

Scenario modelling

Reporting site name	WMU	Baseline								
		% Exceedances over 540 cfu/100 mL	% Exceedances over 260 cfu/100 mL	Median concentration (cfu/100 mL)	95th percentile (cfu/100 mL)	% Exceedances over 540 category	% Exceedances over 260 category	Median Category	95th Percentile category	Overall Category
Taupo at Wetland	Taupō	47	72	479	4,586	E	E	E	D	E
Taupo at Camborne case study	Taupō	100	100	1,932	10,066	E	E	E	D	E
Taupo at Mouth	Taupō	62	96	735	5,299	E	E	E	D	E
Hongoeka to Pukerua at Hongoeka	Rangituhi	85	100	1,064	5,864	E	E	E	D	E
Rangituhi at Bottom of sub-catchment	Rangituhi	42	61	384	7,026	E	E	E	D	E
Onepoto Fringe at Elsdon	Rangituhi	67	95	745	5,660	E	E	E	D	E
Mahinawa Stream at Mouth	Rangituhi	50	78	542	5,682	E	E	E	D	E
Hukatai Stream at Mouth	Rangituhi	91	100	942	5,086	E	E	E	D	E
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	28	41	166	2,723	D	D	D	D	D
Horokiri and Motukaraka at Battle Hill	Pouewe	33	47	220	3,355	E	D	D	D	E
Horokiri and Motukaraka at Mouth	Pouewe	27	39	157	2,621	D	D	D	D	D
Kakaho at Mouth	Pouewe	49	74	531	6,826	E	E	E	D	E
Whitireia at Mouth	Pouewe	100	100	1,198	5,213	E	E	E	D	E
Ration at Mouth	Pouewe	34	48	241	4,145	E	D	D	D	E
Upper Duck Creek at Bottom of sub-catchment	Takapū	70	87	892	7,711	E	E	E	D	E
Lower Duck Creek at Mouth	Takapū	59	92	703	4,783	E	E	E	D	E
Upper Kenepuru at Bottom of sub-catchment	Takapū	100	100	2,505	10,721	E	E	E	D	E
Moonshine at Bottom of sub-catchment	Takapū	39	56	319	4,162	E	E	E	D	E
Pauatahanui at Middle reaches	Takapū	33	47	231	3,022	E	D	D	D	E
Pauatahanui at Mouth	Takapū	31	45	200	2,353	E	D	D	D	E
Takapu at Bottom of sub-catchment	Takapū	79	95	1,361	10,130	E	E	E	D	E
Belmont at Lincolnshire Farms	Te Riu o Porirua	67	99	814	5,704	E	E	E	D	E
Porirua at Willowbank	Te Riu o Porirua	66	96	901	5,618	E	E	E	D	E
Porirua at Kenepuru Drive	Te Riu o Porirua	65	96	891	5,820	E	E	E	D	E
Titahi at Titahi Bay	Te Riu o Porirua	100	100	1,309	5,706	E	E	E	D	E
Kenepuru at Infill case study	Te Riu o Porirua	100	100	1,921	7,731	E	E	E	D	E
Kenepuru at Mouth	Te Riu o Porirua	100	100	1,417	6,483	E	E	E	D	E
Porirua at Mitchell Stream	Te Riu o Porirua	66	95	864	7,024	E	E	E	D	E
Porirua at Mouth	Te Riu o Porirua	55	80	656	4,454	E	E	E	D	E
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	67	85	829	8,682	E	E	E	D	E
Porirua at Granada North industrial	Te Riu o Porirua	100	100	1,363	6,152	E	E	E	D	E

Scenario modelling

Reporting site name	WMU	BAU								
		% Exceedances over 540 cfu/100 mL	% Exceedances over 260 cfu/100 mL	Median concentration (cfu/100 mL)	95th percentile (cfu/100 mL)	% Exceedances over 540 category	% Exceedances over 260 category	Median Category	95th Percentile category	Overall Category
Taupo at Wetland	Taupō	44	70	441	4089	E	E	E	D	E
Taupo at Camborne case study	Taupō	100	100	1291	6597	E	E	E	D	E
Taupo at Mouth	Taupō	56	95	641	4439	E	E	E	D	E
Hongoeka to Pukerua at Hongoeka	Rangituhi	85	100	1064	5864	E	E	E	D	E
Rangituhi at Bottom of sub-catchment	Rangituhi	0	0	25	50	A	A	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	67	95	745	5660	E	E	E	D	E
Mahinawa Stream at Mouth	Rangituhi	50	78	542	5682	E	E	E	D	E
Hukatai Stream at Mouth	Rangituhi	91	100	942	5086	E	E	E	D	E
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	25	39	143	2129	D	D	D	D	D
Horokiri and Motukaraka at Battle Hill	Pouewe	32	45	207	3152	E	D	D	D	E
Horokiri and Motukaraka at Mouth	Pouewe	23	36	127	2001	D	D	A	D	D
Kakaho at Mouth	Pouewe	47	72	485	6179	E	E	E	D	E
Whitireia at Mouth	Pouewe	74	100	741	3165	E	E	E	D	E
Ration at Mouth	Pouewe	19	31	99	1327	C	C	A	D	D
Upper Duck Creek at Bottom of sub-catchment	Takapū	59	85	666	5027	E	E	E	D	E
Lower Duck Creek at Mouth	Takapū	57	94	647	4201	E	E	E	D	E
Upper Kenepuru at Bottom of sub-catchment	Takapū	100	100	1640	6590	E	E	E	D	E
Moonshine at Bottom of sub-catchment	Takapū	37	52	283	3713	E	E	E	D	E
Pauatahanui at Middle reaches	Takapū	30	44	193	2370	D	D	D	D	D
Pauatahanui at Mouth	Takapū	27	41	164	1826	D	D	D	D	D
Takapu at Bottom of sub-catchment	Takapū	79	95	1361	10129	E	E	E	D	E
Belmont at Lincolnshire Farms	Te Riu o Porirua	61	99	687	4431	E	E	E	D	E
Porirua at Willowbank	Te Riu o Porirua	64	95	841	5223	E	E	E	D	E
Porirua at Kenepuru Drive	Te Riu o Porirua	63	96	844	5495	E	E	E	D	E
Titahi at Titahi Bay	Te Riu o Porirua	100	100	1258	5648	E	E	E	D	E
Kenepuru at Infill case study	Te Riu o Porirua	100	100	1916	7732	E	E	E	D	E
Kenepuru at Mouth	Te Riu o Porirua	100	100	1334	6002	E	E	E	D	E
Porirua at Mitchell Stream	Te Riu o Porirua	66	96	829	6451	E	E	E	D	E
Porirua at Mouth	Te Riu o Porirua	53	80	622	4175	E	E	E	D	E
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	86	100	931	5877	E	E	E	D	E
Porirua at Granada North industrial	Te Riu o Porirua	100	100	1363	6152	E	E	E	D	E

Scenario modelling

Reporting site name	WMU	Improved								
		% Exceedances over 540 cfu/100 mL	% Exceedances over 260 cfu/100 mL	Median concentration (cfu/100 mL)	95th percentile (cfu/100 mL)	% Exceedances over 540 category	% Exceedances over 260 category	Median Category	95th Percentile category	Overall Category
Taupo at Wetland	Taupō	26	41	186	1983	D	D	D	D	D
Taupo at Camborne case study	Taupō	33	66	372	2468	E	E	E	D	E
Taupo at Mouth	Taupō	25	42	184	1673	D	D	D	D	D
Hongoeka to Pukerua at Hongoeka	Rangituhi	26	42	193	1204	D	D	D	D	D
Rangituhi at Bottom of sub-catchment	Rangituhi	0	0	25	50	A	A	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	19	31	111	1189	C	C	A	C	C
Mahinawa Stream at Mouth	Rangituhi	28	43	205	2489	D	D	D	D	D
Hukatai Stream at Mouth	Rangituhi	35	57	303	2176	E	E	E	D	E
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	11	22	56	861	C	B	A	B	C
Horokiri and Motukaraka at Battle Hill	Pouewe	18	29	87	1345	C	B	A	D	D
Horokiri and Motukaraka at Mouth	Pouewe	15	26	73	1273	C	B	A	D	D
Kakaho at Mouth	Pouewe	32	47	241	3130	E	D	D	D	E
Whitireia at Mouth	Pouewe	14	32	114	711	C	C	A	B	C
Ration at Mouth	Pouewe	11	23	61	861	C	B	A	B	C
Upper Duck Creek at Bottom of sub-catchment	Takapū	40	68	385	3177	E	E	E	D	E
Lower Duck Creek at Mouth	Takapū	27	43	180	1500	D	D	D	D	D
Upper Kenepuru at Bottom of sub-catchment	Takapū	62	94	670	3238	E	E	E	D	E
Moonshine at Bottom of sub-catchment	Takapū	30	44	198	2630	D	D	D	D	D
Pauatahanui at Middle reaches	Takapū	21	33	111	1488	D	C	A	D	D
Pauatahanui at Mouth	Takapū	14	27	73	908	C	B	A	B	C
Takapu at Bottom of sub-catchment	Takapū	60	83	765	6086	E	E	E	D	E
Belmont at Lincolnshire Farms	Te Riu o Porirua	20	36	128	1134	C	D	A	C	D
Porirua at Willowbank	Te Riu o Porirua	37	55	316	2488	E	E	E	D	E
Porirua at Kenepuru Drive	Te Riu o Porirua	33	50	262	1961	E	D	E	D	E
Titahi at Titahi Bay	Te Riu o Porirua	15	30	106	730	C	B	A	B	C
Kenepuru at Infill case study	Te Riu o Porirua	47	77	491	2751	E	E	E	D	E
Kenepuru at Mouth	Te Riu o Porirua	37	55	314	1859	E	E	E	D	E
Porirua at Mitchell Stream	Te Riu o Porirua	28	42	186	1788	D	D	D	D	D
Porirua at Mouth	Te Riu o Porirua	23	41	170	1388	D	D	D	D	D
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	23	37	174	1930	D	D	D	D	D
Porirua at Granada North industrial	Te Riu o Porirua	44	74	441	2588	E	E	E	D	E

Scenario modelling

Reporting site name	WMU	Water sensitive								
		% Exceedances over 540 cfu/100 mL	% Exceedances over 260 cfu/100 mL	Median concentration (cfu/100 mL)	95th percentile (cfu/100 mL)	% Exceedances over 540 category	% Exceedances over 260 category	Median Category	95th Percentile category	Overall Category
Taupo at Wetland	Taupō	13	26	88	869	C	B	A	B	C
Taupo at Camborne case study	Taupō	4	24	83	529	A	B	A	A	B
Taupo at Mouth	Taupō	12	28	91	757	C	B	A	B	C
Hongoeka to Pukerua at Hongoeka	Rangituhi	26	42	193	1200	D	D	D	C	D
Rangituhi at Bottom of sub-catchment	Rangituhi	0	0	25	50	A	A	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	17	29	99	1018	C	B	A	C	C
Mahinawa Stream at Mouth	Rangituhi	28	43	202	2503	D	D	D	D	D
Hukatai Stream at Mouth	Rangituhi	35	57	303	2137	E	E	E	D	E
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	8	19	46	700	B	A	A	B	B
Horokiri and Motukaraka at Battle Hill	Pouewe	13	24	67	987	C	B	A	B	C
Horokiri and Motukaraka at Mouth	Pouewe	10	21	50	849	B	B	A	B	B
Kakaho at Mouth	Pouewe	23	35	132	1735	D	D	D	D	D
Whitireia at Mouth	Pouewe	13	32	112	702	C	C	A	B	C
Ration at Mouth	Pouewe	4	13	36	475	A	A	A	A	A
Upper Duck Creek at Bottom of sub-catchment	Takapū	33	52	273	2394	E	E	E	D	E
Lower Duck Creek at Mouth	Takapū	21	38	137	1093	D	D	D	C	D
Upper Kenepuru at Bottom of sub-catchment	Takapū	49	86	527	2610	E	E	E	D	E
Moonshine at Bottom of sub-catchment	Takapū	25	38	145	1938	D	D	D	D	D
Pauatahanui at Middle reaches	Takapū	14	26	72	958	C	B	A	B	C
Pauatahanui at Mouth	Takapū	6	19	48	594	B	A	A	B	B
Takapu at Bottom of sub-catchment	Takapū	48	71	500	3918	E	E	E	D	E
Belmont at Lincolnshire Farms	Te Riu o Porirua	23	38	146	1237	D	D	D	D	D
Porirua at Willowbank	Te Riu o Porirua	31	48	239	1699	E	D	D	D	E
Porirua at Kenepuru Drive	Te Riu o Porirua	28	46	209	1403	D	D	D	D	D
Titahi at Titahi Bay	Te Riu o Porirua	18	33	121	839	C	C	A	B	C
Kenepuru at Infill case study	Te Riu o Porirua	37	54	292	1542	E	E	E	D	E
Kenepuru at Mouth	Te Riu o Porirua	33	50	262	1434	E	D	E	D	E
Porirua at Mitchell Stream	Te Riu o Porirua	28	42	179	1674	D	D	D	D	D
Porirua at Mouth	Te Riu o Porirua	17	36	140	979	C	D	D	B	D
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	11	24	85	855	C	B	A	B	C
Porirua at Granada North industrial	Te Riu o Porirua	43	72	423	2521	E	E	E	D	E

