Drinking Water Monitoring Report
Nambucca Valley Council - 2024
Executive Summary

In 2024, Nambucca Valley Council performed routine drinking water sampling and testing to monitor the quality of drinking water. The results were submitted to the NSW Drinking Water Database.

Compliance is determined against the Australian Drinking Water Guidelines (2011) guideline values for E. coli, physical and chemical characteristics of drinking water.

The Nambucca water supply system achieved compliance of 100% for physical, 100% for chemical, and 100% for microbiological samples.

Water Quality

Nambucca Water Supply System

Summary

Table 1. Nambucca Water Supply System Water Quality Compliance

Sample Type	Sample Count	Number of Characteristics	Number of Non-Compliant Samples	Compliance (%)
Physical	12	6	0	100
Chemical	12	20	0	100
Microbiological	163	3	0	100

Table 2. Nambucca Water Supply System Chronic health-related Chemical Water Quality Data

Characteristic	Guideline Value	Mean	Maximum	Sample count	Meeting Guideline Value (%)
Antimony	0.003	0.0001	0.0001	12	100
Arsenic	0.01	0.0005	0.001	12	100
Barium	2	0.0143	0.0329	12	100
Boron	4	0.0144	0.0176	12	100
Cadmium	0.002	0.0001	0.00005	12	100
Chromium	0.05	0.0005	0.0005	12	100
Fluoride	1.5	0.5558	1.01	12	100
Iodine	0.5	0.01	0.01	12	100
Lead	0.01	0.0015	0.0045	12	100
Manganese	0.5	0.0034	0.0129	12	100
Mercury	0.001	0.0004	0.0004	12	100
Molybdenum	0.05	0.0001	0.0001	12	100
Nickel	0.02	0.0004	0.0011	12	100
pH	6.5-8.5	7.3333	7.7	12	100
Selenium	0.01	0.0035	0.0035	12	100
Silver	0.1	0.0001	0.0001	12	100
Uranium	0.02	0.0001	0.00005	12	100

Chronic health-related chemical characteristics are inorganic chemicals that might be present in water and can pose a risk to health with prolonged exposure. The Guideline values for these materials are usually set to be protective over a lifetime of exposure. Single results above a Guideline values are unlikely to pose a risk to health; compliance is based on analysing long-term trends.

Table 3a. Nambucca Water Supply System Acute health-related Chemical Water Quality Data

Characteristic	Guideline Value	Mean	Maximum	Sample count	Meeting Guideline Value (%)
Copper	2	0.0346	0.14	12	100
Nitrate	50	1	1	12	100
Nitrite	3	0.05	0.05	12	100

Acute health-related chemical characteristics are inorganic chemicals that can pose a health risk based on a small number of exposures. High concentrations of copper can cause vomiting. High concentrations of nitrite or nitrate can be risky for bottle-fed babies. The Guideline values for these characteristics have been set to protect people from short-term exposure.

Table 4b. Nambucca Water Supply System Physical and Selected Aesthetic Chemical Water Quality Data

Characteristic	Guideline Value	Mean	Maximum	Sample count	Meeting Guideline Value (%)
Iron	0.3	0.0417	0.02	12	100
Sodium	180	13.3333	16	12	100
Total dissolved solids	1000	57	84	12	100
Total hardness	200	23.6667	31.2	12	100
True Colour	15	0.8333	2	12	100
Turbidity	5	0.55	1.3	12	100

Physical and aesthetic chemical characteristics change the way that water appears; its taste, smell, look and feel. These characteristics do not have health guideline values but do affect how people feel about their drinking water.

Table 5. Nambucca Water Supply System Microbiological Water Quality Data

Characteristic	Guideline Value	Mean	Maximum	Sample count	Meeting Guideline Value (%)
E. coli	0	0	0	163	100
Free Chlorine	0.2 - 5	1.044	1.47	163	100
Total Chlorine	5	1.0866	1.49	163	100

Escherichia coli, bacteria found in the gut of many backboned animals, is an indicator that there has been recent contamination with faeces in a drinking water supply. Chlorine is used widely to kill disease-causing organisms in drinking water. A reasonable residual concentration in the supply provides ongoing protection all the way to customer taps, and gives some indication that filtration is working well and the distribution system has not been compromised.

Other Monitoring

Per- and Poly-fluorinated alkyl substances (PFAS) testing

Characteristic	Guideline Value- µg/L	Mean	Maximum	Meeting Guideline Value (%)
Sum of perfluorooctane sulfonate (PFOS) and perfluorohexane sulfonate (PFHxS)	0.07	0.0001	0.00005	100
Perfluorooctanoic acid (PFOA)	0.56	0.0001	0.00005	100

PFAS are a class of chemicals that have been developed for fire-fighting, stain and water resistance and other uses. They can pose a risk to health with prolonged exposure. The Guideline values for these materials are set to be protective over a lifetime of exposure.

