

**BEFORE THE INDEPENDENT HEARINGS PANELS APPOINTED TO HEAR AND MAKE
RECOMMENDATIONS ON SUBMISSIONS AND FURTHER SUBMISSIONS ON PROPOSED PLAN
CHANGE 1 TO THE NATURAL RESOURCES PLAN FOR THE WELLINGTON REGION**

UNDER the Resource Management Act 1991 (the
Act)

AND

IN THE MATTER of Hearing of Submissions and Further
Submissions on Proposed Plan Change 1 to
the Natural Resources Plan for the
Wellington Region under Schedule 1 of the
Act

**STATEMENT OF REBUTTAL EVIDENCE OF AMANDA ELIZABETH
VALOIS**

ON BEHALF OF GREATER WELLINGTON REGIONAL COUNCIL

HEARING STREAM TWO – FRESHWATER

28 MARCH 2025

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INTRODUCTION

- 1 My full name is Amanda Elizabeth Valois. I am the Team Leader - Monitoring Water at Greater Wellington Regional Council.
- 2 I have read the statements of:
 - 2.1 Eric Cairns – on behalf of the Wellington Branch of the New Zealand Farm Forestry Association (**NZFFA**)
 - 2.2 Peter Matich’s Statement of Evidence – on behalf of Wairarapa Federated Farmers (**WFF**)

QUALIFICATIONS, EXPERIENCE AND CODE OF CONDUCT

- 3 My qualifications and experience are set out in paragraphs 4 to 5 of my Statement of Primary Evidence, dated 28 February 2025. I repeat the confirmation given in that report that I have read and agree to comply with the Code of Conduct for Expert Witnesses.

RESPONSES TO SUBMITTER EVIDENCE

- 4 My evidence addresses:
 - 4.1 The revised Target Attribute State (**TAS**) for visual clarity of the Mangaroa River; and
 - 4.2 Future monitoring of currently unmonitored attributes.

ASSESSMENT OF WHETHER AMENDED SUSPENDED FINE SEDIMENT TAS FOR THE TE AWA KAIRANGI RURAL STREAMS AND RURAL MAINSTEMS PART-FMU SHOULD BE CONSIDERED INTERIM

- 5 At various points in his statement Mr Cairns (on behalf of NZFFA) suggests that in relation to Ms O’Callahan’s¹ recommended amendment to the suspended fine sediment TAS for the Te Awa Kairangi rural streams and rural mainstems part-FMU “*data supporting the numeric 1.67m is limited and should be regarded as interim*”. He provides justification for this through the limited (n= 9) data set that was used to revise the TAS. Mr Cairns outlines the lack of samples collected above a flow rate of 10 m³/s, as well as samples collected above visual clarity measurements of 2 metres.

¹ Plan Change 1 to the Natural Resources Plan for the Wellington Region Section 42A Hearing Report. Hearing Stream 2: Objectives. Prepared by Mary O’Callahan for Greater Wellington Regional Council (dated 28th February 2025)

6 I agree that the TAS was calculated using a small data set. Over the past year (March 2024 to March 2025), the Mangaroa River at Te Marua exceeded 10 m³/s for 3.9% of the year, and these very high flow events were difficult to capture. Visual clarity measurements over 2 metres are more common with 23% of visual clarity measurements of the past five years greater than 2 metres. However, I disagree with Mr Cairns that the 1.67 m TAS should be interim. The revised TAS is based on the best available information at the time and is an improvement over the notified TAS of 2.22 metres as it takes into account natural variation due to the peatland as I understand it.

MONITORING OF PERIPHYTON BIOMASS, DISSOLVED OXYGEN AND DISSOLVED METALS TAS

7 Mr Matich's Statement of Evidence (on behalf of WFF) refers to an "*absence of good information about what needs improvement*". As set out in Dr Greer's Statement of Rebuttal Evidence² this is true for:

- 7.1 Dissolved oxygen at all sites;
- 7.2 Periphyton biomass at some sites; and
- 7.3 Dissolved copper and zinc at non-urban sites.

In paragraphs 8 to 11 I discuss my understanding of the potential for future monitoring to fill these data gaps.

Periphyton biomass

8 Periphyton biomass (i.e., the NPS-FM 2020 periphyton attribute) is only monitored directly at eight sites in TWT and TAoP³. However, periphyton cover (i.e., the amount of the stream-bed covered by periphyton) is monitored at all hard-bottomed sites. The NPS-FM 2020 allows for using visual estimates of periphyton cover at low risk sites. Accordingly, of the eight TAS sites where periphyton biomass is not monitored:

- 8.1 Periphyton biomass monitoring is not planned for the Mākara S. @ Kennels, or Whakatikei R. @ Riverstone TASs sites as, on last reporting⁴, cover estimates suggest biomass is low (max periphyton Weighted Composite Cover (WCC) exceeds 30% on 2 or less occasions) (Table 1). However, if cover increases at

² Evidence of Michael John Crawshaw Greer on Behalf of Greater Wellington Regional Council (dated 28th March 2025)

