

Water Quality Report 2002



**The Jersey
New Waterworks
Company Limited**

WATER QUALITY REPORT

FOR THE YEAR ENDED 31 DECEMBER 2002

Microbiological quality

Water leaving treatment works

Supply point & average daily volume distributed from Works (MI/d)	No. of samples	% samples exceeding prescribed concentration or value	
		Total coliforms	Faecal coliforms
Handois (10.3 MI/d)	1043	0	0
Augres (9.4 MI/d)	365	0	0
Total (19.7 MI/d)	1408	0	0

Water in service reservoirs

Capacity of Reservoirs (MI)	No. of samples	% samples exceeding prescribed concentration or value	
		Total coliforms	Faecal coliforms
Westmount 9 MI	362	0	0

Water in distribution

Zone	No. of samples	% samples exceeding prescribed concentration or value (number of samples exceeding concentration of value)	
		Total coliforms	Faecal coliforms
Zone 1: East			
Random consumer taps	68	0	0
Fixed points	430	0	0
Total	498	0	0
Zone 2: West			
Random consumer taps	57	1.75 (1)	0
Fixed points	279	0.36 (1)	0
Total	336	0.60 (2)	0

Samples exceeding prescribed concentrations were immediately resampled for three consecutive days - recheck samples were clear.

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Physical and chemical quality

Water in distribution

Parameter	Prescribed maximum concentration or value (PCV)	Concentration or value			No. of samples taken	No. of samples exceeding PCV
		Minimum	Mean	Maximum		
pH Value	6.5 - 9.5	7.3	7.4	8.0	227 ^f	0
Conductivity	1500 µSm/cm at 20°C	462	564	650	140	0
Turbidity	4 N.T.U.	0.11	0.30	2.08	141	0
Nitrate	50 mg NO ₃ /l	27	40	48	52	0
Nitrite ¹	0.1 mg NO ₂ /l	0.002	0.034	0.227	140	9 (6%)
Ammonia	0.5 mg NH ₄ /l	<0.01	0.08	0.37	141	0
Iron ²	200 µg Fe/l	<10	38	440	76	1 (1%)
Aluminium	200 µg Al/l	<20	<20	76	189	0
Manganese ³	50 µg Mn/l	<20	<20	51	143	1 (<1%)
Colour	20 Hazen Units	<0.69	4.3	5	141 ^f	0
Copper	3000 µg Cu/l	<4	71	963	76	0
Lead	50 µg Pb/l	<1	5	47	76	0
Zinc	5000 µg Zn/l	<6	49	434	76	0
Chloride	400 mg Cl/l	47	63	82	141	0
Dissolved Solids	1500 mg/l	226	393	469	140	0
Oxidizability	5 mg O ₂ /l	<0.1	0.40	1.08	136	0
Total Hardness	mg CaCO ₃ /l no value	116	143	189	140	-
Alkalinity	mg CaCO ₃ /l no value	42	59	81	140	-
Residual Chlorine	mg Cl ₂ /l no value	<0.02	0.21	0.52	200 ^f	-

mg/l = milligrams per litre
 µg/l = micrograms per litre
 < = indicates the concentration is below the detection level of the test
 f = in addition to the "compliance" chemical samples several hundred examinations were made for bacteriological and operational sampling purposes, all results were below the P.C.V.

1 Nitrite : provisional guideline of 3 mg NO₂/l set by World Health Organisation Quality Guidelines 1995.

2 Iron : provisional maximum tolerable daily intake (PMTDI) give a value of 2000 µg Fe/l given by the World Health Organisation Guideline 1993 - no health-based value for iron in drinking water is proposed.

3 Manganese : provisional health-based guideline of 500 µg Mn/l set by World Health Organisation Quality Guidelines 1999.

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Chemical quality

Pesticides detected results in µg/litre - Water in distribution

Parameter	Prescribed maximum concentration or value (PCV)	E&W/WHO advisory limits	Concentration value			No. of samples	No. of samples exceeding EU PCV	No. of samples exceeding E&W/WHO advisory limit
			Min	Mean	Max			
Atrazine µg/l	0.1	E&W 2 WHO 2	<0.01	<0.01	0.022	7	0	0
Simazine µg/l	0.1	E&W 10 WHO 2	<0.01	<0.01	0.014	7	0	0
Propazine µg/l	0.1	E&W 20	<0.01	<0.01	0.011	7	0	0
Trietazine µg/l	0.1	0.1	<0.01	<0.01	0.012	7	0	0
Terbutryn µg/l	0.1	*E&W 700	<0.01	<0.01	0.013	7	0	0
Terbutylazine µg/l	0.1	*E&W 10	<0.01	<0.01	0.016	7	0	0
Cyanazine µg/l	0.1	0.1	<0.01	0.033	0.165	52	2	2
2,4-D µg/l	0.1	E&W 1000 WHO 30	<0.01	<0.01	0.011	51	0	0
Mecoprop µg/l	0.1	E&W 10	<0.01	<0.01	0.016	52	0	0
Tricopyr µg/l	0.1	0.1	<0.01	<0.01	0.024	52	0	0
Linuron µg/l	0.1	E&W 10	<0.01	<0.01	0.045	52	0	0
Diuron µg/l	0.1	0.1	<0.01	<0.01	0.063	52	0	0
Methabenzthiazuron µg/l	0.1	0.1	<0.01	<0.01	0.020	52	0	0
Dalapon µg/l	0.1	0.1	<0.01	0.013	0.067	9	0	0

µg/l = micrograms per litre

< = indicates the concentration is below the detection level of the test.

E&W = England and Wales advisory limits quoted in 'Water Quality Regulations 1989'.

*E&W = 'likely advisory value', has been calculated by the Company consultants using a formula given in the 'Water Regulations 1989'. The calculations confirm the low toxicity of these particular pesticides.

WHO = advisory limits quoted in 'World Health Organisation Quality Guidelines 1993'.

NB - In addition to the above parameters, examinations were carried out for a further sixty-six types of pesticides, the results of which were below the detection level of the tests.



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