quality Report Card 2021

Tamaterau is located in the middle reaches of the Whāngārei harbour. Since 2008, Northland Regional Council have been collecting water quality samples at this estuary to measure ecosystem health and determine the sites' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.5	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.0014	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.15	ACHIEVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.013	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.010	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.020	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.011	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	2.82	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	<10	ACHEIVED
Shellfish consumption			
Shellfish consumption Parameter	Standard	Result	Status
	Standard 90 th percentile ≤ 43MPN/100mI	Result 8.3	Status ACHEIVED



One Tree Point

Water Quality Report Card 2021

One Tree Point is situated towards the entrance of the Whāngārei Harbor and is close to popular shellfish harvesting sites. Since March 2008, Northland Regional Council have been collecting water quality samples at this estuary to measure ecosystem health and determine the sites suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	7	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0017	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.10	ACHIEVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.011	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.004	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.013	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.007	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	1.17	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	<10	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status

Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	3.3	ACHEIVED
	Median ≤ 14MPN/100ml	<1.6	ACHEIVED



Ruakaka Estuary Water Quality Report Card 2021

Ruakaka Estuary is a tidal lagoon situated on the east coast of the Northland Peninsula. It is popular for a variety of recreational activities including swimming, bird-watching, fishing, and shellfish gathering. Since May 2017, Northland Regional Council have been collecting water quality samples at this site to measure ecosystem health and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.9	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0009	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.23	NOT ACHIEVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.032	NOT ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.019	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.038	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.022	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	2.34	ACHEIVED
Recreation			
Parameter	Standard	Result	Status

Enterococci	95 th percentile ≤ 200/100ml	155	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status

Faecal coliforms	90 th percentile ≤ 43MPN/100ml	590	NOT ACHEIVED
	Median ≤ 14MPN/100ml	50	NOT ACHEIVED



Waipū Estuary Water Quality Report Card 2021

The Waipū Estuary is situated on the east coast of the Northland Peninsula. This estuary is renowned as a nesting area for many native shorebird species and has established shellfish populations. Since May 2017, Northland Regional Council have been undertaking routine monitoring of this estuary to measure ecosystem health and determine its' suitability for recreational activities and shellfish consumption.



Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.53	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.0011	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.17	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.063	NOT ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.023	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.027	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.016	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	2.77	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	75	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml		NOT ACHEIVED
	Median ≤ 14MPN/100ml	20	NOT ACHEIVED



Waipū Lagoon Water Quality Report Card 2021

The Waipū Lagoon is a shallow lagoon in the southern arm of the Waipū estuary which supports native birds and shellfish beds. Since May 2017, Northland Regional Council have been collecting routine water quality samples at this site to measure the health of the estuary and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



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Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.0	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0012	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.13	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.023	NOT ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.001	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.021	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.010	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	1.89	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	15	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90^{th} percentile ≤ 43 MPN/100ml	26	ACHIEVED



Mangawhai Boatramp Water Quality Report Card 2021

The Mangawhai boatramp is situated towards the entrance of the Mangawhai Harbour, which is a small estuarine system on the east coast of the Northland peninsula. Since October 2016, Northland Regional Council have been collecting routine water quality samples to measure ecosystem health of this estuary and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	7.39	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0011	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.10	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.012	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.001	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.013	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.008	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	1.06	ACHEIVED

Turbluity	Median < 0.9 NTO	1.00	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	20	ACHEIVED

Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	10	ACHEIVED
	Median ≤ 14MPN/100ml	1.7	ACHEIVED



Tern Point Channel

Water Quality Report Card 2021

The Tern Point Channel is situated within the Mangawhai Harbour, which is a small estuarine system on Northlands' east coast. Since October 2016, Northland Regional Council have been collecting routine water quality samples at this site to measure ecosystem health and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Falameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.68	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0009	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.13	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.011	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.002	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.018	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.009	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	1.36	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	20	ACHEIVED
Shellfish consumption			
			Chabura
Parameter	Standard	Result	Status
Parameter Faecal coliforms	Standard 90 th percentile ≤ 43MPN/100ml		ACHIEVED