E. coli

Monitoring

Site name		Site no.	n	% exceed 540 cfu/100mL	% exceed 260 cfu/100mL	Median (cfu/100mL)	95th percentile (cfu/100mL)	NOF Attribute State
Horokiri S at Snodgrass	Pouewe	RS13	59	27.12	62.71	335	4550	E
Pauatahanui S at Elmwood Bridge	Takapū	RS14	60	16.67	55.00	270	4300	E
Porirua S at Milk Depot	Te Riu o Porirua	RS16	60	80.00	91.67	1000	6950	E

Enterococci

Scenario modelling

Reporting site name	WMU	Baseline					BAU				
		% Exceedances over 500	95th percentile (cfu/100ml)	% Exceedances over 500 category	95th Percentile category	Overall Category	% Exceedances over 500	95th percentile (cfu/100ml)	% Exceedances over 500 category	95th Percentile category	Overall Category
Waka Ama	Onepoto Arm	19.5	2148.8	C	D	D	19.4	2058.3	C	D	D
Rowing Club	Onepoto Arm	12.8	1372.1	C	D	D	12.5	1337.8	C	D	D
Onepoto Subtidal	Onepoto Arm	0.7	90.5	A	B	B	0.7	86.0	A	B	B
Hanikamu	Onepoto Arm	1.8	206.6	A	C	C	1.4	169.8	A	B	B
Paremata Rail	Onepoto Arm	0.6	82.4	A	B	B	0.6	77.5	A	B	B
Paremata	Pauatahanui Inlet	0.3	80.4	A	B	B	0.1	68.8	A	B	B
Water Ski	Pauatahanui Inlet	1.9	211.7	A	C	C	1.5	180.5	A	B	B
Kakaho	Pauatahanui Inlet	5.8	571.1	B	D	D	4.7	461.2	A	C	C
Pauatahanui	Pauatahanui Inlet	14.2	1420.8	C	D	D	11.1	1027.3	C	D	D
Duck Creek	Pauatahanui Inlet	10.6	910.7	C	D	D	7.6	684.8	B	D	D
Browns Bay	Pauatahanui Inlet	1.4	152.3	A	B	B	1.4	144.8	A	B	B
Pauatahanui Subtidal	Pauatahanui Inlet	0.2	77.1	A	B	B	0.1	62.0	A	B	B
Plimmerton	Coast	0.2	61.0	A	B	B	0.1	54.2	A	B	B

Reporting site name	WMU	Water sensitive				
		% Exceedances over 500	95th percentile (cfu/100ml)	% Exceedances over 500 category	95th Percentile category	Overall Category
Waka Ama	Onepoto Arm	7.2	679.4	B	D	D
Rowing Club	Onepoto Arm	3.8	330.8	A	C	C
Onepoto Subtidal	Onepoto Arm	0.1	23.4	A	A	A
Hanikamu	Onepoto Arm	0.7	47.7	A	B	B
Paremata Rail	Onepoto Arm	0.1	21.5	A	A	A
Paremata	Pauatahanui Inlet	0.0	22.5	A	A	A
Water Ski	Pauatahanui Inlet	0.1	57.6	A	B	B
Kakaho	Pauatahanui Inlet	0.7	144.5	A	B	B
Pauatahanui	Pauatahanui Inlet	2.6	360.8	A	C	C
Duck Creek	Pauatahanui Inlet	1.9	225.7	A	C	C
Browns Bay	Pauatahanui Inlet	0.0	36.0	A	A	A
Pauatahanui Subtidal	Pauatahanui Inlet	0.0	19.9	A	A	A
Plimmerton	Coast	0.0	15.8	A	A	A

Monitoring - data from 2015/16, 16/17, 17/18 surveillance seasons

Reporting site name	WMU	Count	% Exceedances over 500	95th percentile (cfu/100ml)	% Exceedances over 500 category	95th Percentile category	Overall Category
Porirua Harbour at Wi Neera Drive Boat Ramp	Onepoto Arm	34	8.8	862.0	B	D	D
Porirua Harbour at Rowing Club	Onepoto Arm	51	2	337.5	A	C	C
Pauatahanui Inlet at Water Ski Club	Pauatahanui Inlet	52	0	230.0	A	C	C
Pauatahanui Inlet at Paremata Bridge	Pauatahanui Inlet	51	0	24.0	A	A	A
Plimmerton Beach at Bath Street	Coast	52	5.8	858.0	B	D	D
South Beach at Plimmerton	Coast	52	3.8	455.0	A	C	C
Karehana Bay at Cluny Road	Coast			139.0		B	B
Titahi Bay at Bay Drive	Coast			176.0		B	B
Titahi Bay at Toms Road	Coast			125.4		B	B
Titahi Bay at South Beach Access Road	Coast			236.0		C	C
Paekakariki Beach at Whareroa Road	Coast			77.6		B	B
Paekakariki Beach at Surf Club	Coast			69.3		B	B
Pukerua Bay	Coast			43.8		B	B

Ammonia (toxicity)

Scenario modelling

Reporting site name	WMU	Baseline					BAU				
		Median (mg/L)	Maximum (mg/L)	Median Category	Maximum Category	Overall Category	Median (mg/L)	Maximum (mg/L)	Median Category	Maximum Category	Overall Category
Taupo at Wetland	Taupō	0.011	0.07	A	B	B	0.011	0.067	A	B	B
Taupo at Camborne case study	Taupō	0.017	0.09	A	B	B	0.014	0.067	A	B	B
Taupo at Mouth	Taupō	0.011	0.249	A	B	B	0.01	0.197	A	B	B
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.015	0.051	A	B	B	0.015	0.051	A	B	B
Rangituhi at Bottom of sub-catchment	Rangituhi	0.012	0.076	A	B	B	0.011	0.017	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	0.011	1.16	A	C	C	0.011	1.16	A	C	C
Mahinawa Stream at Mouth	Rangituhi	0.013	0.066	A	B	B	0.013	0.066	A	B	B
Hukatai Stream at Mouth	Rangituhi	0.017	0.632	A	C	C	0.017	0.632	A	C	C
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.008	0.048	A	A	A	0.008	0.045	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.009	0.052	A	B	B	0.009	0.052	A	B	B
Horokiri and Motukaraka at Mouth	Pouewe	0.006	0.047	A	A	A	0.006	0.044	A	A	A
Kakaho at Mouth	Pouewe	0.009	0.071	A	B	B	0.009	0.069	A	B	B
Whitireia at Mouth	Pouewe	0.03	0.058	A	B	B	0.027	0.039	A	A	A
Ration at Mouth	Pouewe	0.011	0.069	A	B	B	0.01	0.057	A	B	B
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.013	0.078	A	B	B	0.011	0.055	A	B	B
Lower Duck Creek at Mouth	Takapū	0.013	0.329	A	B	B	0.012	0.296	A	B	B
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.019	0.073	A	B	B	0.016	0.052	A	B	B
Moonshine at Bottom of sub-catchment	Takapū	0.009	0.056	A	B	B	0.009	0.054	A	B	B
Pauatahanui at Middle reaches	Takapū	0.008	0.055	A	B	B	0.007	0.052	A	B	B
Pauatahanui at Mouth	Takapū	0.006	0.05	A	A	A	0.006	0.045	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.015	0.084	A	B	B	0.015	0.084	A	B	B
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.017	1.927	A	C	C	0.015	1.135	A	C	C
Porirua at Willowbank	Te Riu o Porirua	0.015	0.542	A	C	C	0.015	0.446	A	C	C
Porirua at Kenepuru Drive	Te Riu o Porirua	0.013	0.864	A	C	C	0.013	0.773	A	C	C
Titahi at Titahi Bay	Te Riu o Porirua	0.011	0.734	A	C	C	0.015	0.864	A	C	C
Kenepuru at Infill case study	Te Riu o Porirua	0.019	1.096	A	C	C	0.019	1.107	A	C	C
Kenepuru at Mouth	Te Riu o Porirua	0.019	1.531	A	C	C	0.018	1.438	A	C	C
Porirua at Mitchell Stream	Te Riu o Porirua	0.015	0.53	A	C	C	0.014	0.457	A	C	C
Porirua at Mouth	Te Riu o Porirua	0.013	0.958	A	C	C	0.012	0.868	A	C	C
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	0.016	0.094	A	B	B	0.016	0.059	A	B	B
Porirua at Granada North industrial	Te Riu o Porirua	0.016	0.044	A	A	A	0.016	0.044	A	A	A

Ammonia (toxicity)

Scenario modelling

Reporting site name	WMU	Improved					Water sensitive				
		Median (mg/L)	Maximum (mg/L)	Median Category	Maximum Category	Overall Category	Median (mg/L)	Maximum (mg/L)	Median Category	Maximum Category	Overall Category
Taupo at Wetland	Taupō	0.01	0.061	A	B	B	0.009	0.04	A	A	A
Taupo at Camborne case study	Taupō	0.012	0.061	A	B	B	0.012	0.036	A	A	A
Taupo at Mouth	Taupō	0.009	0.124	A	B	B	0.008	0.118	A	B	B
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.014	0.035	A	A	A	0.014	0.035	A	A	A
Rangituhi at Bottom of sub-catchment	Rangituhi	0.011	0.017	A	A	A	0.011	0.017	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	0.011	0.731	A	C	C	0.011	0.208	A	B	B
Mahinawa Stream at Mouth	Rangituhi	0.013	0.066	A	B	B	0.013	0.067	A	B	B
Hukatai Stream at Mouth	Rangituhi	0.017	0.476	A	C	C	0.017	0.104	A	B	B
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.007	0.034	A	A	A	0.007	0.03	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.008	0.039	A	A	A	0.008	0.031	A	A	A
Horokiri and Motukaraka at Mouth	Pouewe	0.006	0.037	A	A	A	0.006	0.032	A	A	A
Kakaho at Mouth	Pouewe	0.008	0.052	A	B	B	0.007	0.036	A	A	A
Whitireia at Mouth	Pouewe	0.027	0.039	A	A	A	0.027	0.039	A	A	A
Ration at Mouth	Pouewe	0.01	0.056	A	B	B	0.01	0.051	A	B	B
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.01	0.045	A	A	A	0.009	0.037	A	A	A
Lower Duck Creek at Mouth	Takapū	0.012	0.224	A	B	B	0.012	0.21	A	B	B
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.015	0.043	A	A	A	0.014	0.04	A	A	A
Moonshine at Bottom of sub-catchment	Takapū	0.009	0.051	A	B	B	0.009	0.041	A	A	A
Pauatahanui at Middle reaches	Takapū	0.007	0.05	A	A	A	0.007	0.038	A	A	A
Pauatahanui at Mouth	Takapū	0.006	0.044	A	A	A	0.005	0.037	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.014	0.078	A	B	B	0.013	0.058	A	B	B
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.013	0.879	A	C	C	0.016	0.731	A	C	C
Porirua at Willowbank	Te Riu o Porirua	0.014	0.416	A	C	C	0.014	0.246	A	B	B
Porirua at Kenepuru Drive	Te Riu o Porirua	0.012	0.677	A	C	C	0.012	0.414	A	C	C
Titahi at Titahi Bay	Te Riu o Porirua	0.013	0.446	A	C	C	0.014	0.144	A	B	B
Kenepuru at Infill case study	Te Riu o Porirua	0.019	0.919	A	C	C	0.018	0.953	A	C	C
Kenepuru at Mouth	Te Riu o Porirua	0.017	1.049	A	C	C	0.017	1.119	A	C	C
Porirua at Mitchell Stream	Te Riu o Porirua	0.013	0.401	A	C	C	0.014	0.134	A	B	B
Porirua at Mouth	Te Riu o Porirua	0.011	0.852	A	C	C	0.011	0.726	A	C	C
Stebbins at Bottom of sub-catchment	Te Riu o Porirua	0.013	0.057	A	B	B	0.016	0.044	A	A	A
Porirua at Granada North industrial	Te Riu o Porirua	0.015	0.043	A	A	A	0.015	0.043	A	A	A

