# Quarterly Drinking Water Quality Report

## Prospect North Delivery System 1 July 2026 to 30 September 2026

11 November 2026

# Your water quality

## Drinking water management

We supply you with high quality, safe drinking water – managed under our drinking water quality management system. Our water is among the world's best!

WaterNSW manages Sydney's catchments to provide the best quality water for us to treat. We treat your water by first filtering it, then disinfecting it. This is part of what's called the 'multiple-barrier' approach. We continuously monitor these steps to ensure our systems are working as expected.

**During this quarter, our monitoring confirmed that the drinking water we delivered to you was safe and of high quality.**

## Testing for water quality

Our aim is to provide you with high quality, safe drinking water treated to meet the *Australian Drinking Water Guidelines*. Our Drinking Water Quality Management System applies the frameworks to manage drinking water quality and testing water quality is one part of this system.

We test your water for up to 70 different characteristics including:

- taste
- colour
- odour
- micro-organisms
- chemical content.

**This report summarises a selection of health characteristics and key aesthetic (look, taste, and smell) characteristics.**

We take water samples from the catchments, at the inlet and outlet of water filtration plants, from the reservoirs and from about 790 customers' front garden taps.

Our laboratories use internationally accredited methods for all our testing.

The tables in this report present water quality data from the analysis of water samples we collect at various stages of the water supply chain, from raw water sources, through treatment to the water supplied to your tap.



# Our Drinking Water Quality Management System

**We use a number of steps to ensure your tap water is high quality and safe to drink. Daily performance results can be found on our website.**

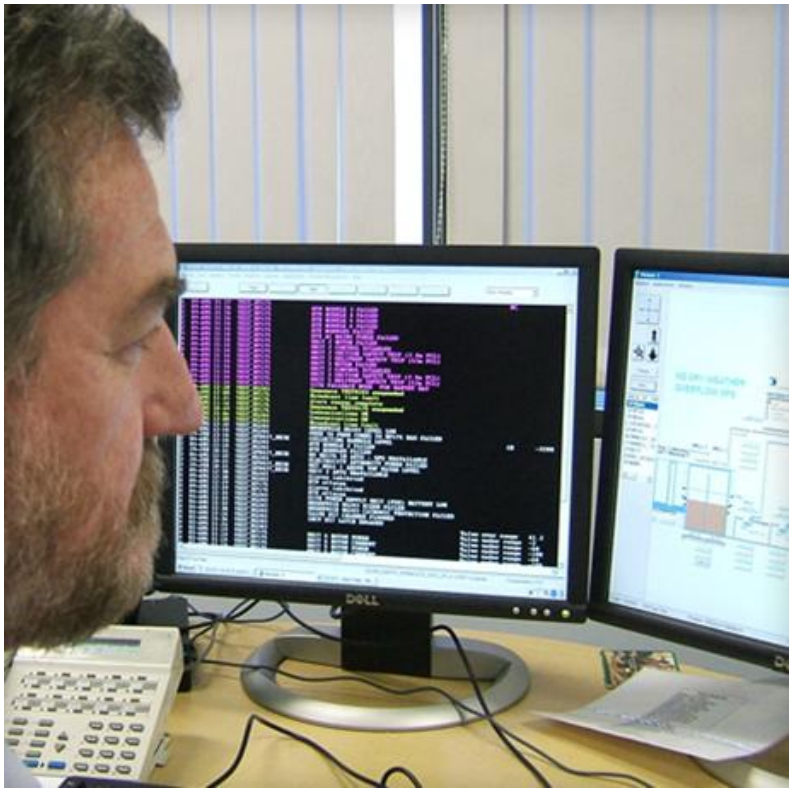
The *Australian Drinking Water Guidelines* Framework for Management of Drinking Water Quality uses a preventive risk management approach that encompasses all the steps in water production from the catchment to the customer.

Sydney Water works collaboratively with WaterNSW to ensure that the best possible water quality is supplied to our customers. Sydney Water and WaterNSW apply a multi-barrier approach to ensure the water supply is safe. Some of the steps or 'barriers' we use to manage water quality are:

- Protecting water catchments (e.g. lakes, rivers and reservoirs)
- Selecting the best available source of water
- Filtering the water at water filtration plants
- Adding chlorine at our water filtration plants and in the network to ensure your water is free of harmful pathogens
- Adding fluoride to support dental health.

We monitor these different steps constantly at critical control points to ensure that your drinking water remains safe and of high quality. You can see current results for these points on our Daily Drinking Water Quality report.

