Summary of draft Ruamāhanga whaitua freshwater objectives for river freshwater management units

\* indicates where current state is based on modelled information or expert best knowledge, otherwise all current state analyses based on monitoring data

			NOF attributes															١	1					
				E. coli							monia (toxicity)			Nit	trate (toxicity)		Periphyton				Macroinv	1		
		Monitoring point	Current state		Freshwater objective			e		rent Freshwater objective		Current state		Freshwater objective		Current state	Freshwater objective		River	Current state	Freshwater objective		Freshwater objectives to be	
FMU group	River freshwater management unit		NOF band	NOF band	% exce ≥540cfu/100mL	edances ≥260cfu/100mL	Concentra Median	tion (mg/L) ≤ 95 <sup>th</sup> percentile	NOF band	NOF band	Concentr Median	ation (mg/L) ≤ 95 <sup>th</sup> percentile	NOF band	NOF band	Concentra Median	tion (mg/L) ≤ 95 <sup>th</sup> percentile	NOF band	NOF band	Chl a (mg/m <sup>2</sup> )	class	Band	Band	Band	met by?
	Tauanui River	TBC	D*	А	<5%	<20%	127	505	A*	А	0.006	0.043	A*	А	0.13	0.33	C/D*	В	>50 and <120	4	Fair*	Good	≥110 and <130	2040
Aorangi rivers	Turanganui River	TBC	B*	В	5-10%	20-30%	66	565	A*	А	0.009	0.046	A*	А	0.15	0.61	C/D*	В	>50 and <120	4	Fair*	Good	≥110 and <130	2040
	Taueru River"	Taueru River at Gladstone	С	С	10-20%	30-34%	99	1171	А	А	0.005	0.044	В	А	0.71	1.41	D*	С	>120 and <200	3	Good	Good	≥105 and <130	2040
Eastern hill rivers	Makahakaha Stream <sup>#</sup>	TBC	A*	А	<5%	<20%	51	100	A*	А	0.006	0.019	В*	А	0.73	1.50	-	В	>50 and <120	5	Fair*	Good	≥100 and <120	2040 (periphyton 2030)
	Huangarua River"	Huangarua River at Ponatahi Bridge	В	В	5-10%	20-30%	68	921	А	А	0.005	0.014	А	А	0.22	0.66	С	В	>50 and <120	4	Fair	Good	≥110 and <130	2080
Eastern hill streams group	Eastern hill streams^	TBC	-	В	5-10%	20-30%	68	921	-	Α	0.005	0.014	-	А	0.22	0.66	-	В	>50 and <120	3/6	-	Fair	≥80 and <105	Maintain
Main stem Ruamāhanga River	Ruamāhanga - Wardells	Ruamāhanga at Wardells	C*	С	10-20%	30-34%	105	994	В*	Α	0.011	0.050	A*	А	0.54	1.24	B*	В	>50 and <120	4	Fair*	Fair	≥90 and <110	2040
	Ruamāhanga - Gladstone Bridge	Ruamāhanga at Gladstone Bridge	D	С	10-20%	30-34%	33	1098	В	А	0.005	0.050	А	А	0.31	0.96	В	В	>50 and <120	4	Fair*	Fair	≥90 and <110	2040
	Ruamāhanga - Waihenga	Ruamāhanga at Waihenga Bridge	А	А	<5%	<20%	33	375	В*	А	0.005	0.040	A*	А	0.50	0.84	В	В	>50 and <120	4	Fair*	Fair	≥90 and <110	2040
	Ruamāhanga - Pukio	Ruamāhanga at Pukio	В	В	5-10%	20-30%	40	875	A*	А	0.005	0.030	A*	А	0.33	0.94	-	В	>50 and <120	4	Good*	Good	≥110 and <130	Maintain
	Ruamāhanga - upstream of confluence with Lake Wai outlet	Ruamāhanga at Boat Ramp	B*	В	5-10%	20-30%	130	900	A*	А	0.009	0.035	A*	А	0.39	0.98	-	В	>50 and <120	4	Fair*	Fair	≥90 and <110	Maintain
	Kopuaranga River	Kopuaranga River at Stuarts	D	С	10-20%	30-34%	130	1200	А	Α	0.005	0.024	Α	А	0.82	1.17	D	С	>120 and <200	5	Fair	Good	≥100 and <120	2040
Northern rivers	Whangaehu River"	Whangaehu River at 250m from Confluence	D	С	10-20%	30-34%	130	1200	А	А	0.005	0.050	А	А	0.47	1.50	-	С	>120 and <200	3	Fair*	Good	≥105 and <130	2040
	Parkvale Stream	Parkvale Stream at Renalls Weir	E	С	10-20%	30-34%	130	1200	В	Α	0.012	0.050	В	А	1.00	1.50	В	В	>50 and <120	5	Fair*	Good	≥100 and <120	2040
Valley floor streams group	Otukura Stream	Otukura Stream	D*	С	10-20%	30-34%	20	1200	В*	А	0.005	0.050	B*	А	1.00	1.30	-	В	>50 and <120	6	-	Fair	≥80 and <105	2040
	Valley floor streams (to Lake Wai and to Ruamāhanga)	TBC	-	С	10-20%	30-34%	20	1200	-	А	0.005	0.050	-	А	1.00	1.30	-	В	>50 and <120	6	-	Good	≥100 and <120	2040
	Upper Ruamāhanga River	Ruamahanga River at Double Bridges	D	С	10-20%	30-34%	13	183	А	Α	0.005	0.019	Α	А	0.09	0.43	А	Α	≤50	4	Fair	Good	≥110 and <130	2040
	Waipoua River	Waipoua River at Colombo Rd Bridge	В	А	<5%	<20%	34	540	А	Α	0.005	0.008	В	А	0.63	1.41	В*	А	≤50	4	Fair	Good	≥110 and <130	2040
	Waingawa River	Waingawa River at South Rd	А	А	<5%	<20%	13	183	А	А	0.005	0.023	А	А	0.06	0.22	А	А	≤50	4	Good	Good	≥110 and <130	Maintain
Western hill rivers	Mangatarere Stream	Mangatarere River at State Highway 2	D	В	5-10%	20-30%	48	218	В	B (top of band)	0.028	0.128	В	А	0.99	1.50	с	B, then A	>50 and <120	4	Fair	Good	≥110 and <130	2040 (2080 for MCI)
	Waiohine River	Waiohine River at Bicknells	А	А	<5%	<20%	15	129	А	А	0.005	0.015	А	А	0.34	0.85	А	А	≤50	4	Fair	Good	≥110 and <130	2080
	Tauherenikau River	Tauherenikau River at Websters	А	А	<5%	<20%	19	210	А	А	0.005	0.009	А	А	0.04	0.14	A*	А	≤50	4	Fair	Good	110 and <130	2040
	Western lake streams <sup>A</sup>	твс	-	А	<5%	<20%	19	210	-	А	0.005	0.009	-	А	0.04	0.14	-	А	≤50	1/2	-	Good or better	Class 1: ≥120 and <130 Class 2: ≥105 and < 130	Maintain
South coast streams group	South coast streams^	твс	-	А	<5%	<20%	19	210	-	А	0.005	0.009	-	А	0.04	0.14	-	А	≤50	1/2	-	Fair	Class 1: ≥110 and <120 Class 2: ≥80 and <105	Maintain