Ammonia (toxicity)

pH Adjusted scenario modelling

Assumed pH		7.3		Baseline			BAU				
Reporting site name	WMU	Median (mg/L)	Maximum (mg/L)	Median Category	Maximum Category	Overall Category	Median (mg/L)	Maximum (mg/L)	Median Category	Maximum Category	Overall Category
Taupo at Wetland	Taupō	0.005	0.035	A	A	A	0.005	0.033	A	A	A
Taupo at Camborne case study	Taupō	0.008	0.045	A	A	A	0.007	0.033	A	A	A
Taupo at Mouth	Taupō	0.005	0.124	A	B	B	0.005	0.098	A	B	B
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.007	0.025	A	A	A	0.007	0.025	A	A	A
Rangituhi at Bottom of sub-catchment	Rangituhi	0.006	0.038	A	A	A	0.005	0.008	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	0.005	0.578	A	C	C	0.005	0.578	A	C	C
Mahinawa Stream at Mouth	Rangituhi	0.006	0.033	A	A	A	0.006	0.033	A	A	A
Hukatai Stream at Mouth	Rangituhi	0.008	0.315	A	B	B	0.008	0.315	A	B	B
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.004	0.024	A	A	A	0.004	0.022	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.004	0.026	A	A	A	0.004	0.026	A	A	A
Horokiri and Motukaraka at Mouth	Pouewe	0.003	0.023	A	A	A	0.003	0.022	A	A	A
Kakaho at Mouth	Pouewe	0.004	0.035	A	A	A	0.004	0.034	A	A	A
Whitireia at Mouth	Pouewe	0.015	0.029	A	A	A	0.013	0.019	A	A	A
Ration at Mouth	Pouewe	0.005	0.034	A	A	A	0.005	0.028	A	A	A
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.006	0.039	A	A	A	0.005	0.027	A	A	A
Lower Duck Creek at Mouth	Takapū	0.006	0.164	A	B	B	0.006	0.147	A	B	B
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.009	0.036	A	A	A	0.008	0.026	A	A	A
Moonshine at Bottom of sub-catchment	Takapū	0.004	0.028	A	A	A	0.004	0.027	A	A	A
Pauatahanui at Middle reaches	Takapū	0.004	0.027	A	A	A	0.003	0.026	A	A	A
Pauatahanui at Mouth	Takapū	0.003	0.025	A	A	A	0.003	0.022	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.007	0.042	A	A	A	0.007	0.042	A	A	A
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.008	0.960	A	C	C	0.007	0.565	A	C	C
Porirua at Willowbank	Te Riu o Porirua	0.007	0.270	A	B	B	0.007	0.222	A	B	B
Porirua at Kenepuru Drive	Te Riu o Porirua	0.006	0.430	A	C	C	0.006	0.385	A	B	B
Titahi at Titahi Bay	Te Riu o Porirua	0.005	0.366	A	B	B	0.007	0.430	A	C	C
Kenepuru at Infill case study	Te Riu o Porirua	0.009	0.546	A	C	C	0.009	0.551	A	C	C
Kenepuru at Mouth	Te Riu o Porirua	0.009	0.763	A	C	C	0.009	0.716	A	C	C
Porirua at Mitchell Stream	Te Riu o Porirua	0.007	0.264	A	B	B	0.007	0.228	A	B	B
Porirua at Mouth	Te Riu o Porirua	0.006	0.477	A	C	C	0.006	0.432	A	C	C
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	0.008	0.047	A	A	A	0.008	0.029	A	A	A
Porirua at Granada North industrial	Te Riu o Porirua	0.008	0.022	A	A	A	0.008	0.022	A	A	A

Ammonia (toxicity)

pH Adjusted scenario modelling

Assumed pH		7.3		Improved			Water sensitive				
Reporting site name	WMU	Median (mg/L)	Maximum (mg/L)	Median Category	Maximum Category	Overall Category	Median (mg/L)	Maximum (mg/L)	Median Category	Maximum Category	Overall Category
Taupo at Wetland	Taupō	0.005	0.030	A	A	A	0.004	0.020	A	A	A
Taupo at Camborne case study	Taupō	0.006	0.030	A	A	A	0.006	0.018	A	A	A
Taupo at Mouth	Taupō	0.004	0.062	A	B	B	0.004	0.059	A	B	B
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.007	0.017	A	A	A	0.007	0.017	A	A	A
Rangituhi at Bottom of sub-catchment	Rangituhi	0.005	0.008	A	A	A	0.005	0.008	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	0.005	0.364	A	B	B	0.005	0.104	A	B	B
Mahinawa Stream at Mouth	Rangituhi	0.006	0.033	A	A	A	0.006	0.033	A	A	A
Hukatai Stream at Mouth	Rangituhi	0.008	0.237	A	B	B	0.008	0.052	A	B	B
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.003	0.017	A	A	A	0.003	0.015	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.004	0.019	A	A	A	0.004	0.015	A	A	A
Horokiri and Motukaraka at Mouth	Pouewe	0.003	0.018	A	A	A	0.003	0.016	A	A	A
Kakaho at Mouth	Pouewe	0.004	0.026	A	A	A	0.003	0.018	A	A	A
Whitireia at Mouth	Pouewe	0.013	0.019	A	A	A	0.013	0.019	A	A	A
Ration at Mouth	Pouewe	0.005	0.028	A	A	A	0.005	0.025	A	A	A
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.005	0.022	A	A	A	0.004	0.018	A	A	A
Lower Duck Creek at Mouth	Takapū	0.006	0.112	A	B	B	0.006	0.105	A	B	B
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.007	0.021	A	A	A	0.007	0.020	A	A	A
Moonshine at Bottom of sub-catchment	Takapū	0.004	0.025	A	A	A	0.004	0.020	A	A	A
Pauatahanui at Middle reaches	Takapū	0.003	0.025	A	A	A	0.003	0.019	A	A	A
Pauatahanui at Mouth	Takapū	0.003	0.022	A	A	A	0.002	0.018	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.007	0.039	A	A	A	0.006	0.029	A	A	A
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.006	0.438	A	C	C	0.008	0.364	A	B	B
Porirua at Willowbank	Te Riu o Porirua	0.007	0.207	A	B	B	0.007	0.123	A	B	B
Porirua at Kenepuru Drive	Te Riu o Porirua	0.006	0.337	A	B	B	0.006	0.206	A	B	B
Titahi at Titahi Bay	Te Riu o Porirua	0.006	0.222	A	B	B	0.007	0.072	A	B	B
Kenepuru at Infill case study	Te Riu o Porirua	0.009	0.458	A	C	C	0.009	0.475	A	C	C
Kenepuru at Mouth	Te Riu o Porirua	0.008	0.522	A	C	C	0.008	0.557	A	C	C
Porirua at Mitchell Stream	Te Riu o Porirua	0.006	0.200	A	B	B	0.007	0.067	A	B	B
Porirua at Mouth	Te Riu o Porirua	0.005	0.424	A	C	C	0.005	0.362	A	B	B
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	0.006	0.028	A	A	A	0.008	0.022	A	A	A
Porirua at Granada North industrial	Te Riu o Porirua	0.007	0.021	A	A	A	0.007	0.021	A	A	A

Ammonia (toxicity)

Monitoring

Site name	WMU	Site no.	n	Date range	Ammoniacal Nitrogen Raw			
					Median (mg/L)		Maximum (mg/L)	
Horokiri S at Snodgrass	Pouewe	RS13	60	June 2012-June 2017	0.0100	A	0.0600	B
Pauatahanui S at Elmwood Bridge	Takapū	RS14	60	July 2012-June 2017	0.0110	A	0.0760	B
Porirua S at Milk Depot	Te Riu o Porirua	RS16	60	July 2012-June 2017	0.0130	A	0.1660	B
Porirua Stream at Glenside Overhead Cables	Te Riu o Porirua		61	June 2012-June 2017	0.0100	A	0.0440	A
Kenepuru at Mouth	Te Riu o Porirua		12	July 2011-June 2012	0.1700	B	1.3000	C
Porirua at Mitchell Stream	Te Riu o Porirua		12	July 2011-June 2012	0.0100	A	0.0840	B
Site name	WMU	Site no.	n	Date range	Ammoniacal Nitrogen pH Adj			
					Median (mg/L)		Maximum (mg/L)	
Horokiri S at Snodgrass	Pouewe	RS13	60	June 2012-June 2017	0.0048	A	0.0265	A
Pauatahanui S at Elmwood Bridge	Takapū	RS14	60	July 2012-June 2017	0.0051	A	0.0355	A
Porirua S at Milk Depot	Te Riu o Porirua	RS16	60	July 2012-June 2017	0.0071	A	0.0771	B
Porirua Stream at Glenside Overhead Cables	Te Riu o Porirua		61	June 2012-June 2017	0.0060	A	0.0500	A
Kenepuru at Mouth	Te Riu o Porirua		12	July 2011-June 2012	0.1174	B	0.6519	C
Porirua at Mitchell Stream	Te Riu o Porirua		12	July 2011-June 2012	0.0079	A	0.0424	A
Site name	WMU	Site no.	n	Date range	pH			
					Median			
Horokiri S at Snodgrass	Pouewe	RS13	60	June 2012-June 2017	7.32			
Pauatahanui S at Elmwood Bridge	Takapū	RS14	60	July 2012-June 2017	7.245			
Porirua S at Milk Depot	Te Riu o Porirua	RS16	60	July 2012-June 2017	7.3			
Porirua Stream at Glenside Overhead Cables	Te Riu o Porirua		61	June 2012-June 2017	7.49			
Kenepuru at Mouth	Te Riu o Porirua		12	July 2011-June 2012	7.53			
Porirua at Mitchell Stream	Te Riu o Porirua		12	July 2011-June 2012	7.8			

Nitrate (toxicity)

Scenario modelling

Reporting site name	WMU	Baseline					BAU				
		Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category	Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category
Taupo at Wetland	Taupō	0.436	2.471	A	B	B	0.416	2.307	A	B	B
Taupo at Camborne case study	Taupō	0.648	3.647	A	C	C	0.544	2.359	A	B	B
Taupo at Mouth	Taupō	0.393	2.101	A	B	B	0.372	1.826	A	B	B
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.573	1.915	A	B	B	0.573	1.915	A	B	B
Rangituhi at Bottom of sub-catchment	Rangituhi	0.497	2.311	A	B	B	0.444	0.588	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	0.447	0.959	A	A	A	0.447	0.959	A	A	A
Mahinawa Stream at Mouth	Rangituhi	0.526	1.984	A	B	B	0.526	1.984	A	B	B
Hukatai Stream at Mouth	Rangituhi	0.686	1.609	A	B	B	0.685	1.609	A	B	B
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.279	1.5	A	A	A	0.272	1.373	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.315	1.712	A	B	B	0.313	1.68	A	B	B
Horokiri and Motukaraka at Mouth	Pouewe	0.217	1.434	A	A	A	0.211	1.3	A	A	A
Kakaho at Mouth	Pouewe	0.346	2.554	A	B	B	0.338	2.427	A	B	B
Whitireia at Mouth	Pouewe	1.227	2.327	B	B	B	1.122	1.506	B	B	B
Ration at Mouth	Pouewe	0.399	2.096	A	B	B	0.37	1.567	A	B	B
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.376	2.577	A	B	B	0.317	1.773	A	B	B
Lower Duck Creek at Mouth	Takapū	0.468	1.602	A	B	B	0.444	1.327	A	A	A
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.756	2.939	A	B	B	0.631	2.065	A	B	B
Moonshine at Bottom of sub-catchment	Takapū	0.27	1.627	A	B	B	0.265	1.569	A	B	B
Pauatahanui at Middle reaches	Takapū	0.178	1.323	A	A	A	0.17	1.194	A	A	A
Pauatahanui at Mouth	Takapū	0.131	0.941	A	A	A	0.123	0.843	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.648	3.394	A	B	B	0.648	3.394	A	B	B
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.735	2.524	A	B	B	0.639	1.611	A	B	B
Porirua at Willowbank	Te Riu o Porirua	0.656	2.272	A	B	B	0.621	2.009	A	B	B
Porirua at Kenepuru Drive	Te Riu o Porirua	0.58	1.777	A	B	B	0.55	1.607	A	B	B
Titahi at Titahi Bay	Te Riu o Porirua	0.472	1.051	A	A	A	0.62	1.252	A	A	A
Kenepuru at Infill case study	Te Riu o Porirua	0.78	2.018	A	B	B	0.79	2.03	A	B	B
Kenepuru at Mouth	Te Riu o Porirua	0.781	1.94	A	B	B	0.736	1.745	A	B	B
Porirua at Mitchell Stream	Te Riu o Porirua	0.628	2.015	A	B	B	0.589	1.682	A	B	B
Porirua at Mouth	Te Riu o Porirua	0.569	1.669	A	B	B	0.538	1.502	A	B	B
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	0.675	3.875	A	C	C	0.641	2.099	A	B	B
Porirua at Granada North industrial	Te Riu o Porirua	0.651	1.594	A	B	B	0.651	1.594	A	B	B

Nitrate (toxicity)

Scenario modelling

Reporting site name	WMU	Improved					Water sensitive				
		Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category	Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category
Taupo at Wetland	Taupō	0.388	2.053	A	B	B	0.336	1.28	A	A	A
Taupo at Camborne case study	Taupō	0.467	2.114	A	B	B	0.458	1.185	A	A	A
Taupo at Mouth	Taupō	0.338	1.629	A	B	B	0.304	1.06	A	A	A
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.522	1.248	A	A	A	0.523	1.251	A	A	A
Rangituhi at Bottom of sub-catchment	Rangituhi	0.444	0.588	A	A	A	0.444	0.588	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	0.44	0.904	A	A	A	0.432	0.843	A	A	A
Mahinawa Stream at Mouth	Rangituhi	0.526	1.981	A	B	B	0.528	2	A	B	B
Hukatai Stream at Mouth	Rangituhi	0.685	1.608	A	B	B	0.691	1.621	A	B	B
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.252	1.022	A	A	A	0.246	0.9	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.291	1.235	A	A	A	0.277	0.984	A	A	A
Horokiri and Motukaraka at Mouth	Pouewe	0.197	1.082	A	A	A	0.186	0.898	A	A	A
Kakaho at Mouth	Pouewe	0.291	1.784	A	B	B	0.258	1.192	A	A	A
Whitireia at Mouth	Pouewe	1.122	1.506	B	B	B	1.133	1.511	B	B	B
Ration at Mouth	Pouewe	0.366	1.548	A	B	B	0.358	1.382	A	A	A
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.287	1.431	A	A	A	0.263	1.162	A	A	A
Lower Duck Creek at Mouth	Takapū	0.419	1.21	A	A	A	0.416	1.057	A	A	A
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.572	1.662	A	B	B	0.549	1.506	A	B	B
Moonshine at Bottom of sub-catchment	Takapū	0.259	1.448	A	A	A	0.245	1.161	A	A	A
Pauatahanui at Middle reaches	Takapū	0.165	1.147	A	A	A	0.152	0.859	A	A	A
Pauatahanui at Mouth	Takapū	0.12	0.814	A	A	A	0.11	0.632	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.618	3.131	A	B	B	0.545	2.29	A	B	B
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.571	1.541	A	B	B	0.66	1.765	A	B	B
Porirua at Willowbank	Te Riu o Porirua	0.588	1.915	A	B	B	0.591	1.645	A	B	B
Porirua at Kenepuru Drive	Te Riu o Porirua	0.528	1.534	A	B	B	0.524	1.384	A	A	A
Titahi at Titahi Bay	Te Riu o Porirua	0.517	1.108	A	A	A	0.597	1.266	A	A	A
Kenepuru at Infill case study	Te Riu o Porirua	0.776	2.014	A	B	B	0.757	1.602	A	B	B
Kenepuru at Mouth	Te Riu o Porirua	0.702	1.657	A	B	B	0.719	1.547	A	B	B
Porirua at Mitchell Stream	Te Riu o Porirua	0.559	1.446	A	A	A	0.567	1.435	A	A	A
Porirua at Mouth	Te Riu o Porirua	0.515	1.43	A	A	A	0.507	1.312	A	A	A
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	0.552	1.989	A	B	B	0.633	1.537	A	B	B
Porirua at Granada North industrial	Te Riu o Porirua	0.64	1.571	A	B	B	0.626	1.549	A	B	B

