

Appendix 3.4 Summary of Metals Monitoring Programme – (2007 – 2009)

Parameter	Classification ¹	Number of Measurements	AA-EQS (ug/L)	MAC-EQS (ug/L)	Detection Limit (ug/L)	% Samples Not Detected	95 Percentile concentration for samples analysed	Comments – sites with relatively high concentrations
Aluminium		3118			50	73	100-150	Glencree/Lough Dan (~200 ug/L)
Antimony		3118			1	99	< 1	Boyne-Oldbridge and Slane (3-4 ug/L)
Arsenic	SP	3117	25		1	93	1-2	Glencree (3ug/L)
Barium		3092			50	85	50-100	Nore-Quakers bridge (280 ug/L), Suir-Knocknageragh (265 ug/L)
Beryllium		3007			1	100	< 1	
Boron		3118			50	99	< 50	
Cadmium	PHS	3118	0.08-0.25 ²	0.45 - 1.5	0.1	99	< 0.1	Avoca/Glenealo (0.3 ug/L)
Calcium		3118			1000	2		
Chromium³	SP	2789	3.4 ⁴	32	1	72	2-4	
Cobalt		3118			1	98	< 1	
Copper	SP	3117	5 or 30 ⁵		1	65	2-4	Avoca (7ug/L)
Iron		3117			50	20	550	Elatagh (1500 ug/L), Bredagh/Swilly (1000 ug/L)
Lead	PS	3118	7.2		1	97	< 1	Glenealo (5ug/L), Avonbeg/Alewnachta (3ug/L)
Magnesium		3118			1000	6		
Manganese		3118			1	10	50-100	Dromore (120ug/L)
Mercury	PHS	2750	0.05	0.07	0.1	99.9	< 0.1	
Molybdenum		3117			1	98	< 1	Tyshe (16ug/L)
Nickel	PS	3118	20		1	66	2-4	Bredagh/Muckno/Kilcrow (7-9ug/L)
Potassium		3118			1000	31		
Selenium		3117			1	96	< 1	Tolka/Nanny (3ug/L)
Sodium		3118			1000	0		
Thallium		3118			1	100	< 1	
Tin		3118			50	100	<50	
Uranium		3118			1	86	2-4	Tyshe/Douglas (40ug/L), Burren (20ug/L)
Vanadium		3117			1	99	< 1	
Zinc	SP	3117	8 or 50 or 100 ⁶		1	29	10-15	Avoca (110ug/L), Glenealo(60ug/L)

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¹SP = Specific Pollutant, PHS=Priority Hazardous Substance, PS = Priority Substance

²For cadmium, the EQS values vary upon the hardness of the water as specified in five categories Class 1 < 40 mg/l CaCO₃; Class 2 40 to < 50 mg/l CaCO₃; Class 3 50 < 100 mg/l CaCO₃; Class 4 100 to < 200 mg/l CaCO₃ and Class 5 ≥ 200 mg/l CaCO₃

³Chromium data for sites sampled in 2009 with hardness > 200 mg/l CaCO₃ have been excluded.

⁴EQS values for chromium is the CrVI EQS as ICP-MS does not distinguish between CrIII and CrVI.

⁵In the case of copper the value of 5 µg/l applies where the water hardness is < 100 mg/l CaCO₃. 30 µg/l applies where the water hardness exceeds 100 mg/l CaCO₃.

⁶In the case of zinc the standard is 8 µg/l for water hardness with an annual average less than or equal to 10 mg/l CaCO₃. 50 µg/l for water hardness greater than 100 mg/l CaCO₃ and 100 µg/l elsewhere.