We monitor water quality to verify that these barriers are working. The results in the remainder of this report are considered 'verification results.'



# Water quality test results

## At your tap

Most health guideline values for chemicals are based on a lifetime of exposure. The *Australian Drinking Water Guidelines* recognise that occasionally there may be health or aesthetic related test results that fall outside the guideline values and that these results are not necessarily an immediate threat to health. For most characteristics, the guidelines do not require 100% of results to fall within the guideline values.

Sydney Water has several areas it delivers water to. We call these Delivery Systems. Our compliance to the guidelines is measured for each Delivery System and is calculated over a 12-month period using the following long-term performance measures:

- For the indicator bacterium *Escherichia coli (E. coli)*, at least 98% of scheduled samples must contain no *E. coli*. In addition to continuous online monitoring of filter performance, this verifies that our filtration and disinfection processes were effective in removing bacteria from the water initially and that the system used to deliver water to your tap remains clean.
- For health-related chemical characteristics, the upper bound of the 95% confidence interval for the 95th percentile must be less than the guideline value.
- For aesthetic characteristics, the upper bound of the 95% confidence interval for the mean must be less than the guideline value.

The following tables show data for the customer supply systems that we use to measure Sydney Water's performance against the long-term health and aesthetic guideline values.

More data including typical ranges over a longer period can be found in the *Safe Drinking Water* and *Water Analysis* pages on the Sydney Water website.

**The data we present here isn't exhaustive but shows the characteristics of water which we regularly test for which the *Australian Drinking Water Guidelines* has set a health and/or aesthetic guideline value.**



Table 1 Water Quality Health Characteristics for the Prospect North Delivery System

| Characteristic | Unit of measure | ADWG health value | No. of samples 1 Oct 2025 to 30 Sept 2026 | No. of exceptions | Long-term performance (assessment over 12-month period) | % of test results complying with the guideline | Met long-term performance measure |
|---|---|---|---|---|---|---|---|
| *E. coli* | orgs/100 mL | not detected in 100 mL sample | 1314 | 0 | At least 98% of test results <1 | 100% | Yes |
| fluoride[2] | mg/L | 1.5 | 159 | 4 | At least 95% of test results 0.90 to 1.50 mg/L | 97.48% | Yes[6] |
| free chlorine[4] | mg/L | 5 | 1314 | 0 | The 95th percentile value is less than the respective ADWG health value | | Yes |
| monochloramine | mg/L | 3 | 1314 | 0 | | | Yes |
| antimony | mg/L | 0.003 | 36 | 0 | | | Yes |
| cadmium | mg/L | 0.002 | 36 | 0 | | | Yes |
| cyanide[1] | mg/L | 0.08 | 2 | 0 | | | Yes |
| copper | mg/L | 2 | 40 | 0 | | | Yes |
| lead | mg/L | 0.005 | 40 | 0 | | | Yes |
| nitrate as $NO_3$ | mg/L | 50 | 40 | 0 | | | Yes |
| nitrite as $NO_2$ | mg/L | 3 | 40 | 0 | | | Yes |
| nickel | mg/L | 0.02 | 36 | 0 | | | Yes |
| sulfate[1] | mg/L | 500 | 8 | 0 | | | Yes |
| chromium[3] | mg/L | 0.05 (as Cr(VI)) | 36 | 0 | | | Yes |
| manganese | mg/L | 0.1 | 120 | 0 | | | Yes |
| n-nitrosodimethylamine[1] | mg/L | 0.0001 | 8 | 0 | | | Yes |

| Characteristic | Unit of measure | ADWG health value | No. of samples 1 Oct 2025 to 30 Sept 2026 | No. of exceptions | Long-term performance (assessment over 12-month period) | % of test results complying with the guideline | Met long-term performance measure |
|---|---|---|---|---|---|---|---|
| carbon tetrachloride[1] | mg/L | 0.0003 | 2 | 0 | | | Yes |
| perfluorooctanoic acid (PFOA)[1,5] | µg/L | 0.2 | 8 | 0 | | | Yes |
| perfluorooctane sulfonate (PFOS)[1,5] | µg/L | 0.008 | 8 | 0 | | | Yes |
| perfluorohexane sulfonate (PFHxS)[1,5] | µg/L | 0.03 | 8 | 0 | | | Yes |
| perfluorobutane sulfonate (PFBS)[1,5] | µg/L | 1 | 8 | 0 | | | Yes |
| total trihalomethanes | mg/L | 0.25 | 63 | 0 | The 95th percentile statistic calculated for combined customer supply system and WFP less than 0.25 mg/L | | Yes |