Nitrate (toxicity)

Monitoring

Site name	WMU	Site no.	n	Date range	Median		Hazen 95%tile	
					mg/L	Category	mg/L	Category
Horokiri S at Snodgrass	Pouewe	RS13	60	July 2012-Jun 2017	0.64	A	1.068	A
Pauatahanui S at Elmwood Bridge	Takapū	RS14	60	July 2012-Jun 2017	0.325	A	0.8025	A
Porirua S at Milk Depot	Te Riu o Porirua	RS16	60	July 2012-Jun 2017	0.9	A	1.534	B
Porirua Stream at Glenside Overhead Cables	Te Riu o Porirua		60	July 2011-Jun 2016	0.9	A	1.6675	B
Kenepuru at Mouth	Te Riu o Porirua		12	July 2011-June 2012	0.71	A	1.376	A
Porirua at Mitchell Stream	Te Riu o Porirua		12	July 2011-June 2012	0.235	A	0.7225	A

Dissolved zinc (toxicity)

Scenario modelling

Reporting site name	WMU	Baseline					BAU				
		Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category	Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category
Taupo at Wetland	Taupō	0.00119	0.01279	A	B	B	0.00118	0.01054	A	B	B
Taupo at Camborne case study	Taupō	0.00932	0.08422	C	D	D	0.00682	0.02888	B	C	C
Taupo at Mouth	Taupō	0.00391	0.03225	B	C	C	0.0036	0.02455	B	C	C
Hongoeka to Pukerua at Hongoeka	Rangitūhi	0.00081	0.0072	A	A	A	0.00081	0.0072	A	A	A
Rangitūhi at Bottom of sub-catchment	Rangitūhi	0.00008	0.00018	A	A	A	0.00008	0.00014	A	A	A
Onepoto Fringe at Elsdon	Rangitūhi	0.04271	0.24914	D	D	D	0.04272	0.24916	D	D	D
Mahinawa Stream at Mouth	Rangitūhi	0.00087	0.00821	A	B	B	0.00088	0.00828	A	B	B
Hukatai Stream at Mouth	Rangitūhi	0.00259	0.01298	B	B	B	0.00264	0.01323	B	B	B
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.00007	0.00023	A	A	A	0.00021	0.00174	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.00007	0.00024	A	A	A	0.00007	0.00024	A	A	A
Horokiri and Motukaraka at Mouth	Pouewe	0.00008	0.0003	A	A	A	0.00021	0.00158	A	A	A
Kakaho at Mouth	Pouewe	0.00007	0.00028	A	A	A	0.00013	0.00076	A	A	A
Whitireia at Mouth	Pouewe	0.00133	0.01084	A	B	B	0.00135	0.01097	A	B	B
Ration at Mouth	Pouewe	0.00008	0.00041	A	A	A	0.00023	0.00259	A	A	A
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.00008	0.00026	A	A	A	0.00055	0.00616	A	A	A
Lower Duck Creek at Mouth	Takapū	0.00196	0.01304	A	B	B	0.00215	0.01281	A	B	B
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.00035	0.00374	A	A	A	0.0007	0.00769	A	A	A
Moonshine at Bottom of sub-catchment	Takapū	0.00008	0.00027	A	A	A	0.00007	0.00026	A	A	A
Pauatahanui at Middle reaches	Takapū	0.00011	0.00048	A	A	A	0.00021	0.00133	A	A	A
Pauatahanui at Mouth	Takapū	0.00027	0.00258	A	A	A	0.00039	0.00341	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.00218	0.02976	A	C	C	0.00218	0.02976	A	C	C
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.00501	0.03302	B	C	C	0.00461	0.02191	B	C	C
Porirua at Willowbank	Te Riu o Porirua	0.00619	0.03622	B	C	C	0.00602	0.03047	B	C	C
Porirua at Kenepuru Drive	Te Riu o Porirua	0.00763	0.0406	B	C	C	0.00746	0.03634	B	C	C
Titahi at Titahi Bay	Te Riu o Porirua	0.00967	0.03149	C	C	C	0.00798	0.0265	B	C	C
Kenepuru at Infill case study	Te Riu o Porirua	0.00606	0.0221	B	C	C	0.00579	0.02123	B	C	C
Kenepuru at Mouth	Te Riu o Porirua	0.00519	0.01982	B	C	C	0.00479	0.01787	B	C	C
Porirua at Mitchell Stream	Te Riu o Porirua	0.00871	0.07886	C	D	D	0.0084	0.0684	C	D	D
Porirua at Mouth	Te Riu o Porirua	0.00808	0.03623	C	C	C	0.00779	0.03338	B	C	C
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	0.00021	0.00054	A	A	A	0.00162	0.00709	A	A	A
Porirua at Granada North industrial	Te Riu o Porirua	0.05057	0.24819	D	D	D	0.05058	0.2482	D	D	D

Dissolved zinc (toxicity)

Scenario modelling

Reporting site name	WMU	Improved					Water sensitive				
		Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category	Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category
Taupo at Wetland	Taupō	0.00067	0.0059	A	A	A	0.00034	0.0027	A	A	A
Taupo at Camborne case study	Taupō	0.00325	0.01438	B	B	B	0.0009	0.00449	A	A	A
Taupo at Mouth	Taupō	0.00195	0.01358	A	B	B	0.00072	0.00491	A	A	A
Hongoeka to Pukerua at Hongoeka	Rangitūhi	0.00067	0.00571	A	A	A	0.00051	0.00423	A	A	A
Rangitūhi at Bottom of sub-catchment	Rangitūhi	0.00008	0.00014	A	A	A	0.00008	0.00014	A	A	A
Onepoto Fringe at Elsdon	Rangitūhi	0.02213	0.12893	C	D	D	0.00148	0.0085	A	B	B
Mahinawa Stream at Mouth	Rangitūhi	0.00067	0.00612	A	A	A	0.00046	0.00406	A	A	A
Hukatai Stream at Mouth	Rangitūhi	0.00203	0.01006	A	B	B	0.00142	0.00712	A	A	A
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.00017	0.00135	A	A	A	0.00011	0.00062	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.00007	0.00022	A	A	A	0.00006	0.00021	A	A	A
Horokiri and Motukaraka at Mouth	Pouewe	0.00018	0.0012	A	A	A	0.00011	0.00056	A	A	A
Kakaho at Mouth	Pouewe	0.00007	0.00026	A	A	A	0.00007	0.00024	A	A	A
Whitireia at Mouth	Pouewe	0.001	0.00788	A	A	A	0.00066	0.00499	A	A	A
Ration at Mouth	Pouewe	0.00018	0.00194	A	A	A	0.0001	0.00084	A	A	A
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.00044	0.00467	A	A	A	0.00023	0.00196	A	A	A
Lower Duck Creek at Mouth	Takapū	0.00143	0.00865	A	B	B	0.00085	0.00523	A	A	A
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.00055	0.0057	A	A	A	0.00032	0.00283	A	A	A
Moonshine at Bottom of sub-catchment	Takapū	0.00007	0.00026	A	A	A	0.00007	0.00025	A	A	A
Pauatahanui at Middle reaches	Takapū	0.00012	0.00052	A	A	A	0.00012	0.00056	A	A	A
Pauatahanui at Mouth	Takapū	0.00026	0.00221	A	A	A	0.00022	0.00177	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.00118	0.01575	A	C	C	0.00017	0.00141	A	A	A
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.0023	0.0115	A	B	B	0.00107	0.00528	A	A	A
Porirua at Willowbank	Te Riu o Porirua	0.00341	0.01762	B	C	C	0.00123	0.00629	A	A	A
Porirua at Kenepuru Drive	Te Riu o Porirua	0.00425	0.02071	B	C	C	0.00141	0.00667	A	A	A
Titahi at Titahi Bay	Te Riu o Porirua	0.00459	0.01549	B	C	C	0.00203	0.00686	A	A	A
Kenepuru at Infill case study	Te Riu o Porirua	0.00395	0.01452	B	B	B	0.00237	0.00891	A	B	B
Kenepuru at Mouth	Te Riu o Porirua	0.00323	0.01199	B	B	B	0.00207	0.00785	A	A	A
Porirua at Mitchell Stream	Te Riu o Porirua	0.00449	0.03655	B	C	C	0.00071	0.00577	A	A	A
Porirua at Mouth	Te Riu o Porirua	0.00453	0.01925	B	C	C	0.00164	0.00695	A	A	A
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	0.00024	0.001	A	A	A	0.00033	0.00175	A	A	A
Porirua at Granada North industrial	Te Riu o Porirua	0.02614	0.12819	C	D	D	0.00163	0.00778	A	A	A

Dissolved zinc (toxicity)

Monitoring

Site name	WMU	Site no.	n	Date range	Median		Hazen 95%tile	
					mg/L	Category	mg/L	Category
Horokiri S at Snodgrass	Pouewe	RS13	0					
Pauatahanui S at Elmwood Bridge	Takapū	RS14	0					
Porirua S at Milk Depot	Te Riu o Porirua	RS16	116	Jan 2008 - Aug 2017	0.021	C	0.08125	D
Porirua Stream at Glenside Overhead Cables	Te Riu o Porirua		102	Jan 2008-Jun 2016	0.00515	B	0.0157	C
Kenepuru at Mouth	Te Riu o Porirua		12	July 2011-June 2012	0.0051	B	0.01811	C
Porirua at Mitchell Stream	Te Riu o Porirua		12	July 2011-June 2012	0.01155	C	0.01971	C

Dissolved copper (toxicity)

Scenario modelling

Reporting site name	WMU	Baseline					BAU				
		Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category	Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category
Taupo at Wetland	Taupō	0.00029	0.00273	A	C	C	0.0003	0.00223	A	C	C
Taupo at Camborne case study	Taupō	0.00077	0.00659	A	D	D	0.0012	0.0047	B	D	D
Taupo at Mouth	Taupō	0.00061	0.00469	A	D	D	0.00067	0.00403	A	C	C
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.00027	0.00223	A	C	C	0.00027	0.00223	A	C	C
Rangituhi at Bottom of sub-catchment	Rangituhi	0.00004	0.00009	A	A	A	0.00004	0.00007	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	0.00177	0.0103	C	D	D	0.00177	0.01032	C	D	D
Mahinawa Stream at Mouth	Rangituhi	0.00025	0.00219	A	C	C	0.00025	0.00223	A	C	C
Hukatai Stream at Mouth	Rangituhi	0.00076	0.00376	A	C	C	0.00079	0.00392	A	C	C
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.00003	0.00012	A	A	A	0.00012	0.00102	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.00003	0.00012	A	A	A	0.00003	0.00012	A	A	A
Horokiri and Motukaraka at Mouth	Pouewe	0.00004	0.00013	A	A	A	0.00012	0.00091	A	A	A
Kakaho at Mouth	Pouewe	0.00003	0.00013	A	A	A	0.00007	0.00038	A	A	A
Whitireia at Mouth	Pouewe	0.00035	0.00256	A	C	C	0.00035	0.00258	A	C	C
Ration at Mouth	Pouewe	0.00003	0.00013	A	A	A	0.00013	0.00147	A	B	B
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.00004	0.00013	A	A	A	0.00032	0.00369	A	C	C
Lower Duck Creek at Mouth	Takapū	0.00047	0.00293	A	C	C	0.00065	0.00366	A	C	C
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.00012	0.00097	A	A	A	0.00034	0.00361	A	C	C
Moonshine at Bottom of sub-catchment	Takapū	0.00004	0.00014	A	A	A	0.00004	0.00014	A	A	A
Pauatahanui at Middle reaches	Takapū	0.00006	0.00027	A	A	A	0.00011	0.00072	A	A	A
Pauatahanui at Mouth	Takapū	0.00011	0.00094	A	A	A	0.00018	0.00147	A	B	B
Takapu at Bottom of sub-catchment	Takapū	0.00013	0.00135	A	A	A	0.00013	0.00135	A	A	A
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.00065	0.00349	A	C	C	0.00102	0.00409	B	C	C
Porirua at Willowbank	Te Riu o Porirua	0.00081	0.00448	A	D	D	0.00099	0.00459	A	D	D
Porirua at Kenepuru Drive	Te Riu o Porirua	0.00094	0.00471	A	D	D	0.00108	0.00474	B	D	D
Titahi at Titahi Bay	Te Riu o Porirua	0.00177	0.00575	C	D	D	0.00153	0.00485	C	D	D
Kenepuru at Infill case study	Te Riu o Porirua	0.00136	0.00495	B	D	D	0.00133	0.00481	B	D	D
Kenepuru at Mouth	Te Riu o Porirua	0.00125	0.00467	B	D	D	0.00127	0.00466	B	D	D
Porirua at Mitchell Stream	Te Riu o Porirua	0.00063	0.00545	A	D	D	0.0007	0.0054	A	D	D
Porirua at Mouth	Te Riu o Porirua	0.00109	0.00477	B	D	D	0.0012	0.00479	B	D	D
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	0.0001	0.00025	A	A	A	0.00085	0.00374	A	C	C
Porirua at Granada North industrial	Te Riu o Porirua	0.00193	0.00933	C	D	D	0.00193	0.00934	C	D	D