Burgess Island

Water Quality Report Card 2021

Burgess Island is downstream of the Wairoa River in the Kaipara Harbour. In June 2009, Auckland Council and Northland Regional Council commenced a monitoring programme in the Kaipara Harbour. Since this time, routine water quality samples have been collected to measure ecosystem health and determine the estuaries' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the Regional Plan of Northland for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.61	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0033	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.40	NOT ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.022	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.100	NOT ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.056	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.025	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status

Turbidity	Median < 6.9 NTU	15.3	NOT ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	22	ACHEIVED

Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	107	NOT ACHIEVED
	Median ≤ 14MPN/100ml	10	ACHIEVED



Five Fathom Channel Water Quality Report Card 2021

Five Fathom Channel is close to the entrance of the Kaipara Harbour on the west coast of the Northland Peninsula. In June 2009, Auckland Council and Northland Regional Council commenced a monitoring programme for the Kaipara harbour. Since this time, routine water quality samples have been collected to measure the ecosystem health of the estuary and determine its' suitability for recreational activities and shellfish consumption. This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



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Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	7.0	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.0031	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.16	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.014	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.025	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.021	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.014	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	3.61	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	10	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status

Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	21.0	ACHIEVED
	Median ≤ 14MPN/100ml	<1.6	ACHIEVED



Oruawharo River

Water Quality Report Card 2021

The Oruawharo River is in the Kaipara Harbour on the west coast of the North Island. In June 2009, Auckland Council and Northland Regional Council commenced a monitoring programme for the Kaipara Harbour. Since this time, routine water quality samples have been collected to measure the ecosystem health of the estuary and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Ecosystem Health

Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.8	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.0034	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.18	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.013	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.011	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.033	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.019	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	5.09	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	<10	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	9.4	ACHIEVED

Median ≤ 14MPN/100ml



ACHIEVED

<1.6

Hargreaves Basin Water Quality Report Card 2021

The Hargreaves Basin site is in the mid-reaches of the Oruawharo arm of the Kaipara Harbour. In June 2009, Northland Regional Council in conjunction with Auckland Council commenced a routine water quality monitoring programme in the Kaipara Harbour. The samples collected have been used to measure the health of the river and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.6	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.005	NOT ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.32	NOT ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.024	NOT ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.026	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.056	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.029	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	13.23	NOT ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	10	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	30.4	ACHIEVED
	Median ≤ 14MPN/100ml	4.1	ACHIEVED



Te Hoanga Point

Water Quality Report Card 2021

Te Hoanga Point is located within the Otamatea River within the Kaipara Harbour. In June 2009, Northland Regional Council in conjunction with Auckland Council commenced a routine water quality monitoring programme of sites in the Kaipara Harbour. The samples collected have been used to measure the health of the river and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



-			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.5	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0036	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.20	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.018	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.025	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.043	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.024	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	6.34	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	10	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	3.2	ACHIEVED
	Median ≤ 14MPN/100ml	1.6	ACHIEVED



Te Kopua

Water Quality Report Card 2021

Te Kopua is located towards the lower end of the Arapaoa arm of the Kaipara Harbour. In June 2009, Northland Regional Council in conjunction with Auckland Council commenced a routine water quality monitoring programme in the Kaipara Harbour. The samples collected have been used to measure the health of the river and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.6	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0047	NOT ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.18	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.002	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.018	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.030	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.021	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	5.54	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	<10	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	4.1	ACHIEVED
	Median ≤ 14MPN/100ml	<1.6	ACHIEVED



