



SHIRE OF EAST PILBARA
NEWMAN AIRPORT
WATER QUALITY REPORT

July – September 2023

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WATER PROVIDER INFORMATION

WATER PROVIDER CONTACT DETAILS

Name Of Company	Shire of East Pilbara		
Company Address	PMB 22, Newman WA 6753		
Company Phone	(08) 9175 8000	Fax	(08) 9175 2668
Company Email	admin@eastpilbara.wa.gov.au		
Chief Executive Officer	Steven Harding		
CEO Email	ceo@eastpilbara.wa.gov.au		
DOH Liaison Officer	Coordinator Environmental Health Services		
DOH Liaison Officer Email	phudson@eastpilbara.wa.gov.au		

Table 1: System Information

Locality						
Zone Name & Number	Number of Consumers	Average Amount of Water Supplied (L/Day)	Sources of Water (% Bore/Surface Catchment)	Treatment Systems	Length of Mains	Number of Sample Points
(1) Newman Airport	10x Residential Tenants 10x Business Tenants 1x RPT Terminal	12,000	Raw water (bore and dewatering water) supplied by BHP WAIO water pipeline	Reverse Osmosis	2.9kms	5

PERFORMANCE SUMMARY

Table 2: Performance summary overview

Water Quality Meeting The Drinking Water Guidelines/Minister Of Health's Directions			
Microbiological quality	No assessed¹	Zone 1² No Within Guidelines	Variance³
Thermotolerant Coliforms / E. Coli	12	12	0
Amoeba (Thermophilic Naegleria)	12	12	0
Chemical quality⁴			
Chemical – Health Related ⁵	20	20	0
Chemical – Aesthetic ⁶	54	54	0
Radiological	0	0	0

¹ Number of samples taken for the quarter

² Table maybe expanded or collapsed according to the number of zones

³ Number of samples that do not comply with the drinking water guidelines

⁴ Chemical performances based on the results of the quarter

⁵ Chemical tested with a health guideline value – Refer to small community Sampling Grid

⁶ Chemicals without health guideline values

Table 3: MICROBIAL PERFORMANCE

Microbiological Water Quality Exceptions							
Region / Scheme / Zone / Service Provider	Volume Of Water Provided (L/day)	Date	Microbiological Character	Alert Level	Remedial Action	DoH Notified	Close Out Date
1	12,000	NIL	NIL	NIL	NIL	NIL	NIL

Microbiological Incident Specific Information

Zone 1

A total of 12 microbiological potable water samples were collected in this quarter of the 2023/24 financial year. Both Thermotolerant Coliforms/*E. Coli* and *Amoeba* (Thermophilic *Naegleria*) results were within the recommended values for all samples collected and tested over this reporting period.

Microbiological General Information

Micro-organisms (or microbes) are microscopic living organisms, occurring naturally in our environment - in the air, soil and in water bodies. Some are beneficial to life but some can have serious health impacts to humans. Pathogens (pathogenic micro-organisms) are micro-organisms that cause disease or illness. The most common and widespread health risk to people is associated with drinking water contaminated by pathogens.

Organisms associated with faecal matter from humans or other mammals cause several waterborne diseases. It is impossible to test for the presence of all pathogens that may be present in water. The Australian Drinking Water Guidelines recommends testing for the presence of *Escherichia coli* (*E.coli*) as an indicator of faecal pathogen contamination. The Australian Drinking Water Guidelines state that *E.coli* should not be present in a minimum 100mL sample of drinking water.

Thermophilic *Naegleria* refers to a group of common water borne amoebae which includes *Naegleria fowleri*, the organism that causes the serious disease primary amoebic meningoencephalitis (PAM). *Naegleria fowleri* is an environmental pathogen which naturally lives in fresh warm water.

The Shire immediately notifies the Department of Health of any confirmed detection of *E.coli* or Thermophilic *Naegleria* in any microbiological analysis of a drinking water sample.

The "Australian Drinking Water Guidelines" is produced by the National Health and Medical Research Council (NHMRC) and is available from the NHMRC website at

<http://nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>

CHEMICAL – HEALTH RELATED PERFORMANCE

Table 4: Chemical – Health Related – Exception Notifications

Health Related Chemical Water Quality Exceptions							
Region/Scheme/Zone/Service Provider	Volume of Water (L/day)	Date	Health Related Chemical Characteristic	Alert Level	Remedial Action	DoH Notified	Close Out Date
1	12,000	None	None	None	None	None	None

Table 5: Chemical – Health

Zone			
Health Characteristic	No of Analyses	No of Analyses Complying	Maximum Individual Value
Barium	2	2	0.0008 mg/L
Boron	2	2	0.20 mg/L
Cadmium	2	2	<0.0001 mg/L
Copper	2	2	<0.001 mg/L
Lead	2	2	<0.0005 mg/L
Manganese	2	2	0.0008 mg/L
Nickel	2	2	<0.001 mg/L
Nitrate	3	3	0.18 mg/L
Nitrite	3	3	<0.1 mg/L
Total samples taken	20	20	-

mg/L = milligrams per litre

CHEMICAL – AESTHETIC PERFORMANCE

Table 6: Chemical – Aesthetic

Zone			
Aesthetic Characteristic	No of Analyses	No of Analyses Complying	Maximum Individual Value
Alkalinity	3	3	72 mg/L
Aluminium 0.2 mg/L	2	2	0.01 mg/L
Bicarbonate	2	2	75 mg/L
Calcium	3	3	8.1 mg/L
Carbonate	2	2	<1 mg/L
Chloride 250mg/L	2	2	22 mg/L
Colour TCU	3	3	<1
Electrical Conductivity	3	3	21.6 mS/m
Hardness 200 mg/L	3	3	47 mg/L
Hydroxide	2	2	<1 mg/L
Ionic Balance	2	2	-2.0 %
Iron 0.3 mg/L	2	2	<0.01 mg/L
Magnesium	3	3	6.5 mg/L
pH	3	3	7.6
Potassium	2	2	1.6 mg/L
Silica 80mg/L	2	2	4.0 mg/L
Sodium 180 mg/L	2	2	21.4 mg/L
Sulphate 250 mg/L	2	2	7 mg/L
Total Suspended Solids	3	3	<1 mg/L
TDS 500 mg/L	3	3	130 mg/L
Turbidity 5 NTU	3	3	1.5 NTU
Zinc	2	2	0.43 mg/L
Total samples taken	54	54	-

mg/L = milligrams per litre

PLANNED SAMPLE SUMMARY

Zone	Microbiological			Chemical		
	Planned	Taken	% Taken	Planned	Taken	% Taken
1	12	12	100%	55	74	134%

GENERAL NOTES/OTHER NEWS

The Shire of East Pilbara has undertaken microbiological sampling of drinking water at the Newman Airport water supply system for many years.

The number of microbiological sampling points has currently reduced from 5 to 4 as there is not an available sampling point for the raw water tank.

The Shire of East Pilbara commenced chemical sampling of drinking water at the Newman Airport water supply system in November 2021.

Sampling is undertaken on a monthly basis.