Dissolved copper (toxicity)

Scenario modelling

Reporting site name	WMU	Improved					Water sensitive				
		Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category	Median (mg/L)	95th Percentile (mg/L)	Median Category	95th Percentile Category	Overall Category
Taupo at Wetland	Taupō	0.00059	0.00236	A	C	C	0.00019	0.00153	A	B	B
Taupo at Camborne case study	Taupō	0.00077	0.00213	A	C	C	0.00054	0.00273	A	C	C
Taupo at Mouth	Taupō	0.00079	0.00298	A	C	C	0.00041	0.00285	A	C	C
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.00028	0.00225	A	C	C	0.00028	0.00231	A	C	C
Rangituhi at Bottom of sub-catchment	Rangituhi	0.00004	0.00007	A	A	A	0.00004	0.00007	A	A	A
Onepoto Fringe at Elsdon	Rangituhi	0.00183	0.00879	C	D	D	0.0012	0.00686	B	D	D
Mahinawa Stream at Mouth	Rangituhi	0.00025	0.00221	A	C	C	0.00025	0.00223	A	C	C
Hukatai Stream at Mouth	Rangituhi	0.00079	0.00384	A	C	C	0.00078	0.0039	A	C	C
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.0001	0.00079	A	A	A	0.00006	0.00036	A	A	A
Horokiri and Motukaraka at Battle Hill	Pouewe	0.00003	0.00011	A	A	A	0.00003	0.00011	A	A	A
Horokiri and Motukaraka at Mouth	Pouewe	0.0001	0.00069	A	A	A	0.00006	0.00032	A	A	A
Kakaho at Mouth	Pouewe	0.00003	0.00012	A	A	A	0.00003	0.00012	A	A	A
Whitireia at Mouth	Pouewe	0.00035	0.00258	A	C	C	0.00036	0.0027	A	C	C
Ration at Mouth	Pouewe	0.0001	0.00112	A	A	A	0.00006	0.00049	A	A	A
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.00026	0.00279	A	C	C	0.00013	0.00117	A	A	A
Lower Duck Creek at Mouth	Takapū	0.00055	0.0031	A	C	C	0.00047	0.00294	A	C	C
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.00028	0.00285	A	C	C	0.00018	0.00162	A	B	B
Moonshine at Bottom of sub-catchment	Takapū	0.00005	0.00014	A	A	A	0.00004	0.00013	A	A	A
Pauatahanui at Middle reaches	Takapū	0.00015	0.00055	A	A	A	0.00006	0.00032	A	A	A
Pauatahanui at Mouth	Takapū	0.00023	0.00124	A	A	A	0.00012	0.00099	A	A	A
Takapu at Bottom of sub-catchment	Takapū	0.00011	0.00105	A	A	A	0.00009	0.00075	A	A	A
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.00063	0.00227	A	C	C	0.00058	0.00282	A	C	C
Porirua at Willowbank	Te Riu o Porirua	0.00092	0.00366	A	C	C	0.0007	0.00362	A	C	C
Porirua at Kenepuru Drive	Te Riu o Porirua	0.00103	0.004	B	C	C	0.00081	0.00385	A	C	C
Titahi at Titahi Bay	Te Riu o Porirua	0.00114	0.00383	B	C	C	0.00131	0.00445	B	D	D
Kenepuru at Infill case study	Te Riu o Porirua	0.0015	0.00466	C	D	D	0.00134	0.0049	B	D	D
Kenepuru at Mouth	Te Riu o Porirua	0.00128	0.00412	B	C	C	0.00116	0.00436	B	D	D
Porirua at Mitchell Stream	Te Riu o Porirua	0.00056	0.00391	A	C	C	0.00041	0.00334	A	C	C
Porirua at Mouth	Te Riu o Porirua	0.00116	0.00404	B	C	C	0.00095	0.00396	A	C	C
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	0.00012	0.0005	A	A	A	0.00018	0.00093	A	A	A
Porirua at Granada North industrial	Te Riu o Porirua	0.00197	0.00791	C	D	D	0.00123	0.00589	B	D	D

Dissolved copper (toxicity)

Monitoring

Site name	WMU	Site no.	n	Date range	Median		Hazen 95%tile	
					mg/L	Category	mg/L	Category
Horokiri S at Snodgrass	Pouewe	RS13	0					
Pauatahanui S at Elmwood Bridge	Takapū	RS14	0					
Porirua S at Milk Depot	Te Riu o Porirua	RS16	116	Jan 2008 - Aug 2017	0.0016	C	0.0086	D
Porirua Stream at Glenside Overhead Cables	Te Riu o Porirua		102	Jan 2008-Jun 2016	0.000915	A	0.00194	C
Kenepuru at Mouth	Te Riu o Porirua		12	July 2011-June 2012	0.00095	A	0.00268	C
Porirua at Mitchell Stream	Te Riu o Porirua		12	July 2011-June 2012	0.001	A	0.0018	B

Total zinc and copper in sediment

Monitoring

WMU & sample locations		Total zinc in sediment									
		mg Zn/Kg					Category				
		2006	2008	2009	2010	2015	2006	2008	2009	2010	2015
Onepoto Arm	Intertidal A		39	41	36	37		A	B	A	A
	Intertidal B		60	58	62	78		B	B	B	B
	Subtidal A	169					C				
	Subtidal B	127					C				
Pauatahanui Inlet	Intertidal A		37	35	37	38		A	A	A	A
	Intertidal B		23	21	19	20		A	A	A	A
	Subtidal A	66					B				
	Subtidal B	57					B				
	Subtidal C	58					B				
WMU & sample locations		Total copper in sediment									
		mg Cu/Kg					Category				
		2006	2008	2009	2010	2015	2006	2008	2009	2010	2015
Onepoto Arm	Intertidal A		5.1	5	3.8	4.8		A	A	A	A
	Intertidal B		3.6	3.9	3.4	3.9		A	A	A	A
	Subtidal A	21					B				
	Subtidal B	19					B				
Pauatahanui Inlet	Intertidal A		4.9	4.6	4.8	4.2		A	A	A	A
	Intertidal B		2.3	2	1.8	2		A	A	A	A
	Subtidal A	12.5					A				
	Subtidal B	11.4					A				
	Subtidal C	9.3					A				

Expert assessment

WMU	Zinc			
	Current state	BAU	Improved	Water sensitive
Onepoto intertidal	A	A	A	A
Onepoto subtidal	C	C	C	C↑
Pauatahanui intertidal	A/B	B/C↓	A/B	A/B
Pauatahanui subtidal	B	B	B	B↑
WMU	Copper			
	Current state	BAU	Improved	Water sensitive
Onepoto intertidal	A	A	A	A
Onepoto subtidal	B	B	B	B↑
Pauatahanui intertidal	A	A	A	A
Pauatahanui subtidal	A	A	A	A

↑ indicates an improvement within an attribute state and ↓ indicates a deterioration within an attribute state.

Periphyton

Expert ecological assessment

Reporting site name	WMU	Current	BAU	Improved	Water sensitive
Taupo at Mouth	Taupō	C	C	B	B
Hongoeka to Pukerua at Hongoeka	Rangituhi	A	A	A	A
Mahinawa Stream at Mouth	Rangituhi	A	A	A	A
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	C	C	B	B
Lower Duck Creek at Mouth	Takapū	C	C	C	C
Pauatahanui at Middle reaches	Takapū	C	C	B	B
Takapu at Bottom of sub-catchment	Takapū	C	C	B	B
Kenepuru at Mouth	Te Riu o Porirua	C	C	C	C
Porirua at Kenepuru Drive	Te Riu o Porirua	B	B	B↑	B↑
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	C	C	B	B

↑ indicates an improvement within an attribute state

Monitoring

Site name	WMU	Site no.	n	Chlorophyll a (mg/m ²)	
				Median	Max
Horokiri S at Snodgrass	Pouewe	RS13	22	17.64	455.89
Pauatahanui S at Elmwood Bridge	Takapū	RS14		Not sampled	
Porirua S at Milk Depot	Te Riu o Porirua	RS16	23	9.93	98.07

Dissolved inorganic nitrogen (DIN)

Scenario modelling

Reporting site name	WMU	Baseline		BAU		Improved		Water sensitive	
		Median (mg/L)	95th Percentile (mg/L)	Median (mg/L)	95th Percentile (mg/L)	Median (mg/L)	95th Percentile (mg/L)	Median (mg/L)	95th Percentile (mg/L)
Taupo at Wetland	Taupō	0.447	2.523	0.427	2.357	0.398	2.098	0.345	1.31
Taupo at Camborne case study	Taupō	0.665	3.723	0.559	2.411	0.48	2.16	0.47	1.215
Taupo at Mouth	Taupō	0.405	2.152	0.384	1.876	0.347	1.67	0.313	1.088
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.588	1.958	0.588	1.958	0.536	1.278	0.537	1.281
Rangituhi at Bottom of sub-catchment	Rangituhi	0.509	2.357	0.454	0.603	0.454	0.603	0.454	0.603
Onepoto Fringe at Elsdon	Rangituhi	0.459	1.013	0.459	1.013	0.451	0.933	0.442	0.866
Mahinawa Stream at Mouth	Rangituhi	0.539	2.026	0.539	2.026	0.539	2.023	0.541	2.042
Hukatai Stream at Mouth	Rangituhi	0.703	1.65	0.703	1.65	0.702	1.648	0.707	1.658
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.286	1.534	0.28	1.404	0.26	1.046	0.253	0.923
Horokiri and Motukaraka at Battle Hill	Pouewe	0.324	1.75	0.322	1.718	0.299	1.264	0.285	1.007
Horokiri and Motukaraka at Mouth	Pouewe	0.224	1.466	0.217	1.331	0.202	1.108	0.192	0.92
Kakaho at Mouth	Pouewe	0.356	2.608	0.347	2.48	0.299	1.823	0.265	1.219
Whitireia at Mouth	Pouewe	1.257	2.379	1.149	1.543	1.149	1.543	1.161	1.548
Ration at Mouth	Pouewe	0.41	2.142	0.38	1.606	0.376	1.586	0.368	1.418
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.389	2.639	0.328	1.818	0.297	1.468	0.272	1.193
Lower Duck Creek at Mouth	Takapū	0.481	1.647	0.456	1.365	0.431	1.244	0.427	1.094
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.775	3.003	0.647	2.111	0.587	1.699	0.564	1.54
Moonshine at Bottom of sub-catchment	Takapū	0.279	1.669	0.274	1.61	0.268	1.485	0.253	1.192
Pauatahanui at Middle reaches	Takapū	0.186	1.362	0.178	1.23	0.173	1.182	0.159	0.887
Pauatahanui at Mouth	Takapū	0.137	0.972	0.13	0.872	0.126	0.842	0.116	0.654
Takapu at Bottom of sub-catchment	Takapū	0.663	3.46	0.662	3.46	0.632	3.193	0.558	2.337
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.756	2.645	0.655	1.702	0.584	1.616	0.676	1.828
Porirua at Willowbank	Te Riu o Porirua	0.674	2.337	0.637	2.064	0.602	1.975	0.605	1.689
Porirua at Kenepuru Drive	Te Riu o Porirua	0.601	1.85	0.568	1.673	0.54	1.597	0.536	1.431
Titahi at Titahi Bay	Te Riu o Porirua	0.484	1.097	0.636	1.289	0.53	1.151	0.611	1.299
Kenepuru at Infill case study	Te Riu o Porirua	0.802	2.106	0.811	2.117	0.795	2.101	0.775	1.661
Kenepuru at Mouth	Te Riu o Porirua	0.804	2.025	0.758	1.83	0.719	1.73	0.736	1.619
Porirua at Mitchell Stream	Te Riu o Porirua	0.645	2.06	0.604	1.727	0.573	1.484	0.581	1.469
Porirua at Mouth	Te Riu o Porirua	0.588	1.739	0.556	1.581	0.527	1.501	0.519	1.36
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	0.692	3.95	0.657	2.144	0.565	2.031	0.649	1.573
Porirua at Granada North industrial	Te Riu o Porirua	0.667	1.631	0.667	1.631	0.655	1.606	0.641	1.584

Dissolved inorganic nitrogen (DIN)