Kapua Point

Water Quality Report Card 2021

Kapua Point is located in the upper reaches of the Arapaoa River arm of the Kaipara Harbour. In June 2009, Northland Regional Council worked in conjunction with Auckland Council commenced a routine water quality monitoring programme in the Kaipara Harbour. The samples collected have been used to measure the health of the Harbour and determine its' suitability for recreational activities and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



,			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.4	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.0041	NOT ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.21	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.005	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.017	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.040	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.025	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	6.18	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	<10	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status

Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	7.8	ACHIEVED
	Median ≤ 14MPN/100ml	<1.6	ACHIEVED



Waikare Inlet Water Quality Report Card 2021

The Waikare Inlet is located within the Bay of Islands, on the east coast of the Northland Peninsula. Since May 2008, Northland Regional Council have been undertaking routine monitoring of this inlet to measure the water quality and determine its' suitability for recreational activities and shellfish consumption.



Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.2	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.0033	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.18	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.007	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.005	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.024	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.011	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	7.54	NOT ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	10	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	38	ACHIEVED
	Median ≤ 14MPN/100ml	1.6	ACHIEVED



Tapu Point Water Quality Report Card 2021

Tapu Point is in the Bay of Islands close to Ōpua. Since May 2008, Northland Regional Council have been undertaking routine monitoring of this site to measure the water quality and determine its' suitability for recreational activities and shellfish consumption.



This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.

Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.4	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0030	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.15	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.005	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.004	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.020	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.011	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	6.24	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	31	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml		ACHIEVED
	Median ≤ 14MPN/100ml	5	ACHIEVED



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Te Haumi

Water Quality Report Card 2021

Te Haumi Estuary is in the Bay of Islands, to the south-east of Paihia. This site has high ecological significance, with diverse estuarine habitats and well-established shellfish beds. Since May 2008, Northland Regional Council has undertaken routine monitoring of this estuary to measure the ecosystem health and determine the sites suitability for recreation and shellfish consumption.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	4.87	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0012	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.14	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.013	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.008	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.023	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.011	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	5.78	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	36	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	26	ACHIEVED
	Median ≤ 14MPN/100ml	5	ACHIEVED



Paihia

Water Quality Report Card 2021

The Paihia is a popular beach resort in the Bay of Islands, on the east coast of the Northland Peninsula. Since May 2008, Northland Regional Council has collected routine water quality samples to assess the health of the estuary and its suitability for recreation and shellfish consumption.



Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.4	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0013	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.13	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.005	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.009	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.017	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.010	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	4.01	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	20	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	28	ACHIEVED
	Median ≤ 14MPN/100ml	5	ACHIEVED



Waitangi Estuary Water Quality Report Card 2021

The Waitangi Estuary is located within the Bay of Islands, on the east coast of the Northland peninsula. Since May 2008, Northland Regional Council has collected routine water quality samples to assess the health of the estuary and its suitability for recreation and shellfish consumption



Ecosystem	Health
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Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.4	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.0015	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.15	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.011	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.011	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.019	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.009	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	4.6	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	26	ACHEIVED
Enterococci Shellfish consumption	95 th percentile ≤ 200/100ml	26	ACHEIVED
	95 th percentile ≤ 200/100ml Standard	26 Result	ACHEIVED Status
Shellfish consumption			



Doves Bay

Water Quality Report Card 2021

Doves Bay is situated towards the entrance of the Kerikeri Inlet, on the east coast of the Northland peninsula. Since the commencement of the Bay of Islands water quality programme in May 2008, Northland Regional Council has collected routine water quality samples at this estuary to measure ecosystem health, and the sites suitability for recreation and shellfish consumption.



Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.4	ACHEIVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.0019	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.13	ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.011	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.009	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.021	ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.009	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	2.94	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	96	ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90^{th} percentile ≤ 43 MPN/100ml Median ≤ 14 MPN/100ml	62 1.7	NOT ACHIEVED ACHIEVED



Wainui Island

Water Quality Report Card 2021

Wainui Island site is in the middle reaches of the Kerikeri Inlet in the Bay of Islands. Since May 2008, Northland Regional Council has collected routine water quality samples to assess the health of the estuary and its suitability for recreation and shellfish consumption.