³ Kaiwharawhara S. @ Ngaio Gorge, Hutt R. @ Boulcott, Mangaroa R. @ Te Marua, Wainuiomata River D/S of White Br., Horokiri S. @ Snodgrass, Duck Ck @ Tradewinds Dr. Br. And Porirua S. @ Milk Depot

⁴ <https://www.gw.govt.nz/annual-monitoring-reports/river-water-quality-and-ecology/>

these sites then monitoring will be upgraded to include direct measurements of biomass at these sites;

- 8.2 Periphyton biomass monitoring is now planned for the Hulls Ck adj. Reynolds Bach Dr., Black Ck @ Rowe Parade and Karori S. @ Mākara Peak sites on the basis of periphyton cover data indicating moderately high or high periphyton biomass (Table 1); and
- 8.3 The Taupō S. @ Plimmerton Domain, Pāuatahanui S. @ Elmwood Br. And Waiwhetū S. @ Whites Line East are soft-bottomed and periphyton biomass monitoring is not possible (Table 1).

Table 1: Current and future state of periphyton monitoring at TAS sites across the TAoP and TWT Whaitua.

Whaitua	Part-FMU	Site	Urban land-cover (ha)
TWT	Ōrongorongo, Te Awa Kairangi and Wainuiomata small forested and Te Awa Kairangi forested mainstems	Whakatikei R. @ Riverstone	Not monitored, biomass expected to be low when looking at visual estimates
	Te Awa Kairangi lower mainstem	Hutt R. @ Boulcott	Monitored
	Te Awa Kairangi rural streams and rural mainstems	Mangaroa R. @ Te Marua	Monitored
	Te Awa Kairangi urban streams	Hulls Ck adj. Reynolds Bach Dr.	Not monitored but cover suggests high - to be monitored in 2025/26
	Waiwhetū Stream	Waiwhetū S. @ Whites Line East	Soft bottom site so periphyton monitoring not possible
	Wainuiomata urban streams	Black Ck @ Rowe Parade	Not monitored but cover suggests high - to be monitored in 2025/26
	Wainuiomata rural streams	Wainuiomata River D/S of White Br.	Monitored
	Parangārehu catchment streams and South-west coast rural streams	Mākara S. @ Kennels	Not monitored, biomass expected to be low when looking at visual estimates
	Korokoro Stream	Korokoro S. @ Cornish St. Br.	Monitored (do not have 5 years of data yet)
	Kaiwharawhara Stream	Kaiwharawhara S. @ Ngaio Gorge	Monitored
	Wellington urban	Karori S. @ Mākara Peak	Not monitored but cover suggests moderately high - to be monitored in 2025/26

Whaitua	Part-FMU	Site	Urban land-cover (ha)
TAoP	Taupō	Taupō S. @ Plimmerton Domain	Soft bottom site so periphyton monitoring not possible
	Pouewe	Horokiri S. @ Snodgrass	Monitored
	Wai-o-hata	Duck Ck @ Tradewinds Dr. Br.	Monitored (do not have 5 years of data yet)
	Takapū	Pāuatahanui S. @ Elmwood Br.	Soft bottom site so periphyton monitoring not possible
	Te Rio o Porirua and Rangitūhi	Porirua S. @ Milk Depot	Monitored

Dissolved oxygen

9 Dissolved oxygen is currently not monitored to the standard outlined in the NPS-FM 2020 (continuous monitoring across the entire summer period; 1 November to 30th April).

However, this monitoring is planned for the following sites in:

9.1 2025/26:

9.1.1 Black Ck @ Rowe Parade;

9.1.2 Mākara S. @ Kennels;

9.1.3 Korokoro S. @ Cornish St. Br.; and

9.1.4 Taupō S. @ Plimmerton Domain.

9.2 2026/27:

9.2.1 Waiwhetū S. @ Whites Line East;

9.2.2 Karori S. @ Mākara Peak;

9.2.3 Duck Ck @ Tradewinds Dr. Br.; and

9.2.4 Pāuatahanui S. @ Elmwood Br.

9.3 2027/2028:

9.3.1 Hulls Ck adj. Reynolds Bach Dr.;

9.3.2 Kaiwharawhara S. @ Ngaio Gorge;

9.3.3 Horokiri S. @ Snodgrass; and

9.3.4 Porirua S. @ Milk Depot.

10 No dissolved oxygen monitoring is planned for the following sites:

10.1 Whakatikei R. @ Riverstone;

10.2 Hutt R. @ Boulcott;

10.3 Mangaroa R. @ Te Marua; and

10.4 Wainuiomata River D/S of White Bridge.

Dissolved metals

11 Metals are only monitored at urban sites, with no plans to monitor rural or forested sites unless metal contamination is found to be occurring or likely as a result of targeted investigations.

CONCLUSION

12 The information provided within my rebuttal evidence supports Ms O’Callahan’s recommendations related to freshwater objectives for PC1.

DATE: 28 MARCH 2025



AMANDA ELIZABETH VALOIS

TEAM LEADER – MONITORING WATER

**GREATER WELLINGTON REGIONAL
COUNCIL**