Scenario modelling

Reporting site name	WMU	BAU		Improved		Water sensitive	
		% change median	% change 95th percentile	% change median	% change 95th percentile	% change median	% change 95th percentile
Taupo at Wetland	Taupō	-4%	-7%	-11%	-17%	-23%	-48%
Taupo at Camborne case study	Taupō	-16%	-35%	-28%	-42%	-29%	-67%
Taupo at Mouth	Taupō	-5%	-13%	-14%	-22%	-23%	-49%
Hongoeka to Pukerua at Hongoeka	Rangituhi	0%	0%	-9%	-35%	-9%	-35%
Rangituhi at Bottom of sub-catchment	Rangituhi	-11%	-74%	-11%	-74%	-11%	-74%
Onepoto Fringe at Elsdon	Rangituhi	0%	0%	-2%	-8%	-4%	-15%
Mahinawa Stream at Mouth	Rangituhi	0%	0%	0%	0%	0%	1%
Hukatai Stream at Mouth	Rangituhi	0%	0%	0%	0%	1%	0%
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	-2%	-8%	-9%	-32%	-12%	-40%
Horokiri and Motukaraka at Battle Hill	Pouewe	-1%	-2%	-8%	-28%	-12%	-42%
Horokiri and Motukaraka at Mouth	Pouewe	-3%	-9%	-10%	-24%	-14%	-37%
Kakaho at Mouth	Pouewe	-3%	-5%	-16%	-30%	-26%	-53%
Whitireia at Mouth	Pouewe	-9%	-35%	-9%	-35%	-8%	-35%
Ration at Mouth	Pouewe	-7%	-25%	-8%	-26%	-10%	-34%
Upper Duck Creek at Bottom of sub-catchment	Takapū	-16%	-31%	-24%	-44%	-30%	-55%
Lower Duck Creek at Mouth	Takapū	-5%	-17%	-10%	-24%	-11%	-34%
Upper Kenepuru at Bottom of sub-catchment	Takapū	-17%	-30%	-24%	-43%	-27%	-49%
Moonshine at Bottom of sub-catchment	Takapū	-2%	-4%	-4%	-11%	-9%	-29%
Pauatahanui at Middle reaches	Takapū	-4%	-10%	-7%	-13%	-15%	-35%
Pauatahanui at Mouth	Takapū	-5%	-10%	-8%	-13%	-15%	-33%
Takapu at Bottom of sub-catchment	Takapū	0%	0%	-5%	-8%	-16%	-32%
Belmont at Lincolnshire Farms	Te Riu o Porirua	-13%	-36%	-23%	-39%	-11%	-31%
Porirua at Willowbank	Te Riu o Porirua	-5%	-12%	-11%	-15%	-10%	-28%
Porirua at Kenepuru Drive	Te Riu o Porirua	-5%	-10%	-10%	-14%	-11%	-23%
Titahi at Titahi Bay	Te Riu o Porirua	31%	18%	10%	5%	26%	18%
Kenepuru at Infill case study	Te Riu o Porirua	1%	1%	-1%	0%	-3%	-21%
Kenepuru at Mouth	Te Riu o Porirua	-6%	-10%	-11%	-15%	-8%	-20%
Porirua at Mitchell Stream	Te Riu o Porirua	-6%	-16%	-11%	-28%	-10%	-29%
Porirua at Mouth	Te Riu o Porirua	-5%	-9%	-10%	-14%	-12%	-22%
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	-5%	-46%	-18%	-49%	-6%	-60%
Porirua at Granada North industrial	Te Riu o Porirua	0%	0%	-2%	-2%	-4%	-3%

Dissolved inorganic nitrogen (DIN)

Monitoring

Site name	WMU	Site no.	n	Date range	Median (mg/L)	Hazen 95th Percentile (mg/L)
Horokiri S at Snodgrass	Pouewe	RS13	60	July 2012-Jun 2017	0.64	1.092
Pauatahanui S at Elmwood Bridge	Takapū	RS14	60	July 2012-Jun 2017	0.3315	0.84
Porirua S at Milk Depot	Te Riu o Porirua	RS16	60	July 2012-Jun 2017	0.91	1.567

Dissolved reactive phosphorus

Scenario modelling

Reporting site name	WMU	Baseline		BAU		Improved		Water sensitive	
		Median (mg/L)	95th Percentile (mg/L)	Median (mg/L)	95th Percentile (mg/L)	Median (mg/L)	95th Percentile (mg/L)	Median (mg/L)	95th Percentile (mg/L)
Taupo at Wetland	Taupō	0.019	0.051	0.018	0.046	0.011	0.025	0.008	0.018
Taupo at Camborne case study	Taupō	0.038	0.067	0.029	0.054	0.013	0.029	0.009	0.023
Taupo at Mouth	Taupō	0.017	0.047	0.016	0.043	0.009	0.025	0.007	0.021
Hongoeka to Pukerua at Hongoeka	Rangituhi	0.018	0.044	0.018	0.044	0.011	0.027	0.011	0.027
Rangituhi at Bottom of sub-catchment	Rangituhi	0.013	0.047	0.009	0.009	0.009	0.009	0.009	0.009
Onepoto Fringe at Elsdon	Rangituhi	0.011	0.041	0.011	0.041	0.01	0.035	0.01	0.031
Mahinawa Stream at Mouth	Rangituhi	0.014	0.044	0.014	0.044	0.012	0.034	0.012	0.034
Hukatai Stream at Mouth	Rangituhi	0.016	0.046	0.016	0.046	0.016	0.045	0.016	0.046
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	0.009	0.03	0.008	0.027	0.006	0.014	0.006	0.013
Horokiri and Motukaraka at Battle Hill	Pouewe	0.011	0.035	0.01	0.034	0.008	0.018	0.007	0.015
Horokiri and Motukaraka at Mouth	Pouewe	0.008	0.028	0.007	0.025	0.006	0.016	0.005	0.013
Kakaho at Mouth	Pouewe	0.015	0.052	0.014	0.049	0.009	0.026	0.008	0.019
Whitireia at Mouth	Pouewe	0.022	0.05	0.014	0.04	0.014	0.04	0.014	0.04
Ration at Mouth	Pouewe	0.011	0.035	0.009	0.019	0.008	0.016	0.007	0.013
Upper Duck Creek at Bottom of sub-catchment	Takapū	0.026	0.064	0.019	0.044	0.014	0.03	0.012	0.025
Lower Duck Creek at Mouth	Takapū	0.018	0.05	0.016	0.042	0.011	0.034	0.011	0.033
Upper Kenepuru at Bottom of sub-catchment	Takapū	0.032	0.062	0.023	0.043	0.016	0.03	0.014	0.027
Moonshine at Bottom of sub-catchment	Takapū	0.012	0.039	0.012	0.037	0.01	0.027	0.009	0.023
Pauatahanui at Middle reaches	Takapū	0.011	0.035	0.01	0.031	0.007	0.02	0.007	0.016
Pauatahanui at Mouth	Takapū	0.009	0.03	0.008	0.026	0.006	0.019	0.005	0.016
Takapu at Bottom of sub-catchment	Takapū	0.022	0.058	0.022	0.058	0.016	0.037	0.013	0.027
Belmont at Lincolnshire Farms	Te Riu o Porirua	0.027	0.065	0.023	0.056	0.013	0.039	0.014	0.043
Porirua at Willowbank	Te Riu o Porirua	0.021	0.054	0.02	0.052	0.014	0.039	0.013	0.036
Porirua at Kenepuru Drive	Te Riu o Porirua	0.016	0.05	0.015	0.048	0.012	0.036	0.011	0.034
Titahi at Titahi Bay	Te Riu o Porirua	0.015	0.047	0.024	0.052	0.012	0.038	0.013	0.041
Kenepuru at Infill case study	Te Riu o Porirua	0.02	0.057	0.021	0.058	0.017	0.049	0.015	0.046
Kenepuru at Mouth	Te Riu o Porirua	0.021	0.058	0.019	0.054	0.015	0.043	0.014	0.042
Porirua at Mitchell Stream	Te Riu o Porirua	0.013	0.051	0.014	0.047	0.01	0.036	0.01	0.035
Porirua at Mouth	Te Riu o Porirua	0.015	0.05	0.015	0.048	0.011	0.035	0.011	0.033
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	0.028	0.072	0.028	0.061	0.012	0.033	0.011	0.032
Porirua at Granada North industrial	Te Riu o Porirua	0.016	0.043	0.016	0.043	0.015	0.041	0.014	0.038

Dissolved reactive phosphorus

Scenario modelling

Reporting site name	WMU	BAU		Improved		Water sensitive	
		% change median	% change 95th percentile	% change median	% change 95th percentile	% change median	% change 95th percentile
Taupo at Wetland	Taupō	-5%	-10%	-42%	-51%	-58%	-65%
Taupo at Camborne case study	Taupō	-24%	-19%	-66%	-57%	-76%	-66%
Taupo at Mouth	Taupō	-6%	-9%	-47%	-47%	-59%	-55%
Hongoeka to Pukerua at Hongoeka	Rangituhi	0%	0%	-39%	-39%	-39%	-39%
Rangituhi at Bottom of sub-catchment	Rangituhi	-31%	-81%	-31%	-81%	-31%	-81%
Onepoto Fringe at Elsdon	Rangituhi	0%	0%	-9%	-15%	-9%	-24%
Mahinawa Stream at Mouth	Rangituhi	0%	0%	-14%	-23%	-14%	-23%
Hukatai Stream at Mouth	Rangituhi	0%	0%	0%	-2%	0%	0%
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	-11%	-10%	-33%	-53%	-33%	-57%
Horokiri and Motukaraka at Battle Hill	Pouewe	-9%	-3%	-27%	-49%	-36%	-57%
Horokiri and Motukaraka at Mouth	Pouewe	-13%	-11%	-25%	-43%	-38%	-54%
Kakaho at Mouth	Pouewe	-7%	-6%	-40%	-50%	-47%	-63%
Whitireia at Mouth	Pouewe	-36%	-20%	-36%	-20%	-36%	-20%
Ration at Mouth	Pouewe	-18%	-46%	-27%	-54%	-36%	-63%
Upper Duck Creek at Bottom of sub-catchment	Takapū	-27%	-31%	-46%	-53%	-54%	-61%
Lower Duck Creek at Mouth	Takapū	-11%	-16%	-39%	-32%	-39%	-34%
Upper Kenepuru at Bottom of sub-catchment	Takapū	-28%	-31%	-50%	-52%	-56%	-56%
Moonshine at Bottom of sub-catchment	Takapū	0%	-5%	-17%	-31%	-25%	-41%
Pauatahanui at Middle reaches	Takapū	-9%	-11%	-36%	-43%	-36%	-54%
Pauatahanui at Mouth	Takapū	-11%	-13%	-33%	-37%	-44%	-47%
Takapu at Bottom of sub-catchment	Takapū	0%	0%	-27%	-36%	-41%	-53%
Belmont at Lincolnshire Farms	Te Riu o Porirua	-15%	-14%	-52%	-40%	-48%	-34%
Porirua at Willowbank	Te Riu o Porirua	-5%	-4%	-33%	-28%	-38%	-33%
Porirua at Kenepuru Drive	Te Riu o Porirua	-6%	-4%	-25%	-28%	-31%	-32%
Titahi at Titahi Bay	Te Riu o Porirua	60%	11%	-20%	-19%	-13%	-13%
Kenepuru at Infill case study	Te Riu o Porirua	5%	2%	-15%	-14%	-25%	-19%
Kenepuru at Mouth	Te Riu o Porirua	-10%	-7%	-29%	-26%	-33%	-28%
Porirua at Mitchell Stream	Te Riu o Porirua	8%	-8%	-23%	-29%	-23%	-31%
Porirua at Mouth	Te Riu o Porirua	0%	-4%	-27%	-30%	-27%	-34%
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	0%	-15%	-57%	-54%	-61%	-56%
Porirua at Granada North industrial	Te Riu o Porirua	0%	0%	-6%	-5%	-13%	-12%

Dissolved reactive phosphorus

Monitoring

Site name	WMU	Site no.	n	Date range	Median (mg/L)	Hazen 95th Percentile (mg/L)
Horokiri S at Snodgrass	Pouewe	RS13	60	July 2012-Jun 2017	0.011	0.02555
Pauatahanui S at Elmwood Bridge	Takapū	RS14	60	July 2012-Jun 2017	0.014	0.02155
Porirua S at Milk Depot	Te Riu o Porirua	RS16	60	July 2012-Jun 2017	0.018	0.03375

Macroinvertebrate Community Index (MCI)

Modelling

Reporting site name	WMU	River Class	MCI Estimate	MCI Category
Taupo at Camborne case study	Taupō	6	90.86	C
Taupo at Mouth	Taupō	6	87.45	C
Taupo at Wetland	Taupō	6	92.07	C
Hongoeka to Pukerua at Hongoeka	Rangituhi	2	101.67	C
Hukatai Stream at Mouth	Rangituhi	2	98.18	C
Mahinawa Stream at Mouth	Rangituhi	2	101.08	C
Onepoto Fringe at Elsdon	Rangituhi	2	96.15	C
Rangituhi at Bottom of sub-catchment	Rangituhi	2	125.22	B
Horokiri and Motukaraka at Battle Hill	Pouewe	2	99.5	C
Horokiri and Motukaraka at Mouth	Pouewe	2	100.37	C
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	2	100.4	C
Kakaho at Mouth	Pouewe	2	98.1	C
Ration at Mouth	Pouewe	6	99.24	C
Whitireia at Mouth	Pouewe	6	91.13	C
Lower Duck Creek at Mouth	Takapū	2	90.75	C
Moonshine at Bottom of sub-catchment	Takapū	2	101.06	C
Pauatahanui at Middle reaches	Takapū	2	93.14	C
Pauatahanui at Mouth	Takapū	2	95.8	C
Takapu at Bottom of sub-catchment	Takapū	6	95.7	C
Upper Duck Creek at Bottom of sub-catchment	Takapū	2	103.65	C
Upper Kenepuru at Bottom of sub-catchment	Takapū	2	104.69	C
Belmont at Lincolnshire Farms	Te Riu o Porirua	2	100.09	C
Porirua at Granada North industrial	Te Riu o Porirua	2	92.41	C
Kenepuru at Infill case study	Te Riu o Porirua	6	79.14	D
Kenepuru at Mouth	Te Riu o Porirua	6	84.22	C
Porirua at Mitchell Stream	Te Riu o Porirua	2	94.42	C
Porirua at Kenepuru Drive	Te Riu o Porirua	6	82.12	C
Porirua at Mouth	Te Riu o Porirua	2	84.47	C
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	2	93.09	C
Titahi at Titahi Bay	Te Riu o Porirua	6	81.16	C
Porirua at Willowbank	Te Riu o Porirua	2	88.6	C

Monitoring

Site name	Site no.	River class	MCI Score	2016/17 MCI class	Three year rolling median
Horokiri S at Snodgrass	RS13	2.00	118.50	Good	116.5#
Pauatahanui S at Elmwood Bridge	RS14	2.00	100.4 (95.8)*	Fair	92.50
Porirua S at Milk Depot	RS16	2.00	98.10	Fair	80.90

Notes
 # Sites with a rolling mean calculated using three data points, but not from the last three consecutive years.
 * MCI-sb scores that were used to apply quality classes at soft-bottomed sites while values in brackets are the MCI-hb scores for these sites.