	-	
Standard	Result	Status
Minimum > 4.6 mg/L	6.1	ACHEIVED
Median < 0.004 mg/L	0.0018	ACHEIVED
Median < 0.22 mg/L	0.18	ACHEIVED
Median < 0.023 mg/L	0.019	ACHEIVED
Median < 0.048 mg/L	0.032	ACHEIVED
Median < 0.03 mg/L	0.023	ACHEIVED
Median < 0.017 mg/L	0.012	ACHEIVED
Standard	Result	Status
Median < 6.9 NTU	4.64	ACHEIVED
Standard	Result	Status
95 th percentile ≤ 200/100ml	220	NOT ACHEIVED
Standard	Result	Status
90^{th} percentile ≤ 43 MPN/100ml Median ≤ 14 MPN/100ml	180 5	NOT ACHIEVED ACHIEVED
	Median < 0.004 mg/L	Minimum > 4.6 mg/L 6.1 Median < 0.004 mg/L



Aurere Estuary

Water Quality Report Card 2021

The Aurere Estuary is a small estuary on the east coast of the Northland peninsula that flows into Doubtless Bay. It is fed by two main tributaries, namely the Aurere Stream and the Parapara Stream. Since January 2018, Northland Regional Council has collected routine water quality samples to assess the health of the estuary and its suitability for recreation and shellfish consumption. This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of</u> <u>Northland</u> for data collected between January 2020 and December 2021.



-			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.31	ACHEIVED
Chlorophyll-a	Median < 0.004 mg/L	0.0013	ACHEIVED
Total nitrogen	Median < 0.22 mg/L	0.24	NOT ACHEIVED
Total ammoniacal nitrogen	Median < 0.023 mg/L	0.059	NOT ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.048 mg/L	0.023	ACHEIVED
Total phosphorus	Median < 0.03 mg/L	0.054	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.017 mg/L	0.028	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 6.9 NTU	4.86	ACHEIVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	347	NOT ACHEIVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100ml	1930	NOT ACHEIVED



Report Cards – Tidal Creeks

Site	Lat	Lon
Otaika Creek	-35.77896	174.310165
Mangapai River	-35.835147	174.327153
Causeway Bridge	-36.109005	174.579622
Insley St Causeway	-36.132310	174.580834
Wairoa River	-36.122052	173.980896
Wahiwaka Creek	-36.159039	174.384173
Kawakawa River	-35.331248	174.118410
Kerikeri River	-35.210463	173.975588
Waipapa River	-35.207471	173.975432

Otaika Creek Water Quality Report Card 2021

This site is situated nearby to the upper tidal limit of the Otaika Creek, which is connected to the Whangārei Harbour. Since January 2013, Northland Regional Council have been collecting routine water quality samples for state of the environment monitoring. The resulting data has been used to monitor the ecosystem health of the creek and indicate its' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	4.4	NOT ACHIEVED
Chlorophyll-a	Median < 0.004 mg/L	0.0015	ACHIEVED
Total nitrogen	Median < 0.6 mg/L	0.51	ACHIEVED
Total ammoniacal nitrogen	Median < 0.043 mg/L	0.033	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.218 mg/L	0.200	ACHIEVED
Total phosphorus	Median < 0.04 mg/L	0.031	ACHIEVED
Dissolved reactive phosphorous	Median < 0.021 mg/L	0.010	ACHIEVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 10.8 NTU	4.95	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	230	NOT ACHIEVED