*[1] Insufficient number of samples collected to calculate 95th percentile. The maximum reading will be used for assessment of long-term performance of each of these health-related chemical parameters against the ADWG values.*

*[2] The long-term fluoride performance for each delivery system in this table is based on both treated water from Water Filtration Plant (WFP) and customer tap data. We target a value of 1.0 mg/L. The ADWG specifies a guideline value for fluoride of <1.5 mg/L. The NSW Code of Practice for Fluoridation of Public Water Supplies sets a target that each year >95% of all routine fluoride samples (both treated water from WFPs and customer taps) fall within the concentration range of 0.90 to 1.50 mg/L.*

*[3] The ADWG sets a guideline value for hexavalent chromium (Cr(VI)) however Sydney Water measures total chromium which includes hexavalent chromium.*

*[4] 5 mg/L is the ADWG health value for total chlorine, there is no maximum health value for free chlorine.*

*[5] From 1 July 2026 samples were collected for compliance at WFP. Detailed information on PFAS data can be found on the Sydney Water website PFAS monitoring results*

*[6]During the 12-month period from 1 October 2025 to 30 September 2026, three samples collected at Prospect WFP and one customer tap in the Prospect North delivery system for fluoride showed results that were below the target concentration range of 0.90 to 1.50 mg/L. Compliance was achieved as >95% of samples were within the required range over a 12-month period.*

*Abbreviations: ADWG = Australian Drinking Water Guidelines; E. coli = Escherichia coli; mg/L = milligrams per litre; µg/L = micrograms per litre; orgs/100 mL = organisms per 100 millilitres.*

Table 2 Water Quality Aesthetic Characteristics for the Prospect North Delivery System

| Characteristic | Unit of measure | ADWG aesthetic value | No. of samples 1 Oct 2025 to 30 Sept 2026 | Average result | Long-term performance (assessment over 12-month period) | Met long-term performance measure |
|---|---|---|---|---|---|---|
| iron | mg/L | 0.3 | 120 | 0.008 | Average of test results less than respective ADWG aesthetic value | Yes |
| aluminium | mg/L | 0.2 | 28 | 0.012 | | Yes |
| manganese | mg/L | 0.05 | 120 | 0.0018 | | Yes |
| copper | mg/L | 1 | 40 | 0.020 | | Yes |
| zinc | mg/L | 3 | 28 | 0.006 | | Yes |
| ammonia as $NH_3$ | mg/L | 0.50 | 28 | 0.188 | | Yes |
| turbidity | NTU | 5 | 1314 | 0.11 | | Yes |
| true colour[1] | HU | 15 | 28 | 3 | | Yes |
| dissolved oxygen | % saturation | greater than 85% | 28 | 100.7 | | Yes |
| total dissolved solids | mg/L | 600 | 8 | 103.1 | | Yes |
| sulfate | mg/L | 250 | 8 | 9.3 | | Yes |
| hardness (total) | mg/L | 200 | 28 | 51.5 | | Yes |
| chloride | mg/L | 250 | 2 | 26.0 | | Yes |
| sodium | mg/L | 180 | 2 | 14.2 | | Yes |
| flavour | rating[2] | acceptable | 1 | 3 | Average rating of 1, 2 or 3 | Yes |
| odour | rating[2] | acceptable | 1 | 3 | | Yes |
| pH | pH units | between 6.5 - 8.5 | 1314 | 7.9 | Average results between 6.5 - 8.5 pH units | Yes |

| Characteristic | Unit of measure | ADWG aesthetic value | No. of samples 1 Oct 2025 to 30 Sept 2026 | Average result | Long-term performance (assessment over 12-month period) | Met long-term performance measure |
|---|---|---|---|---|---|---|
| temperature | degrees C | no set value | 1318 | 19.1 | NA | NA |

*[1] True colour is measured at 400 nm wavelength.*

*[2] Rated by a panel on a scale from 1 to 5. Ratings of 1, 2 and 3 are generally acceptable to most people while ratings of 4 and 5 are generally not acceptable.*

*Abbreviations: ADWG = Australian Drinking Water Guidelines; HU = Hazen Units; mg/L = milligrams per litre; NTU = nephelometric turbidity units; NA = not applicable.*

We also test for a range of other water characteristics at your tap over the course of the year. In Table 3 we've summarised the typical values for a range of characteristics for your area, noting that these values are intended to provide an approximate guide, and that all compliance-related values are provided in Table 1 and Table 2.