Productive periphyton class (as defined in NPS-FM Appendix
2)
^ Because monitoring stream TBC, this selection will confirm productivity class for periphyton and river class for MCI

		MCI bands - V	Vellington-specific			
	А	В	С	D		
<b>River class</b>	Excellent	Good	Fair	Poor		
1	≥130	≥120	≥110	<110		
2	≥130	≥105	≥80	<80		
3	≥130	≥105	≥80	<80		
4	≥130	≥110	≥90	<90		
5	≥120	≥100	≥80	<80		
6	≥120	≥100	≥80	<80		

## Summary of draft Ruamāhanga whaitua freshwater objectives for lakes freshwater management units

			NOF attributes															Non-NOF attributes											
		E. coli						Total nitrogen			Total phosphorus			Ammonia toxicity				Phytoplankton			Trophic level index		Total suspended sediment		Macrophytes				
Lake FMU		Current state		Fre	eshwater obje	ective		Current state	Fresh	water objective	Current state	Fresh	water objective	Current state	I	Freshwater obj	ective	Current state		Freshwater objective	Current state	Freshwater objective	Current state	Freshwater objective	Current state	Freshwater objective	Freshwater objectives to be		
	Monitoring site	NOF	NOF	NOF	NOF	% excee	edances	Concentrat	tion (mg/L)	NOF	NOF	Concentration (mg/L)	NOF	NOF	Concentration (mg/L)	NOF	NOF	Concentra	ation (mg/L)	NOF	NOF	Concentration chlorophyll a (mg/m <sup>3</sup> )	TLI category	TLI category	Narrative state	Narrativo stato	State	State	met by?
		band	band	≥540cfu/ 100mL	≥260cfu/ 100mL	Median	95th percentile	band	band	Median	band	band	Median	band	band	Median	95th percentile	band	band	Annual Annual max median	TErcategory	TErcategory	Natiative state	Natiative state	State	State			
Lake Wairarapa	Lake Wairarapa Site 2	А	А	<5%	<20%	65	300	С	С	>500 and ≤800	D	С	>20 and ≤50	А	А	0.005	0.023	D	С	>5 and ≤12 >25 and ≤60	Very poor	Poor	Poor	Fair	D	С	2080		
Lake Onoke	Lake Onoke 1	B/C	Α	<5%	<20%	130	540	С	В	>160 and ≤350	В	В	>10 and ≤20	А	А	0.010	0.040	В	В	>2 and ≤5 >10 and ≤25	Poor	Average	Poor	Fair	D	С	2040		