Mangapai River Water Quality Report Card 2021

The Mangapai River is the in the upper reaches of the Whangārei Harbour. Since January 2013, Northland Regional Council have been collecting routine water quality samples from this site. The resulting data has been used to monitor the ecosystem health of the river and indicate its' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	4.17	NOT ACHIEVED
Chlorophyll-a	Median < 0.004 mg/L	0.0024	ACHIEVED
Total nitrogen	Median < 0.6 mg/L	0.26	ACHIEVED
Total ammoniacal nitrogen	Median < 0.043 mg/L	0.023	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.218 mg/L	0.009	ACHIEVED
Total phosphorus	Median < 0.04 mg/L	0.040	ACHIEVED
Dissolved reactive phosphorous	Median < 0.021 mg/L	0.015	ACHIEVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 10.8 NTU	9.43	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	47	ACHIEVED



Causeway Bridge Water Quality Report Card 2021

Situated along Molesworth Drive, this site is at the lower end of Tara Creek, which is one of the main freshwater inputs to Mangawhai Harbour. Since October 2016, routine water quality samples have been collected by Northland Regional Council. The resulting data has been used to monitor the ecosystem health of this tidal creek and indicate its' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Standard	Result	Status
Minimum > 4.6 mg/L	5.93	ACHIEVED
Median < 0.004 mg/L	0.0014	ACHIEVED
Median < 0.6 mg/L	0.24	ACHIEVED
Median < 0.043 mg/L	0.010	ACHIEVED
Median < 0.218 mg/L	0.012	ACHIEVED
Median < 0.04 mg/L	0.024	ACHIEVED
Median < 0.021 mg/L	0.009	ACHIEVED
Standard	Result	Status
Median < 10.8 NTU	2.94	ACHIEVED
Standard	Result	Status
95^{th} percentile $\leq 200/100$ ml	380	NOT ACHIEVED
	Minimum > 4.6 mg/L Median < 0.004 mg/L Median < 0.6 mg/L Median < 0.043 mg/L Median < 0.218 mg/L Median < 0.04 mg/L Median < 0.021 mg/L Standard Median < 10.8 NTU	Minimum > 4.6 mg/L 5.93 Median < 0.004 mg/L



Insley Street Causeway Water Quality Report Card 2021

Situated along Insley Street, this site is at the lower end of Bob Creek, which is one of the main freshwater inputs to Mangawhai Harbour. Since October 2016, routine water quality samples have been collected by Northland Regional Council. The resulting data has been used to monitor the ecosystem health of the creek and indicate its' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.48	ACHIEVED
Chlorophyll-a	Median < 0.004 mg/L	0.0009	ACHIEVED
Total nitrogen	Median < 0.6 mg/L	0.23	ACHIEVED
Total ammoniacal nitrogen	Median < 0.043 mg/L	0.012	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.218 mg/L	0.006	ACHIEVED
Total phosphorus	Median < 0.04 mg/L	0.028	ACHIEVED
Dissolved reactive phosphorous	Median < 0.021 mg/L	0.010	ACHIEVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 10.8 NTU	3.17	ACHIEVED
Desusation			
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	95	ACHIEVED



Wairoa River Water Quality Report Card 2021

The Wairoa River site is located between Raupo and Tikinui in the Wairoa arm of the Kaipara Harbour. Since October 2016, routine water quality samples have been collected at this site by Northland Regional Council. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.82	ACHIEVED
Chlorophyll-a	Median < 0.004 mg/L	0.0030	ACHIEVED
Total nitrogen	Median < 0.6 mg/L	0.68	NOT ACHIEVED
Total ammoniacal nitrogen	Median < 0.043 mg/L	0.017	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.218 mg/L	0.270	NOT ACHIEVED
Total phosphorus	Median < 0.04 mg/L	0.121	NOT ACHIEVED
Dissolved reactive phosphorous	Median < 0.021 mg/L	0.032	NOT ACHIEVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 10.8 NTU	51.3	NOT ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	26	ACHIEVED