## Table 3 Typical values for your area

| Parameter | Range (10th – 90th Percentile) or Average | Units |
|---|---|---|
| **Physical Characteristics** | | |
| true colour | <2 - 3 | TCU or HU |
| turbidity | 0.07 - 0.13 | NTU |
| total dissolved solids | 69.9 - 127.0 | mg/L |
| pH | 7.71 - 8.01 | pH units |
| conductivity | 19.1 - 22.0 | mS/m |
| total hardness | 39 - 58 | mg $CaCO_3$ /L |
| calcium hardness | 25 - 34 | mg $CaCO_3$ /L |
| magnesium hardness | 19 - 22 | mg $CaCO_3$ /L |
| alkalinity | 37.9 - 45.3 | mg $CaCO_3$ /L |
| temperature | 15.4 - 23.1 | degrees C |
| dissolved oxygen | 90.4 - 112.2 | % saturation |
| **Disinfectants** | | |
| free chlorine | 0.21 | mg/L |
| monochloramine | 0.75 | mg/L |
| **Disinfection by-products** | | |
| trihalomethanes | 0.070 | mg/L |
| **Inorganic chemicals** | | |
| aluminium | 0.008 - 0.017 | mg/L |
| ammonia (as $NH_3$) | <0.001 - 0.400 | mg/L |
| arsenic | <0.0002 | mg/L |
| cadmium | <0.0001 | mg/L |
| antimony | <0.0003 | mg/L |
| calcium | 10.3 - 14.9 | mg/L |
| chloride | 25.4 - 31.1 | mg/L |
| chromium | <0.0002 | mg/L |
| copper | 0.0045 - 0.0455 | mg/L |
| cyanide | < 0.005 | mg/L |
| fluoride | 0.94 | mg/L |
| iron | <0.005 - 0.010 | mg/L |
| lead | <0.0001 - 0.0004 | mg/L |
| nickel | 0.0003 - 0.0007 | mg/L |
| magnesium | 3.01 - 5.44 | mg/L |
| manganese | 0.0007 - 0.0026 | mg/L |
| mercury | <0.00001 | mg/L |

| Parameter | Range (10th – 90th Percentile) or Average | Units |
|---|---|---|
| nitrate (as $NO_3$) | 0.15 - 0.31 | mg/L |
| nitrite (as $NO_2$) | <0.001 - 0.121 | mg/L |
| phosphorus | 0.002 - 0.004 | mg/L |
| potassium | 1.62 - 2.16 | mg/L |
| reactive silica (as $SiO_2$) | 2.8 - 4.8 | mg/L |
| selenium | <0.0002 | mg/L |
| silver | <0.0001 - 0.0003 | mg/L |

| Parameter | Range (10th – 90th Percentile) or Average | Units |
|---|---|---|
| sodium | 15.3 - 16.8 | mg/L |
| sulfate | 8.30 - 10.00 | mg/L |
| zinc | 0.002 - 0.009 | mg/L |
| **Organic compounds** | | |
| chlorinated, polynuclear aromatic, aromatic hydrocarbons | not detected | |
| chlorophenols | not detected | |
| pesticides | not detected | |

## At the treatment plant

The water at your tap is treated at our **Prospect Water Filtration Plant**.

We monitor the quality of the untreated (raw) water entering our filtration plants to understand how much treatment is needed and to verify the quality of treated water leaving the plant for a range of water quality characteristics.

Results for key water quality characteristics which we test are presented in Table 4 and Table 5 for the **Prospect Water Filtration Plant**.

Table 4 Treated water quality characteristics at Prospect Water Filtration Plant – quarterly results

