Drinking Water Quality Report for Martello Lakes Supply Zone ZAF0101

Areas covered by Report:	Hythe
Report Period:	01 January 2019 to 31 December 2019
Upstream Zone:	Affinity Water Paddlesworth WSZ (Z081)
Population:	225
Notices:	Undertaking IWN3466 in relation to Total Pesticides and Metaldehyde in the bulk supply provided. This scheme is progressing according to the action plan.

Commentary on Water Quality

The water supplied to the Martello Lakes Zone originates from a ground water source that is chlorinated. The analysis results indicate the quality of the water supplied to this zone is very good.
IWNL had 2 compliance failures during 2019: A Coliform failure which was attributed to customer tap hygiene and a Nickel failure which was attributed to water fittings.
IWNL received 1 customer contact concerning "Water Hardness" during the period of this report.

Hardness Rating: The water supplied to this zone is classified as hard as it contains naturally elevated concentrations of calcium and magnesium.

	Soft	Moderately Soft	Slightly Hard	Moderately Hard	Hard	Very Hard
CaCO3 mg/l	0-50	50-100	100-150	150-200	200-300	300+

Microbiological Indicators

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Coliform Bacteria (Indicator)	**No. 100/ml**	19	0	5	0.3	**0**
E.coli (faecal coliforms Confirmed)	**No. 100/ml**	19	0	0	0.0	**0**
Enterococci (Confirmed)	**No. 100/ml**	8	0	0	0.0	**0**
Sulphite-reducing Clostridia (Confirmed)	**No. 100/ml**	5	0	0	0.0	**0**

Physio-Chemical Parameters

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Ammonium (Total)	**mg/l NH4**	6	0.004	0.004	0.0040	**0.5**
Boron	**mg/l B**	4	0.02	0.02	0.018	**1**
Bromate	**ug/l BrO3**	4	0.1	0.5	0.20	**10**
Chloride	**mg/l**	6	26.1	27.8	26.87	**250**
Colour	**mg/l Pt/Co**	6	1	1	1.00	**20**
Cyanide (Total)	**ug/l CN**	4	0.7	1.7	0.95	**50**

Physio-Chemical Parameters continued

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Electrical Conductivity	uS/cm @ 20 C	5	550	561	554.6	2500
Fluoride (Total)	mg/l F	4	0.07	0.08	0.078	1.5
Free Residual Chlorine	mg/l	14	0.05	0.17	0.12	No Specific PCV
Hydrogen ion	pH value	5	7.33	7.48	7.408	6.5-9.5
Nitrate (Total)	mg/l NO3	7	23.2	27.6	24.87	50
Nitrite - Consumer's Taps	mg/l NO3	7	0.002	0.002	0.0020	0.5
Nitrite/Nitrate formula	No Units	5	0.46	0.55	0.506	1
Sodium	mg/l Na	4	12.9	13.6	13.20	200
Sulphate	mg/l SO4	6	13.2	14.2	13.65	250
Total Residual Chlorine	mg/l	17	0.09	0.3	0.203	No Specific PVC
Turbidity (CT)	FTU	5	0.08	0.18	0.122	4

Hydrocarbons / Organics

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
1 1 1-Trichloroethane (Total)	ug/l	5	0.04	0.18	0.104	0.1
1 2-Dichloroethane (Total)	ug/l	5	0.07	0.13	0.112	3
Benzene (Total)	ug/l	5	0.02	0.07	0.036	1
Benzo[a]Pyrene (Total)	ug/l	4	0.00022	0.00022	0.000220	0.01
Benzo[b]Fluoranthene (Total)	ug/l	4	0.00052	0.00052	0.000520	The sum of PAHs must be <0.1 ug/l
Benzo[ghi]Perylene (Total)	ug/l	4	0.00022	0.0004	0.000355	The sum of PAHs must be <0.1 ug/l
Benzo[k]Fluoranthene (Total)	ug/l	4	0.00022	0.00047	0.000408	The sum of PAHs must be <0.1 ug/l
Bromodichloromethane (Total)	ug/l	5	0.42	0.54	0.468	60
ChloroDibromomethane (Total)	ug/l	5	2	2.63	2.254	100
Indeno[1 2 3-cd]Pyrene (Total)	ug/l	4	0.00048	0.00048	0.000480	The sum of PAHs must be <0.1 ug/l
Polycyclic Aromatic Hydrocarbons (Total by Calculation)	ug/l	4	0.01	0.02	0.015	0.1
Tetrachloroethene (Total)	ug/l	5	0.05	0.39	0.160	10
Tetrachloromethane (Total)	ug/l	5	0.02	0.14	0.056	3
Total Organic Carbon	mg/l C	3	0.3	0.6	0.47	NO ABNORMAL CHANGE
Total Trichloroethene & Tetrachloroethene (Total by Calculation)	ug/l	5	0	0	0.0	100

Hydrocarbons / Organics continued

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Tribromomethane-Bromoform (Total)	ug/l	5	3.69	5.31	4.666	100
Trichloroethene (Total)	ug/l	5	0.05	0.34	0.138	10
Trichloromethane-Chloroform (Total)	ug/l	5	0.1	0.44	0.210	300
Trihalomethanes (Total by Calculation)	ug/l	5	6.25	8.48	7.380	100

Metals

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Aluminium (Total)	ug/l Al	6	7.22	7.22	7.220	200
Antimony	ug/l Sb	4	0.04	0.04	0.040	5
Arsenic (Total)	ug/l As	4	0.15	0.19	0.168	10
Cadmium (Total)	ug/l Cd	4	0.013	0.013	0.0130	5
Chromium (Total)	ug/l Cr	4	0.58	0.84	0.650	50
Copper (Total)	mg/l Cu	6	0.0254	0.381	0.14233	2
Iron (Total)	ug/l Fe	6	0.7	0.7	0.700	200
Lead (10)	ug/l Pb	4	0.17	1.18	0.718	10
Manganese (Total)	ug/l Mn	6	0.22	0.23	0.222	50
Mercury (Total)	ug/l Hg	4	0.03	0.03	0.030	1
Nickel (Total)	ug/l Ni	6	0.39	61.8	15.257	20
Selenium (Total)	ug/l Se	4	0.16	0.39	0.2275	10

Organoleptic Parameters

Parameter	units of measurement	Number of Samples	Minimum	Maximum	Average	Prescribed Concentration or Value
Odour (Quantitative)	Dilution Number	6	0	0	0.0	0
Taste(Quantitative)	Dilution Number	6	0	0	0.0	0

Notes
1. For some parameters, monitoring occurs at the supplying Water Treatment Works rather than the Water Supply Zone.

Glossary of Terms

Term	Definition
PCV	Prescribed Concentration or Value
mg/l	Milligrammes per Litre or parts per million
µg/l	Microgrammes per Litre or parts per billion
Pt/Co	Platinum/Cobalt
µS/cm	Micro Siemens per Centimetre
Bq/l	Becquerel per Litre
NTU	Nephelometric Turbidity Units