Wahiwaka Creek Water Quality Report Card 2021

Wahiwaka Creek is a tidal creek located in the upper reaches of the Otamatea channel in the Kaipara Harbour. Northland Regional Council has been collecting routine water quality samples at this site since 2009. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan</u> of Northland for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.7	ACHIEVED
Chlorophyll-a	Median < 0.004 mg/L	0.0025	ACHIEVED
Total nitrogen	Median < 0.6 mg/L	0.32	ACHIEVED
Total ammoniacal nitrogen	Median < 0.043 mg/L	0.022	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.218 mg/L	0.069	ACHIEVED
Total phosphorus	Median < 0.04 mg/L	0.072	NOT ACHIEVED
Dissolved reactive phosphorous	Median < 0.021 mg/L	0.043	NOT ACHIEVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 10.8 NTU	8.12	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	1134	NOT ACHIEVED



Kawakawa River Water Quality Report Card 2021

This site is situated in the lower reaches of the Kawakawa river, which is one of the main freshwater inputs to the Bay of Islands. Since commencement of the Bay of Islands water quality programme in May 2008, Northland Regional Council has been collecting routine water quality samples at this site. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.6	ACHIEVED
Chlorophyll- <i>a</i>	Median < 0.004 mg/L	0.002	ACHIEVED
Total nitrogen	Median < 0.6 mg/L	0.22	ACHIEVED
Total ammoniacal nitrogen	Median < 0.043 mg/L	0.020	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.218 mg/L	0.013	ACHIEVED
Total phosphorus	Median < 0.04 mg/L	0.029	ACHIEVED
Dissolved reactive phosphorous	Median < 0.021 mg/L	0.016	ACHIEVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 10.8 NTU	6.02	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	31	ACHIEVED



Kerikeri River Water Quality Report Card 2021

This site is situated in the lower reaches of the Kerikeri River, which contributes an important freshwater input to the Bay of Islands system. Since commencement of the Bay of Islands water quality programme in May 2008, Northland Regional Council has been collecting routine water quality samples at this tidal creek. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Standard	Result	Status
Minimum > 4.6 mg/L	5.7	ACHIEVED
Median < 0.004 mg/L	0.0015	ACHIEVED
Median < 0.6 mg/L	0.45	ACHIEVED
Median < 0.043 mg/L	0.024	ACHIEVED
Median < 0.218 mg/L	0.190	ACHIEVED
Median < 0.04 mg/L	0.029	ACHIEVED
Median < 0.021 mg/L	0.008	ACHIEVED
Standard	Result	Status
Median < 10.8 NTU	5.92	ACHIEVED
Standard	Result	Status
95 th percentile ≤ 200/100ml	1349	NOT ACHIEVED
	Minimum > 4.6 mg/L Median < 0.004 mg/L Median < 0.6 mg/L Median < 0.043 mg/L Median < 0.218 mg/L Median < 0.04 mg/L Median < 0.021 mg/L Standard Median < 10.8 NTU	Minimum > 4.6 mg/L 5.7 Median < 0.004 mg/L



Waipapa River Water Quality Report Card 2021

This site is situated in the lower reaches of the Waipapa River, which contributes an important freshwater input to the Bay of Islands system. Since commencement of the Bay of Islands water quality programme in May 2008, Northland Regional Council has been collecting routine water quality samples at this tidal creek. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan</u> of Northland for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	4.9	ACHIEVED
Chlorophyll-a	Median < 0.004 mg/L	0.0025	ACHIEVED
Total nitrogen	Median < 0.6 mg/L	0.33	ACHIEVED
Total ammoniacal nitrogen	Median < 0.043 mg/L	0.037	ACHIEVED
Nitrate-nitrite nitrogen	Median < 0.218 mg/L	0.100	ACHIEVED
Total phosphorus	Median < 0.04 mg/L	0.028	ACHIEVED
Dissolved reactive phosphorous	Median < 0.021 mg/L	0.008	ACHIEVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 10.8 NTU	9.16	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 200/100ml	1926	NOT ACHIEVED