| Quarter - 1 Jul 2026 to 30 Sept 2026 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Characteristics** | **Unit of measure** | **ADWG value** | **No. of samples** | **Min** | **Ave** | **Max** | **% of tests meeting the guideline[3]** |
| *E. coli* | orgs/100 mL | not detected in 100 mL | 13 | <1 | <1 | <1 | 100% |
| turbidity | NTU | 5 | 13 | 0.06 | 0.1 | 0.14 | 100% |
| true colour[1] | HU | 15 | 13 | <2 | <2 | 3 | 100% |
| pH | pH units | between 6.5 - 8.5 | 13 | 7.6 | 7.8 | 8.1 | 100% |
| free chlorine[4] | mg/L | 5 | 26 | <0.04 | <0.04 | <0.04 | 100% |
| monochloramine | mg/L | 3 | 26 | 1.56 | 1.75 | 1.88 | 100% |
| fluoride[2] | mg/L | 1.5 | 12 | 0.89 | 0.95 | 1.00 | 91.67%[2] |
| total trihalomethanes | mg/L | 0.25 | 16 | 0.03 | 0.04 | 0.05 | 100% |
| n-nitrosodimethylamine | mg/L | 0.0001 | 1 | <0.000001 | <0.000001 | <0.000001 | 100% |
| iron | mg/L | 0.3 | 13 | <0.005 | 0.012 | 0.100 | 100% |
| aluminium | mg/L | 0.2 | 13 | 0.006 | 0.009 | 0.019 | 100% |
| manganese | mg/L | 0.05 | 13 | <0.001 | 0.004 | 0.022 | 100% |

*[1] True colour is measured at 400 nm wavelength.*

*[2] The ADWG specifies a guideline value for fluoride of <1.5 mg/L. The NSW Code of Practice for Fluoridation of Public Water Supplies sets a target that each year >95% of all routine fluoride samples (both treated water from WFPs and customer taps) fall within the concentration range of 0.90 to 1.50 mg/L. The data in this table is the WFP data only. One sample collected at Prospect WFP for fluoride in Q1 2026-27 was below the concentration range of 0.90 to 1.50 mg/L.*

*[3] Water quality compliance is based on annual results and different criteria are applied to health-related targets and aesthetic targets as noted in Tables 1 and 2.*

*[4] 5 mg/L is the ADWG health value for total chlorine, there is no maximum health value for free chlorine.*

*Abbreviations: ADWG = Australian Drinking Water Guidelines; Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; Min = minimum value; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres.*

Table 5 Treated water quality characteristics at Prospect Water Filtration Plant – annual results

| Annual – 1 Oct 2025 to 30 Sept 2026 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Characteristics** | **Unit of measure** | **ADWG value** | **No. of samples** | **Min** | **Ave** | **Max** | **% of tests meeting the guideline** | **Meets long-term performance measure** |
| *E. coli* | orgs/100 mL | not detected in 100 mL | 52 | <1 | <1 | <1 | 100% | Yes |
| turbidity | NTU | 5 | 52 | 0.05 | 0.11 | 0.66 | 100% | Yes |
| true colour[1] | HU | 15 | 52 | <2 | <2 | 3 | 100% | Yes |
| pH | pH units | between 6.5 - 8.5 | 52 | 7.5 | 7.8 | 8.1 | 100% | Yes |
| free chlorine[3] | mg/L | 5 | 104 | <0.04 | <0.04 | <0.04 | 100% | Yes |
| monochloramine | mg/L | 3 | 104 | 1.38 | 1.76 | 1.94 | 100% | Yes |
| fluoride[2] | mg/L | 1.5 | 51 | 0.85 | 0.94 | 1.00 | 94.11% | Yes[2] |
| total trihalomethanes | mg/L | 0.25 | 64 | 0.03 | 0.06 | 0.10 | 100% | Yes |
| n-nitrosodimethylamine | mg/L | 0.0001 | 4 | <0.000001 | <0.000001 | <0.000001 | 100% | Yes |
| iron | mg/L | 0.3 | 52 | <0.005 | 0.009 | 0.100 | 100% | Yes |
| aluminium | mg/L | 0.2 | 52 | 0.006 | 0.012 | 0.032 | 100% | Yes |
| manganese | mg/L | 0.05 | 52 | <0.001 | 0.002 | 0.030 | 100% | Yes |

*[1] True colour is measured at 400 nm wavelength.*

*[2] The ADWG specifies a guideline value for fluoride of <1.5 mg/L. The NSW Code of Practice for Fluoridation of Public Water Supplies sets a target that each year >95% of all routine fluoride samples (both treated water from WFPs and customer taps) fall within the concentration range of 0.90 to 1.50 mg/L. The data in this table is the WFP data only. During the 12-month period from 1 October 2025 to 30 September 2026, three samples collected at Prospect WFP for fluoride showed a result that was below the concentration range of 0.90 to 1.50 mg/L. Compliance was achieved as >95% of all samples (including customer taps) were within the required range over a 12-month period – see Table 1.*

*[3] 5 mg/L is the ADWG health value for total chlorine, there is no maximum health value for free chlorine.*

*Abbreviations: ADWG = Australian Drinking Water Guidelines; Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; Min = minimum value; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres.*