Expert ecological assessment

Reporting site name	WMU	Current	BAU	Improved	Water sensitive
Taupo at Mouth	Taupō	C	C	B	B
Hongoeka to Pukerua at Hongoeka	Rangituhi	C	C	C ↑	C ↑
Mahinawa Stream at Mouth	Rangituhi	B/A	B/A	B/A	B/A
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	C	B	B	B
Lower Duck Creek at Mouth	Takapū	C	C	C ↑	B
Pauatahanui at Middle reaches	Takapū	C	C	B	B
Takapu at Bottom of sub-catchment	Takapū	C	C	B	B
Kenepuru at Mouth	Te Riu o Porirua	C	C	C ↑	C
Porirua at Kenepuru Drive	Te Riu o Porirua	C	C	C ↑	C ↑
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	C	C	B	B

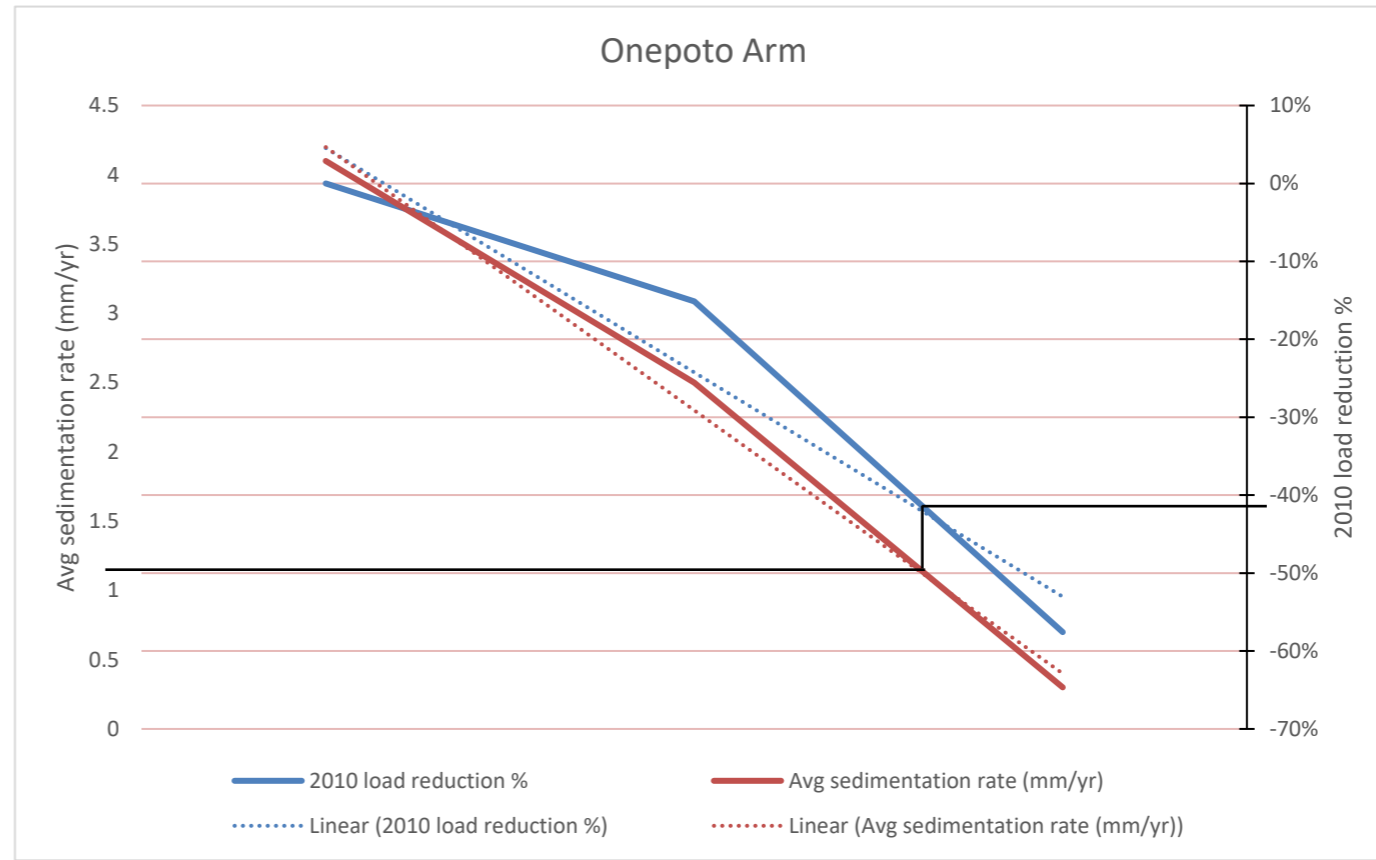
↑ indicates an improvement within an attribute state

Sedimentation rate

Scenario modelling

Sedimentation rate and load reduction			
Onepoto Arm			
Scenario	2010 Sediment load (tonnes/year)	2010 load reduction %	Avg sedimentation rate (mm/yr)
Baseline	3300	0%	4.1
BAU	2800	-15%	2.5
Water sensitive	1400	-58%	0.3
Pauatahanui			
Scenario	2010 Sediment load (tonnes/year)	2010 load reduction %	Avg sedimentation rate (mm/yr)
Baseline	5500	0%	4.7
BAU	5400	-2%	4.4
Water sensitive	3000	-45%	2

Current estimate WIP	Annual average SS Load (tonnes/yr)
Onepoto Arm	2,800
Pauatahanui Inlet	5,200



Harbour scale load estimates

Modelling

Reporting site name	WMU	Average SS Load (kg/yr)	Average TN Load (kg/yr)	Average TP Load (kg/yr)	Average Total Zn Load (kg/yr)	Average Total Cu Load (kg/yr)
Direct to Onepoto mid	Onepoto Arm	14,472	957	63	48	6
Direct to Onepoto North	Onepoto Arm	11,000	793	51	56	5
Direct to Onepoto South	Onepoto Arm	36,987	910	78	15	2
Elsdon	Onepoto Arm	19,685	893	53	189	14
Hukatai Stream at Mouth	Onepoto Arm	10,166	621	33	18	2
Kahotea Stream (Onepoto Park)	Onepoto Arm	8,527	1,352	94	91	9
Tangare	Onepoto Arm	40,614	1,758	76	24	2
Mahinawa	Onepoto Arm	9,358	652	39	74	6
Porirua at Mouth	Onepoto Arm	2,655,151	50,480	2,772	2,126	194
Whitireia at Mouth	Onepoto Arm	12,054	842	37	5	0
Browns Bay	Pauatahanui Inlet	43,484	1,356	86	76	6
Direct to Pautahanui (boat houses)	Pauatahanui Inlet	1,583	296	24	22	2
Direct to Pautahanui (mid)	Pauatahanui Inlet	1,426	487	26	17	2
Direct to Pautahanui (water ski club)	Pauatahanui Inlet	1,441	351	17	1	0
Horokiri and Motukaraka at Mouth	Pauatahanui Inlet	955,367	25,712	1,236	69	11
Kakaho at Mouth	Pauatahanui Inlet	245,253	13,912	746	27	4
Lower Duck Creek at Mouth	Pauatahanui Inlet	525,843	8,867	531	186	17
Motukaraka	Pauatahanui Inlet	2,277	655	30	2	0
Pauatahanui at Mouth	Pauatahanui Inlet	3,213,937	23,810	1,507	164	24
Pautahanui village	Pauatahanui Inlet	6,354	613	29	4	0
Ration at Mouth	Pauatahanui Inlet	196,232	7,460	300	10	1
TOTAL	Onepoto Arm	2,818,014	59,259	3,296	2,646	241
	Pauatahanui Inlet	5,193,197	83,518	4,532	577	68

Current estimate WIP	Average SS Load (tonnes/yr)	Average TN Load (tonnes/yr)	Average TP Load (kg/yr)	Average Total Zn Load (kg/yr)	Average Total Cu Load (kg/yr)
Onepoto Arm	2,800	59	3300	2600	240
Pauatahanui Inlet	5,200	84	4500	580	70

Sediment sources

Reporting site name	WMU	Sediment load (tonnes/yr)											
		Baseline			BAU			Improved			Water Sensitive		
		Hillslope	Landslide	Streambank	Hillslope	Landslide	Streambank	Hillslope	Landslide	Streambank	Hillslope	Landslide	Streambank
Taupo at Wetland	Taupo	36	18	7	38	7	7	28	0	5	26	0	3
Taupo at Camborne case study	Taupo	9	4	1	16	2	1	7	0	1	7	0	0
Taupo at Mouth	Taupo	48	22	17	58	9	18	38	0	14	35	0	8
Hongoeka to Pukerua at Hongoeka	Rangituhi	6	1	0	6	1	0	5	0	0	5	0	0
Rangituhi at Bottom of sub-catchment	Rangituhi	25	1	0	22	0	0	22	0	0	22	0	0
Onepoto Fringe at Elsdon	Rangituhi	19	0	0	20	0	0	19	0	0	19	0	0
Mahinawa Stream at Mouth	Rangituhi	37	3	0	39	3	0	39	3	0	39	3	0
Hukatai Stream at Mouth	Rangituhi	10	0	0	10	0	0	10	0	0	10	0	0
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe		332	163	276	310	168	236	87	64	233	87	62
Horokiri and Motukaraka at Battle Hill	Pouewe	128	185	54	130	185	54	108	9	19	106	9	18
Horokiri and Motukaraka at Mouth	Pouewe	294	345	316	302	324	320	259	97	134	254	88	122
Kakaho at Mouth	Pouewe	105	100	40	105	95	37	79	2	8	77	2	7
Whitireia at Mouth	Pouewe	12	0	0	11	0	0	11	0	0	11	0	0
Ration at Mouth	Pouewe	178	0	18	183	0	18	160	0	12	157	0	12
Upper Duck Creek at Bottom of sub-catchment	Takapu	236	136	12	178	41	7	145	0	2	141	0	2
Lower Duck Creek at Mouth	Takapu	361	136	29	316	41	23	217	0	14	212	0	13
Upper Kenepuru at Bottom of sub-catchment	Takapu	116	409	0	89	37	0	77	12	0	76	12	0
Moonshine at Bottom of sub-catchment	Takapu	479	84	71	485	84	71	435	29	41	422	29	39
Pauatahanui at Middle reaches	Takapu	1272	185	855	1375	174	856	1102	55	494	1046	51	376
Pauatahanui at Mouth	Takapu	1316	185	1713	1429	174	1715	1143	55	904	1086	51	703
Takapu at Bottom of sub-catchment	Takapu	274	364	8	295	364	8	242	10	2	226	0	2
Belmont at Lincolnshire Farms	Te Riu o Porirua	206	63	1	253	12	1	98	12	1	102	12	0
Porirua at Willowbank	Te Riu o Porirua	852	432	26	983	381	28	596	27	19	579	17	13
Porirua at Kenepuru Drive	Te Riu o Porirua	1133	441	123	1286	388	126	872	33	115	852	23	102
Titahi at Titahi Bay	Te Riu o Porirua	1	0	0	3	0	0	1	0	0	1	0	0
Kenepuru at Infill case study	Te Riu o Porirua	71	0	1	82	0	1	65	0	1	60	0	0
Kenepuru at Mouth	Te Riu o Porirua	391	409	13	318	37	12	216	12	12	212	12	11
Porirua at Mitchell Stream	Te Riu o Porirua	117	6	1	124	6	1	109	4	1	109	4	1
Porirua at Mouth	Te Riu o Porirua	1554	850	236	1637	425	252	1114	45	227	1091	34	200
Stebbing at Bottom of sub-catchment	Te Riu o Porirua	111	0	1	180	0	1	58	0	0	59	0	0
Porirua at Granada North industrial	Te Riu o Porirua	21	0	0	22	0	0	21	0	0	21	0	0

