Upper Mangaokewa – Quarterly River Monitoring – November

Sample Collection Day: 12th November 2025

*Water quality was **Fair** in Waiteti stream-upper (Site 46), and **Poor** in Mangaokewa stream (Site 4), Mangawhauwhi stream (Site 5) and Waiteti stream-viaduct (Site 6).*

E. coli concentrations were low in Waiteti stream-upper (150 cells per 100 mL), slightly elevated in Mangawahuwhi stream (370 cells per 100 mL), meeting recommended health guidelines for swimming (540 cells per 100 mL). Concentrations were elevated in Mangaokewa stream (630) and Waiteti stream-viaduct (710) and did not meet recommended swimming guidelines.

Nitrogen: Nitrate concentrations were low in Waiteti stream-upper (0.20 mg/L) and slightly elevated across the other three sites, exceeding Waikato Plan Change One targets (0.525 mg/L). Though all sites fell well below eco-toxicity levels (2.4 mg/L). **Ammonia** concentrations were very low at three sites, and slightly higher in Waiteti stream-viaduct (0.009 mg/L), posing a low risk to aquatic life but exceeded Plan Change One targets (0.005 mg/L). **Dissolved inorganic nitrogen (DIN)** was very low in Waiteti stream-upper (0.20 mg/L) and slightly elevated in the other three sites (0.62 – 0.80 mg/L), exceeding the ecological impact threshold (0.5 mg/L).

Phosphorus: Dissolved reactive phosphorus (DRP) concentrations were low in Mangawhauwhi stream and Waiteti stream-viaduct (0.005 – 0.010 mg/L) and slightly elevated in Mangaokewa stream and Waiteti stream-upper (0.014 – 0.016 mg/L).

Suspended sediment: Water clarity was *Excellent* in Mangaokewa stream (1.85 m), *Fair* in Mangawahuwhi stream (1.36 m) and *Poor* across all other sites (≤ 1.3 m), relative to the national bottom line (1.34 m).

The results in the table below have been graded according to the National Policy Statement for Freshwater Management (NPS-FM, 2020) and Waikato Plan Change One (PC1, 2020), using the strictest applicable measure.

Upper Mangaokewa[1] Sample Dates: 12-Nov-25 Lab: Analytica	Human Contact	Ecosystem Health					
		Water Quality				Sediment	
	E. coli/100 ml	Nitrates (mg N/L)	Ammonia (mg N/L)	Dissolved Inorganic Nitrogen (mg N/L)[3]	Dissolved Reactive Phosphorus (mg/L)	Water Clarity (m)[2]	National Bottom Line
4-Mangaokewa Stm (viaduct)	630	0.66	<0.005	0.66	0.014	1.85	1.34
5-Mangawhauwhi Stm 071	370	0.80	<0.005	0.80	0.005	1.36	1.34
6-Waiteti Stm (viaduct)	710	0.62	0.009	0.62	0.010	0.93	1.34
46-Waiteti stream (Upper)	150	0.20	<0.005	0.20	0.016	1.30	1.34

[1]Assessed against Short-term PC1 targets & NPS-FM National Bottom Lines - where the most stringent measures apply.

[2]Water clarity has been converted from measured turbidity using the formular ln(CLAR) = 1.21 – 0.72 ln(TURB) (Franklin, Booker & Stoffels, 2020).

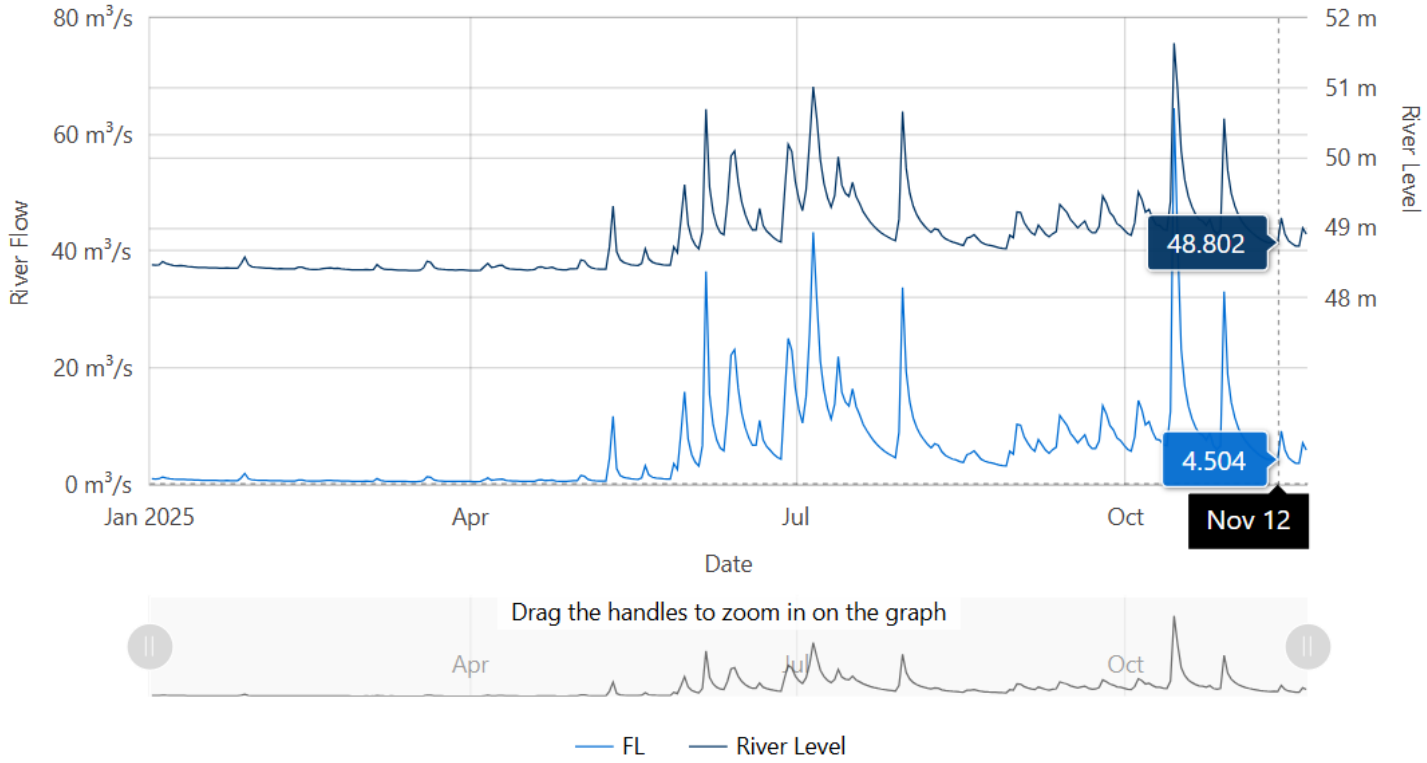
[3]Guideline values to assess ecological impacts of nitrogen on freshwater life. Attribute band limits are from the NPS-FM consultation draft (2019)

Attribute	
A	Ecosystem Health
B	
C	
D	
E	Human Contact only

Prepared by Freshwater Ecologist Merrin Whatley (PhD)

River Level and Flow Rate – Mangaokewa Stream, Te Kuiti

The below chart presents continuous data collected by the Waikato Regional Council for Mangaokewa between 1st January and 20th November 2025. River Level and Flow Rate on the day of sampling (12-November) are highlighted.



Data source: Waikato Regional Council [envirohub website] for environmental data.

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