Table 6 Untreated (raw) water quality characteristics at Prospect Water Filtration Plant

| | | | Quarter – 1 July 2026 to 30 Sept 2026 | | | | Annual – 1 Oct 2025 to 30 Sept 2026 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Characteristics** | **Unit of measure** | **Raw Water Supply Agreement[2]** | **No. of samples** | **Min** | **Ave** | **Max** | **No. of samples** | **Min** | **Ave** | **Max** |
| *E. coli* | orgs/100 mL | NA | 13 | <1 | <1 | 2 | 52 | <1 | <1 | 7 |
| *Cryptosporidium* | oocysts/10 L | NA | 27 | <1 | <1 | <1 | 96 | <1 | <1 | <1 |
| *Giardia* | cysts/10 L | NA | 27 | <1 | <1 | <1 | 95 | <1 | <1 | <1 |
| turbidity | NTU | 40 | 13 | 0.71 | 1.24 | 2.49 | 52 | 0.71 | 2.00 | 3.97 |
| true colour[1] | HU | 60 | 13 | 9 | 10 | 13 | 52 | 7 | 10 | 14 |
| pH | pH units | between 6.3 - 7.9 | 13 | 7.3 | 7.6 | 8.0 | 52 | 7.1 | 7.4 | 8.0 |
| iron | mg/L | 3.500 | 13 | 0.040 | 0.118 | 0.344 | 52 | 0.040 | 0.169 | 0.421 |
| aluminium | mg/L | 2.600 | 13 | 0.011 | 0.032 | 0.082 | 52 | 0.011 | 0.088 | 0.263 |
| manganese | mg/L | 1.400 | 13 | 0.009 | 0.041 | 0.148 | 52 | 0.009 | 0.021 | 0.148 |

*[1] True colour is measured at 400 nm wavelength.*

*[2] The Raw Water Supply Agreement is an agreement between WaterNSW and Sydney Water about the water quality required for the routine operation of the water filtration plants. Water quality may vary outside these ranges during disturbances of the raw water for example after heavy rain in the catchments.*

*Abbreviations: Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; Min = minimum value; NA = not applicable; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres.*

## What else do we test for?

We monitor for all the characteristics found in tables 7-10. If detected, results are below the *Australian Drinking Water Guidelines* value, wherever a guideline value exists.

A range of potential chemical contaminants (metals, organic chemicals and radionuclides) are monitored in the raw water at the inlet to each water filtration plant. A few are also monitored in the treated water at the plant outlet and at the customer tap. Risk assessments for these chemicals take into consideration the physical and chemical properties of the various compounds and usage within the catchment areas.

For most of these chemicals, intensive monitoring was initially carried out to establish if they were likely to be present in the supply. This historical data was used along with risk assessments to determine the range of potential contaminants and the frequency of analysis for the current monitoring program. Some chemicals are measured every five years, to verify they are still not present in the water.

Monitoring for additional chemicals may be done from time to time for investigative or other operational purposes but results are not shown here for one or more of the following reasons:

- because of the infrequency of monitoring
- the lack of direct influence on drinking water quality
- no guideline values exist to compare test results to in order to assess risk.

The following tables only show the ADWG health value, the analytical limit of detection, and the frequency of analysis for each chemical. Results are not shown because analysis is infrequent, and most of these chemicals are only rarely detected and at very low levels.

Table 7 Prospect North Delivery System – other characteristics

| Characteristic | Analyte name | ADWG health/aesthetic value (mg/L) | Detection limit (mg/L) | Monitoring frequency | Most recent result complies with ADWG value |
|---|---|---|---|---|---|
| Inorganic chemicals | cyanogen chloride | 0.08 | 0.004 | 2024-25, 2 samples per delivery system annually[1] | Yes |
| | chloral hydrate | 0.1 | 0.001 | 2022-23, 1 sample per delivery system annually[1] | Yes |
| | hydrogen sulfide | 0.05 | 0.002 | 2023-24, 2 samples per delivery system monthly[1] | Yes |
| | chloride | 250 | 0.10 | 2026-27, 2 samples per delivery system quarterly[2] | Yes |
| | sodium | 180 | 0.05 | 2026-27, 2 samples per delivery system quarterly[2] | Yes |
| Organic chemicals | benzo-(a)-pyrene (PAHs) | 0.00001 | 0.00001 | 2026-27, 2 samples per delivery system annually[2] | Yes |
| | di(2-ethylhexly) phthalate (DEHP) | 0.01 | 0.01 | 2022-23, 1 sample per delivery system annually[1] | Yes |
| | toluene | 0.8 | 0.0003 | 2023-24, 1 sample per delivery system annually[1] | Yes |
| | acrylamide | 0.0002 | 0.0002 | 2025-26, 2 samples per delivery system quarterly[1] | Yes |
| | xylene | 0.6 | 0.0004 | 2022-23, 1 sample per delivery system annually[1] | Yes |
| | acrylamide | 0.0002 | 0.0002 | 2023-24, 1 sample per delivery system annually[1] | Yes |