Report Cards – Hatea River

Site	Lat	Lon
Town Basin	-35.723474	174.325364
Waiarohia Canal	-35.730956	174.332763
Limeburners Creek	-35.737986	174.333787
Kissing Point	-35.736125	174.347844
Lower Hātea River	-35.745892	174.349214

Town Basin Water Quality Report Card 2021

This site is in the upper reaches of the Whangārei Harbour and is the immediate receiving environment for input from the Hātea River catchment. Since January 1986, Northland Regional Council has been collecting routine water quality samples at this site. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	4.2	NOT ACHEIVED
Chlorophyll-a	Median < 0.003 mg/L	0.0018	ACHEIVED
Total nitrogen	Median < 0.86 mg/L	0.82	ACHEIVED
Total ammoniacal nitrogen	Median < 0.099 mg/L	0.065	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.58 mg/L	0.500	ACHEIVED
Total phosphorus	Median < 0.119 mg/L	0.105	ACHEIVED
Dissolved reactive phosphorous	Median < 0.092 mg/L	0.095	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 7.5 NTU	4.72	ACHEIVED

Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 500/100ml	1265	NOT ACHEIVED



Waiarohia Canal Water Quality Report Card 2021

This site is at the bottom of the Waiarohia River just upstream of the confluence with the Hātea River. Since the commencement of the Whangārei Harbour monitoring programme in March 2008, Northland Regional Council have been collecting routine water quality samples at this site. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan</u> of Northland for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	4.6	NOT ACHEIVED
Chlorophyll-a	Median < 0.003 mg/L	0.0020	ACHEIVED
Total nitrogen	Median < 0.86 mg/L	0.94	NOT ACHEIVED
Total ammoniacal nitrogen	Median < 0.099 mg/L	0.086	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.58 mg/L	0.500	ACHEIVED
Total phosphorus	Median < 0.119 mg/L	0.123	NOT ACHEIVED
Dissolved reactive phosphorous	Median < 0.092 mg/L	0.094	NOT ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 7.5 NTU	7.11	ACHEIVED

Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 500/100ml	435	ACHEIVED



Limeburners Creek Water Quality Report Card 2021

This site is situated at the mouth of the Limeburners Creek, at the confluence with the Hātea River. Since January 1986, Northland Regional Council has been collecting routine water quality samples at this site. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	4.61	ACHEIVED
Chlorophyll-a	Median < 0.003 mg/L	0.0021	ACHEIVED
Total nitrogen	Median < 0.86 mg/L	1.20	NOT ACHEIVED
Total ammoniacal nitrogen	Median < 0.099 mg/L	0.073	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.58 mg/L	0.560	ACHEIVED
Total phosphorus	Median < 0.119 mg/L	0.107	ACHEIVED
Dissolved reactive phosphorous	Median < 0.092 mg/L	0.086	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 7.5 NTU	8.33	NOT ACHEIVED

Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 500/100ml	125	ACHEIVED



Kissing Point Water Quality Report Card 2021

Kissing Point is located midway down the Hatea part of the Hātea River Channel in the Whangārei Harbour. Since January 1986, Northland Regional Council has been collecting routine water quality samples at this site. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.2	ACHEIVED
Chlorophyll-a	Median < 0.003 mg/L	0.0024	ACHEIVED
Total nitrogen	Median < 0.86 mg/L	0.67	ACHEIVED
Total ammoniacal nitrogen	Median < 0.099 mg/L	0.053	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.58 mg/L	0.300	ACHEIVED
Total phosphorus	Median < 0.119 mg/L	0.067	ACHEIVED
Dissolved reactive phosphorous	Median < 0.092 mg/L	0.048	ACHEIVED
Water clarity			
Parameter	Standard	Result	Status
Turbidity	Median < 7.5 NTU	5.59	ACHEIVED

Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 500/100ml	75	ACHEIVED



Lower Hātea River Water Quality Report Card 2021

This site is located in the lower reaches of the Hātea River Channel in the Whangārei Harbour. Unit. Since the commencement of the Whangārei Harbour monitoring programme in March 2008, Northland Regional Council have been collecting routine water quality samples at this site. The resulting data has been used to monitor ecosystem health and indicate the sites' suitability for recreational purposes.

