

## Awakino River & Tasman - Quarterly River Monitoring

Sample Collection Day: 18<sup>th</sup> May 2023

**E. coli** concentrations were low at all sites ( $\leq 96$ ). **Nitrate** concentrations were well below toxicity levels at all sites being lowest at 1-Waikawau River and 2-Manganui River ( $\leq 0.08$  mg/L) and greater at 3-Mangaorango Stream (0.63 mg/L). **Ammonia** concentrations were low at all sites ( $\leq 0.007$  mg/L). 3-Mangaorango Stream had a **Dissolved Inorganic Nitrogen** (DIN) concentration exceeding 0.5 mg/L, potentially impacting the health of the river<sup>1</sup>. **Dissolved reactive phosphorus** concentrations were elevated at all sites ( $\geq 0.011$  mg/L). **Water clarity** was excellent at 2-Manganui River and 3-Mangaorango Stream ( $\geq 0.99$  m) but was poor at 1-Waikawau River (0.46 m), relative to the national bottom line (0.61 m).

AWAKINO RIVER & TASMAN Sample Date: 18-May-23 Lab: Analytica	Ecosystem Health						
	Human Contact	Water Quality					
		E. coli/100 ml	Nitrates Toxicity (mg N/L)	Ammonia Toxicity (mg N/L)	Dissolved Inorganic Nitrogen (mg N/L) <sup>2</sup>	Dissolved Reactive Phosphorus (mg/L)	Sediment
	Water Clarity (m) <sup>1</sup>						National Bottom Line
1-Waikawau R.	45	0.06	<0.005	0.06	0.015	0.46	<0.61
2-Manganui R.	34	0.08	<0.005	0.08	0.011	1.82	<0.61
3-Mangaorango Stm	96	0.63	0.007	0.63	0.017	0.99	<0.61

Attribute Band
A
B
C
D
E

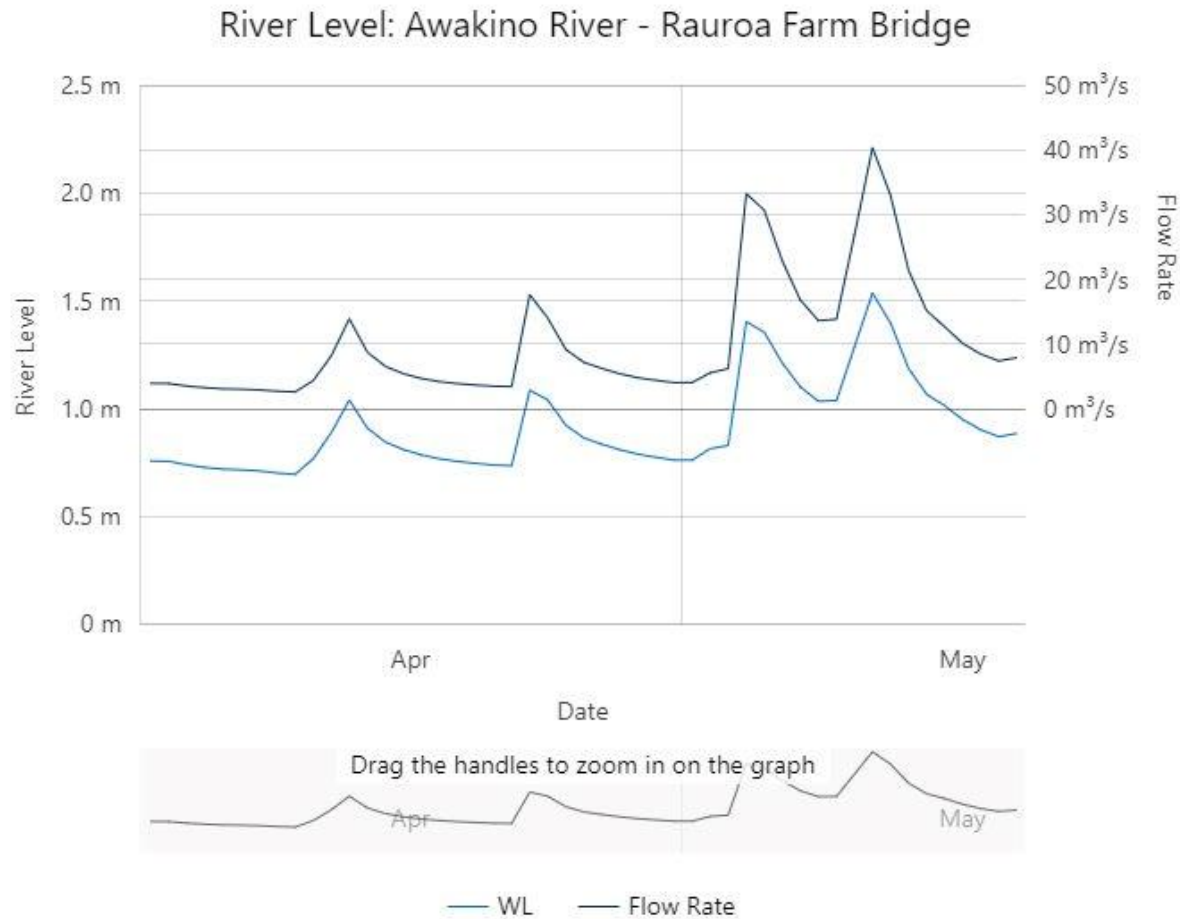
<sup>1</sup>Water clarity has been converted from measured turbidity using the formular  $\ln(\text{CLAR}) = 1.21 - 0.72 \ln(\text{TURB})$  (Franklin, Booker & Stoffels, 2020).

<sup>2</sup>Guideline values to assess ecological impacts of nitrogen on freshwater life. Attribute band limits are from the NPS-FM consultation draft (2019)

<sup>1</sup> Ecological impacts, including problematic growth of algae and/or aquatic plants and loss of sensitive aquatic species are likely when the combined concentration of nitrate and ammonia (i.e. DIN) regularly exceed 0.5 mg/L.

Prepared by Freshwater Ecologist Merrin Whatley (PhD)

## Awakino River - Rauroa Farm Bridge - River level



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

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