| Characteristic | Analyte name | ADWG health/aesthetic value (mg/L) | Detection limit (mg/L) | Monitoring frequency | Most recent result complies with ADWG value |
|---|---|---|---|---|---|
| | carbon tetrachloride | 0.003 | 0.0003 | 2026-27, 2 samples per delivery system quarterly[2] | Yes |
| Chloroacetic acids | chloroacetic acid | 0.15 | 0.001 | 2023-24, 1 sample per delivery system annually[1] | Yes |
| | dichloroacetic acid | 0.1 | 0.001 | | Yes |
| | trichloroacetic acid | 0.1 | 0.001 | | Yes |
| Chlorophenols | 2-chlorophenol | 0.3 | 0.0001 | 2023-24, 1 sample per delivery system annually[1] | Yes |
| | 2,4-dichlorophenol | 0.2 | 0.0001 | | Yes |
| | 2,4,6-trichlorophenol | 0.02 | 0.0001 | | Yes |

*mg/L = milligrams per litre; ADWG = Australian Drinking Water Guidelines*

*[1] Monitored on a 5-year rotational basis.*

*[2] Monitored on a 5-year rotational basis. Last sampled in 2021-22 from WFP, in 2026-27 sampling from customer supply system.*

Table 8 Untreated (raw) water at Prospect Water Filtration Plant – other characteristics

| Characteristic | Analyte name | ADWG health value (mg/L) | Detection limit (mg/L) | Monitoring frequency – Prospect Water Filtration Plant | Most recent result complies with ADWG value |
|---|---|---|---|---|---|
| Inorganic chemicals | cadmium | 0.002 | 0.0001 | quarterly | Yes |
| | arsenic | 0.01 | 0.001 | quarterly | Yes |
| | barium | 2 | 0.001 | yearly | Yes |
| | boron | 4 | 0.02 | yearly | Yes |
| | iodide | 0.5 | 0.010 | yearly | Yes |
| | beryllium | 0.06 | 0.001 | yearly | Yes |
| | uranium | 0.02 | 0.001 | yearly | Yes |
| | mercury | 0.001 | 0.0001 | quarterly | Yes |
| | molybdenum | 0.05 | 0.001 | yearly | Yes |
| | selenium | 0.004 | 0.001 | quarterly | Yes |
| | silver | 0.1 | 0.001 | yearly | Yes |
| | tin | NA | 0.001 | yearly | NA |
| | fluoride | 1.5 | 0.010 | quarterly | Yes |
| | nitrate | 50 | 0.002 | quarterly | Yes |
| Organic chemicals | benzene | 0.001 | 0.0001 | quarterly[1] | Yes |
| | vinyl chloride | 0.0003 | 0.0003 | quarterly[1] | Yes |

*NA = not applicable; mg/L = milligrams per litre; ADWG = Australian Drinking Water Guidelines.*

*[1] Event trigger for organics if wet weather intrusion impacts on raw water supply.*

Table 9 Untreated (raw) water at Prospect Water Filtration Plant – pesticides and herbicides

| Characteristic | Analyte name | ADWG health value (mg/L) | Detection limit (mg/L) | Monitoring frequency – Prospect Water Filtration Plant[1] | Most recent result complies with ADWG value |
|---|---|---|---|---|---|
| Pesticides/ Herbicides | atrazine | 0.02 | 0.000005 | quarterly | Yes |
| | chlorfenvinphos | 0.002 | 0.00002 | quarterly | Yes |
| | flupropanate | 0.009 | 0.002 | quarterly | Yes |
| | MCPA (2-methyl-4-clorophenoxyacetic acid) | 0.04 | 0.00001 | quarterly | Yes |
| | picloram | 0.3 | 0.00005 | quarterly | Yes |
| | simazine | 0.02 | 0.000005 | quarterly | Yes |
| | chlorpyrifos | 0.01 | 0.000005 | quarterly | Yes |
| | 2,4-D | 0.03 | 0.00001 | quarterly | Yes |
| | diuron | 0.02 | 0.000005 | quarterly | Yes |
| | glyphosate | 1 | 0.001 | quarterly | Yes |
| | hexazinone | 0.4 | 0.000005 | quarterly | Yes |
| | triclopyr | 0.02 | 0.00001 | quarterly | Yes |