* Excludes wastewater overflow sources

Land use summary

Percentage of area in each land use class in each scenario		Forest and natural				Grazed livestock							Rural residential area				Urban grass/ parks				
Reporting site name	WMU	Current state	BAU	Improved	Water sensitive	Current state	BAU		Remain pasture	Improved		Water sensitive		Current state	BAU	Improved	Water sensitive	Current state	BAU	Improved	Water sensitive
							Remain pasture	Retired		Space planted	Retired	Remain pasture	Retired								
Taupo at Wetland	Taupō	23%	23%	23%	22%	71%	60%		19%	29%	12%	20%	41%	1%	10%	10%	10%	1%	2%	2%	3%
Taupo at Camborne case study	Taupō	13%	13%	12%	13%	82%	47%		3%	37%	8%	4%	44%		11%	11%	11%	2%	10%	10%	14%
Taupo at Mouth	Taupō	20%	19%	19%	19%	68%	53%		14%	28%	10%	15%	38%	1%	9%	9%	9%	4%	7%	7%	9%
Hongoeka to Pukerua at Hongoeka	Rangitūhi	48%	48%	48%	48%	32%	32%		10%		22%	10%	22%					17%	17%	17%	17%
Rangitūhi at Bottom of sub-catchment	Rangitūhi	62%	62%	62%	62%	38%		38%			38%		38%								
Onepoto Fringe at Elsdon	Rangitūhi	50%	50%	50%	50%	1%	1%		1%			1%						9%	9%	9%	9%
Mahinawa Stream at Mouth	Rangitūhi	57%	57%	57%	57%	29%	29%		29%			29%						6%	6%	6%	6%
Hukatai Stream at Mouth	Rangitūhi	45%	45%	45%	45%	14%	14%		14%			14%						24%	24%	24%	24%
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe	59%	59%	59%	59%	39%	35%		12%	7%	16%	12%	23%	2%	5%	5%	5%				
Horokiri and Motukaraka at Battle Hill	Pouewe	52%	52%	52%	52%	46%	45%		14%	12%	19%	14%	31%	1%	2%	2%	2%				
Horokiri and Motukaraka at Mouth	Pouewe	56%	56%	56%	56%	42%	37%		14%	9%	14%	14%	23%	2%	6%	6%	6%				
Kakaho at Mouth	Pouewe	33%	33%	33%	33%	66%	61%		17%	20%	24%	17%	44%		4%	4%	4%				1%
Whitireia at Mouth	Pouewe	41%	41%	41%	41%	18%		18%			18%	18%						37%	37%	37%	37%
Ration at Mouth	Pouewe	63%	62%	62%	62%	33%	8%		3%	5%		4%	5%	4%	28%	28%	27%				
Upper Duck Creek at Bottom of sub-catchment	Takapū	11%	10%	10%	10%	89%	53%	35%	28%	10%	50%	28%	60%								
Lower Duck Creek at Mouth	Takapū	21%	20%	20%	19%	49%	31%	18%	14%	9%	26%	15%	35%	1%	1%	1%	1%	17%	16%	16%	17%
Upper Kenepuru at Bottom of sub-catchment	Takapū	25%	25%	25%	25%	67%	37%	30%	19%	4%	43%	19%	47%					7%	7%	7%	7%
Moonshine at Bottom of sub-catchment	Takapū	53%	53%	53%	53%	45%	42%		25%	12%	5%	25%	17%	1%	5%	5%	4%				
Pauatahanui at Middle reaches	Takapū	41%	41%	41%	41%	56%	45%		21%	21%	3%	21%	24%	3%	12%	12%	11%		1%	1%	1%
Pauatahanui at Mouth	Takapū	40%	40%	40%	39%	54%	42%		20%	20%	3%	20%	23%	3%	12%	12%	12%	1%	2%	2%	2%
Takapu at Bottom of sub-catchment	Takapū	36%	36%	36%	36%	60%	60%		30%	23%	7%	31%	30%	2%	2%	2%	2%				
Belmont at Lincolnshire Farms	Te Riu o Porirua	22%	20%	20%	20%	44%	16%		16%			16%		1%	1%	1%	1%	17%	26%	26%	31%
Porirua at Willowbank	Te Riu o Porirua	25%	24%	24%	23%	40%	31%		16%	12%	2%	17%	15%	1%	1%	1%	1%	17%	20%	20%	22%
Porirua at Kenepuru Drive	Te Riu o Porirua	27%	26%	26%	26%	30%	24%		13%	8%	2%	14%	11%	1%	1%	1%	1%	21%	23%	23%	24%
Titahi at Titahi Bay	Te Riu o Porirua																	21%	36%	36%	39%
Kenepuru at Infill case study	Te Riu o Porirua	1%	1%	1%	1%	24%	24%		6%	18%		7%	18%	1%	1%	1%		35%	35%	35%	36%
Kenepuru at Mouth	Te Riu o Porirua	7%	7%	7%	7%	25%	19%	6%	8%	8%	9%	9%	17%					38%	35%	35%	36%
Porirua at Mitchell Stream	Te Riu o Porirua	39%	39%	39%	39%	23%	23%		13%	2%	8%	13%	10%					29%	25%	25%	26%
Porirua at Mouth	Te Riu o Porirua	22%	21%	21%	21%	28%	22%	2%	12%	8%	4%	12%	12%	1%	1%	1%	1%	25%	26%	26%	27%
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	28%	20%	20%	19%	67%	31%		7%	24%	1%	7%	25%					3%	19%	19%	26%
Porirua at Granada North industrial	Te Riu o Porirua	42%	42%	42%	42%	14%	14%		14%			14%		2%	2%	2%	2%	20%	20%	20%	20%

Land use summary

Percentage of area in each land use class in each scenario		Residential				New residential				Commercial and industrial				Roads			
Reporting site name	WMU	Current state	BAU	Improved	Water sensitive	Current state	BAU	Improved	Water sensitive	Current state	BAU	Improved	Water sensitive	Current state	BAU	Improved	Water sensitive
Taupo at Wetland	Taupō	1%	1%	1%	1%		2%	1%	1%					2%	2%	2%	2%
Taupo at Camborne case study	Taupō	1%	1%	1%	1%		11%	11%	7%	1%	1%	1%	1%	1%	6%	6%	6%
Taupo at Mouth	Taupō	4%	2%	2%	2%		4%	4%	3%	1%	1%	1%	1%	2%	3%	3%	3%
Hongoeka to Pukerua at Hongoeka	Rangituhi	3%	3%	3%	3%									1%	1%	1%	1%
Rangituhi at Bottom of sub-catchment	Rangituhi																
Onepoto Fringe at Elsdon	Rangituhi	9%	9%	9%	9%					28%	28%	28%	28%	4%	4%	4%	4%
Mahinawa Stream at Mouth	Rangituhi	6%	6%	6%	6%									2%	2%	2%	2%
Hukatai Stream at Mouth	Rangituhi	13%	13%	13%	13%									4%	4%	4%	4%
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe														1%	1%	1%
Horokiri and Motukaraka at Battle Hill	Pouewe													1%	1%	1%	1%
Horokiri and Motukaraka at Mouth	Pouewe														1%	1%	1%
Kakaho at Mouth	Pouewe						1%	1%									
Whitireia at Mouth	Pouewe	3%	3%	3%	3%									1%	1%	1%	1%
Ration at Mouth	Pouewe														2%	2%	2%
Upper Duck Creek at Bottom of sub-catchment	Takapū														2%	2%	2%
Lower Duck Creek at Mouth	Takapū	9%	8%	8%	8%	1%	2%	2%	2%					2%	4%	4%	4%
Upper Kenepuru at Bottom of sub-catchment	Takapū	1%	1%	1%	1%										1%	1%	1%
Moonshine at Bottom of sub-catchment	Takapū																
Pauatahanui at Middle reaches	Takapū						1%	1%	1%					1%	1%	1%	1%
Pauatahanui at Mouth	Takapū	1%	1%	1%	1%		1%	1%	1%					1%	1%	1%	1%
Takapu at Bottom of sub-catchment	Takapū									1%	1%	1%	1%				
Belmont at Lincolnshire Farms	Te Riu o Porirua	12%	11%	11%	11%	1%	16%	16%	11%					3%	10%	10%	10%
Porirua at Willowbank	Te Riu o Porirua	11%	11%	11%	11%		5%	5%	3%	2%	2%	2%	2%	4%	6%	6%	6%
Porirua at Kenepuru Drive	Te Riu o Porirua	14%	14%	14%	14%		4%	4%	3%	2%	2%	2%	2%	4%	6%	6%	6%
Titahi at Titahi Bay	Te Riu o Porirua	64%	24%	24%	24%		26%	26%	23%	3%	3%	3%	3%	12%	12%	12%	12%
Kenepuru at Infill case study	Te Riu o Porirua	31%	28%	28%	28%		3%	3%	2%	1%	1%	1%	1%	7%	7%	7%	7%
Kenepuru at Mouth	Te Riu o Porirua	23%	20%	20%	20%		5%	5%	4%	1%	1%	1%	1%	5%	7%	7%	7%
Porirua at Mitchell Stream	Te Riu o Porirua	4%	3%	3%	3%		3%	3%	2%	4%	4%	4%	4%	1%	2%	2%	2%
Porirua at Mouth	Te Riu o Porirua	17%	15%	15%	15%		4%	4%	3%	2%	2%	2%	2%	5%	6%	6%	6%
Stebbings at Bottom of sub-catchment	Te Riu o Porirua					1%	21%	20%	13%						9%	9%	9%
Porirua at Granada North industrial	Te Riu o Porirua	3%	3%	3%	3%					17%	17%	17%	17%	2%	2%	2%	2%

Scenario land use change assumptions

Scenario modelling landuse setup		Number of residential dwellings							Length of stream for riparian planting (km)		Retirement/space planting (Ha)			
Reporting site name	WMU	Existing dwellings through all scenarios				Additional dwellings in the BAU, improved and water sensitive scenarios			Total	Improved	Water sensitive	Improved		Water sensitive
		Residential	Commercial	Rural	Other/unknown*	Infill dwellings	Greenfield dwellings	Rural residential				Retire	Space	Retired
Taupo at Wetland	Taupō	53	18	32	12		311	28	455	6	5	90	236	326
Taupo at Camborne case study	Taupō													
Taupo at Mouth	Taupō	513	104	35	71	372	938	38	2,071	8	6	106	319	424
Hongoeka to Pukerua at Hongoeka	Rangituhi	12		31	1				44			30		30
Rangituhi at Bottom of sub-catchment	Rangituhi											7		7
Onepoto Fringe at Elsdon	Rangituhi	21	124	1	18				164					
Mahinawa Stream at Mouth	Rangituhi	317	6		13				336					
Hukatai Stream at Mouth	Rangituhi	244	1		11				256					
Horokiri and Motukaraka at Near Pautahanui Golf Club	Pouewe		1	98	6			38	143	11	9	462	198	660
Horokiri and Motukaraka at Battle Hill	Pouewe		1	60	3			7	71	7	4	281	181	462
Horokiri and Motukaraka at Mouth	Pouewe													
Kakaho at Mouth	Pouewe	1		10	1		181	20	213	4	3	300	247	547
Whitireia at Mouth	Pouewe	46		1	1				48					
Ration at Mouth	Pouewe	1		61	1			67	130	3	3		32	32
Upper Duck Creek at Bottom of sub-catchment	Takapū	2		2	1				5			271	54	326
Lower Duck Creek at Mouth	Takapū	1,818	9	2	91	301	309		2,530	1	1	271	91	363
Upper Kenepuru at Bottom of sub-catchment	Takapū	24		1	34				59			118	10	128
Moonshine at Bottom of sub-catchment	Takapū		1	37	2			16	56	5	3	51	143	194
Pauatahanui at Middle reaches	Takapū		4	200	8		961	139	1,311	29	20	83	816	899
Pauatahanui at Mouth	Takapū													
Takapu at Bottom of sub-catchment	Takapū	1	16	86	1				104	7	3	51	178	229
Belmont at Lincolnshire Farms	Te Riu o Porirua	1,298	2	38	126	265	1,621		3,350	1	1			
Porirua at Willowbank	Te Riu o Porirua	5,829	157	194	327	265	2,893		9,665	10	7	51	307	359
Porirua at Kenepuru Drive	Te Riu o Porirua	10,231	446	265	777	653	3,237		15,609	10	7	84	322	406
Titahi at Titahi Bay	Te Riu o Porirua	298	23		72	300			693					
Kenepuru at Infill case study	Te Riu o Porirua													
Kenepuru at Mouth	Te Riu o Porirua	5,039	88	2	1,340	1,322	621		8,412	1		118	95	213
Porirua at Mitchell Stream	Te Riu o Porirua	3	118	5	49		343		518			32	7	39
Porirua at Mouth	Te Riu o Porirua													
Stebbings at Bottom of sub-catchment	Te Riu o Porirua	68		9	65		1,272		1,414	2	2		58	58
Porirua at Granada North industrial	Te Riu o Porirua	30	55	5	5				95					

* Can include uses such as reserves/parks, schools, churches, social housing.