Pesticide testing: Results for pesticides that were detected

Characteristic	Guideline Value	Mean	Maximum	Meeting Guideline Value (%)
2,4,5-T	0.1000	0.0003	0.00025	100.00
2,4-D	0.0300	0.0003	0.00025	100.00
Aldicarb	0.0040	0.0001	0.00005	100.00
Aldrin	0.0003	0.0001	0.00005	100.00
Atrazine	0.0200	0.0001	0.00005	100.00
Azinphos-methyl	0.0300	0.0005	0.0005	100.00
Beta-cyfluthrin	0.0500	0.0005	0.0005	100.00
Bioresmethrin	0.1000	0.0003	0.00025	100.00
Bromacil	0.4000	0.0003	0.00025	100.00
Bromoxynil	0.0100	0.0003	0.00025	100.00
Captan	0.4000	0.0003	0.00025	100.00
Carbaryl	0.0300	0.0001	0.00005	100.00
Carbendazim	0.0900	0.0001	0.00005	100.00
Carbofuran	0.0100	0.0001	0.00005	100.00
Carbophenothion	0.0005	0.0002	0.0002	100.00
Chlordane	0.0020	0.0003	0.00025	100.00
Chlorfenvinphos	0.0020	0.0001	0.000065	100.00
Chlorothalonil	0.0500	0.0025	0.0025	100.00
Chloroxuron	0.0100	0.0001	0.00005	100.00
Chlorpyrifos	0.0100	0.0001	0.000125	100.00
Clopyralid	2.0000	0.0003	0.00025	100.00
Cypermethrin	0.2000	0.0005	0.0005	100.00

DDT	0.0090	0.0003	0.00025	100.00
Deltamethrin	0.0400	0.0005	0.0005	100.00
Diazinon	0.0040	0.0000	0.000015	100.00
Dicamba	0.1000	0.0003	0.00025	100.00
Dichlobenil	0.0100	0.0001	0.000125	100.00
Dichlorprop	0.1000	0.0003	0.00025	100.00
Dichlorvos	0.0050	0.0001	0.000065	100.00
Dicofol	0.0040	0.0005	0.0005	100.00
Dieldrin	0.0003	0.0001	0.00025	100.00
Dimethoate	0.0070	0.0003	0.00025	100.00
Disulfoton	0.0040	0.0005	0.0005	100.00
Diuron	0.0200	0.0001	0.00005	100.00
Endosulfan	0.0200	0.0025	0.0025	100.00
Ethion	0.0040	0.0001	0.000125	100.00
Ethoprophos	0.0010	0.0001	0.000065	100.00
Fenamiphos	0.0005	0.0000	0.000015	100.00
Fenitrothion	0.0070	0.0013	0.00125	100.00
Fenoprop	0.0100	0.0003	0.00025	100.00
Fensulfothion	0.0100	0.0000	0.000015	100.00
Fenthion	0.0070	0.0005	0.0005	100.00
Fenvalerate	0.0600	0.0005	0.0005	100.00
Fluometuron	0.0700	0.0001	0.00005	100.00
Glyphosate	1.0000	0.0005	0.0005	100.00
Haloxyfop	0.0010	0.0003	0.00025	100.00
Heptachlor	0.0003	0.0001	0.000125	100.00
Heptachlor &Heptachlor epoxide	0.0003	0.0005	0.0005	0.00
Heptachlor epoxide	0.0003	0.0005	0.0005	0.00
Hexazinone	0.4000	0.0001	0.00005	100.00
Lindane	0.0100	0.0001	0.00005	100.00
Maldison (Malathion)	0.0700	0.0000	0.000015	100.00
Mancozeb (for ETU)	0.0090	0.0005	0.0005	100.00
MCPA	0.0400	0.0003	0.00025	100.00
Methidathion	0.0060	0.0003	0.00025	100.00
Methiocarb	0.0070	0.0001	0.00005	100.00
Methomyl	0.0200	0.0001	0.00005	100.00
Methoxychlor	0.3000	0.0003	0.00025	100.00
Metolachlor	0.3000	0.0000	0.000015	100.00
Metribuzin	0.0700	0.0001	0.00005	100.00
Mevinphos	0.0050	0.0001	0.000125	100.00
Molinate	0.0040	0.0001	0.000125	100.00
Oxamyl	0.0070	0.0001	0.00005	100.00
Parathion	0.0200	0.0003	0.00025	100.00
Parathion-methyl	0.0007	0.0003	0.00025	100.00
Pendimethalin	0.4000	0.0003	0.00025	100.00

Pentachlorophenol	0.0100	0.0003	0.00025	100.00
Permethrin	0.2000	0.0003	0.00025	100.00
Picloram	0.3000	0.0003	0.00025	100.00
Pirimicarb	0.0070	0.0001	0.00005	100.00
Pirimiphos-ethyl	0.0005	0.0000	0.000015	100.00
Pirimiphos-methyl	0.0900	0.0000	0.000015	100.00
Profenofos	0.0003	0.0001	0.000065	100.00
Propachlor	0.0700	0.0000	0.000015	100.00
Propanil	0.7000	0.0003	0.00025	100.00
Propazine	0.0500	0.0001	0.00005	100.00
Propiconazole	0.1000	0.0000	0.000015	100.00
Quintozene	0.0300	0.0003	0.00025	100.00
Simazine	0.0200	0.0001	0.00005	100.00
Sulprofos	0.0100	0.0003	0.00025	100.00
Terbufos	0.0009	0.0003	0.00025	100.00
Terbuthylazine	0.0100	0.0001	0.00005	100.00
Terbutryn	0.4000	0.0001	0.00005	100.00
Thiobencarb	0.0400	0.0001	0.00005	100.00
Total of Aldrin and Dieldrin	0.0003	0.0001	0.00005	100.00
Triclopyr	0.0200	0.0003	0.00025	100.00
Trifluralin	0.0900	0.0003	0.00025	100.00

Pesticides are a broad group of chemicals that have been developed to kill plants, insects and other invertebrates, and fungi. At low concentrations they can pose a risk to health with prolonged exposure. The Guideline values for these materials are usually set to be protective over a lifetime of exposure.