This report card indicates achievement status of the water quality standards outlined in the <u>Regional Plan of Northland</u> for data collected between January 2020 and December 2021.



Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	5.3	ACHEIVED
Chlorophyll-a	Median < 0.003 mg/L	0.0023	ACHEIVED
Total nitrogen	Median < 0.86 mg/L	0.35	ACHEIVED
Total ammoniacal nitrogen	Median < 0.099 mg/L	0.042	ACHEIVED
Nitrate-nitrite nitrogen	Median < 0.58 mg/L	0.150	ACHEIVED
Total phosphorus	Median < 0.119 mg/L	0.065	ACHEIVED
Dissolved reactive phosphorous	Median < 0.092 mg/L	0.042	ACHEIVED
Water clarity			
De la constant		Dec. II	

Parameter	Standard	Result	Status
Turbidity	Median < 7.5 NTU	5.77	ACHEIVED

Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 500/100ml	91	ACHEIVED



Report Cards – Open Coast

Site	Lat	Lon
Mair Bank	-35.842826	174.512687
Waipū Cove	-36.028346	174.508514
Mangawhai Heads	-36.081068	174.598823
Brampton Reef	-35.231943	174.093172

Mair Bank Water Quality Report Card 2021

Mair Bank is situated offshore from Marsden Point just beyond the entrance of the Whangārei Harbour. Since April 1991, Northland Regional Council have been collecting routine water quality samples from this site to measure ecosystem health and determine the sites suitability for recreational activities and shellfish consumption.



Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	7.0	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 40/100ml	<10	ACHIEVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100m	l 3.3	ACHIEVED
	Median ≤ 14MPN/100ml	<1.6	ACHIEVED



Waipū Cove Water Quality Report Card 2021

Waipū Cove is an open coast site on the east coast of the Northland Peninsula. It is a popular beach for recreational purposes including surfing, camping, and swimming. Since November 2017, Northland Regional Council have been collecting routine water quality samples from this site to measure ecosystem health and determine the sites suitability for recreational activities and shellfish consumption.



Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	7.2	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 40/100ml	10	ACHIEVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100m	l 11	ACHIEVED
	Median ≤ 14MPN/100ml	<1.6	ACHIEVED



Mangawhai Heads Water Quality Report Card 2021

Mangawhai Heads is an open coast site on the east coast of the Northland Peninsula. It is a popular beach for recreational purposes including surfing, and swimming. Since May 2017, Northland Regional Council have been collecting routine water quality samples from this site to measure ecosystem health and determine the sites suitability for recreational activities and shellfish consumption.



Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	7.3	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 40/100ml	10	ACHIEVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90 th percentile ≤ 43MPN/100m	l 1.6	ACHIEVED
	Median ≤ 14MPN/100ml	<1.6	ACHIEVED



Brampton Reef Water Quality Report Card 2021

Brampton Reef is an open coast site situated beyond the Veronica Channel in the Bay of Islands. Since May 2017, Northland Regional Council have been collecting routine water quality samples from this site to measure ecosystem health and determine the sites suitability for recreational activities and shellfish consumption.



Ecosystem Health			
Parameter	Standard	Result	Status
Dissolved oxygen	Minimum > 4.6 mg/L	6.8	ACHIEVED
Recreation			
Parameter	Standard	Result	Status
Enterococci	95 th percentile ≤ 40/100ml	36	ACHIEVED
Shellfish consumption			
Parameter	Standard	Result	Status
Faecal coliforms	90^{th} percentile ≤ 43 MPN/100m	l 8.2	ACHIEVED
	Median ≤ 14MPN/100ml	<1.6	ACHIEVED