*mg/L = milligrams per litre; ADWG = Australian Drinking Water Guidelines.*

[1] *Event trigger for pesticides if wet weather intrusion impacts on raw water supply.*

Table 10 Untreated (raw) water at Prospect Water Filtration Plant – radionuclides

| Characteristic | Analyte name | ADWG health value (Bq/L) | Detection limit (Bq/L) | Monitoring frequency – Prospect Water Filtration Plant | Most recent result complies with ADWG value |
|---|---|---|---|---|---|
| Radiological | gross alpha | NA[1] | 0.02 | every 3 years | Yes |
| | gross beta | NA[1] | 0.07 | every 3 years | Yes |
| | total radionuclides | 0.5 | 0.02 | every 3 years | Yes |

*NA = not applicable. ADWG = Australian Drinking Water Guidelines.*

*[1] The sum of gross alpha and gross beta (total radionuclides) should not exceed 0.5 Bq/L (becquerels per litre). If the screening test for gross alpha or gross beta activity was to trigger further analysis of radionuclides, the specific radionuclides would be identified and assessed in consultation with NSW Health. These would likely be radium-226 (limit of detection is 0.01 Bq/L) and radium-228 (limit of detection is 0.08 Bq/L) as this is recommended in the ADWG.*

## Water in the catchments

We report some information about water quality in WaterNSW's catchments. **Water in your area is sourced from Lake Burragorang at Warragamba Dam, Prospect Lake,** and the **Upper Canal** (which conveys water from Nepean and Avon Dams.

Information about untreated (raw) water in these catchments is provided below.

**For more information about quantities of water in the catchment areas, please visit the WaterNSW website.**

### Table 11 Lake Burragorang, 500 metres upstream of the dam wall, quarterly results

| Quarterly Results – 1 July 2026 to 30 Sept 2026 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Characteristics | | Unit of measure | WaterNSW Reference levels[2] | No. of samples | Min | Ave | Max |
| Microbiological | *E. coli* | orgs/100 mL | NA | 70 | <1 | 1 | 1 |
| | *Cryptosporidium*[3] | oocysts/10 L | NA | 0 | NA | NA | NA |
| | *Giardia*[3] | cysts/10 L | NA | 0 | NA | NA | NA |
| Physical / chemical | turbidity | NTU | NA | 637 | 0.44 | 1.83 | 5.09 |
| | true colour[1] | HU | NA | 70 | 8 | 10 | 18 |
| | chlorophyll - *a* | µg/L | 2-10 | 42 | 0.9 | 2.6 | 4.9 |
| | iron | mg/L | <1 | 70 | <0.010 | 0.110 | 0.580 |
| | aluminium | mg/L | <0.1 | 70 | <0.010 | 0.022 | 0.300 |
| | manganese | mg/L | 0.5 | 70 | 0.002 | 0.073 | 0.460 |

*[1] True colour is measured at 400 nm wavelength.*

*[2] Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000). These guidelines list water quality levels consistent with acceptable medium to long-term environmental water quality. Water quality may vary outside these ranges during disturbances of the raw water for example after heavy rain events in the catchments. During these occurrences, Sydney Water can treat the raw water and continued to provide safe drinking water that met all long-term health and aesthetic guidelines under the Australian Drinking Water Guidelines.*

*[3] Cryptosporidium & Giardia are monitored at irregular frequencies and in response to events.*

*Abbreviations: Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; µg/L = micrograms per litre; Min = minimum value; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres; cysts/10 L = Giardia cysts per 10 litres; oocysts/10 L = Cryptosporidium oocysts per 10 litres; NA = not applicable.*

Table 12 Lake Burragorang, 500 metres upstream of the dam wall, annual results

| Annual Results – 1 Oct 2025 to 30 Sept 2026 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Characteristics | | Unit of measure | WaterNSW Reference levels[2] | No. of samples | Min | Ave | Max |
| Microbiological | *E. coli* | orgs/100 mL | NA | 260 | <1 | 1 | 31 |
| | *Cryptosporidium*[3] | oocysts/10 L | NA | 0 | NA | NA | NA |
| | *Giardia*[3] | cysts/10 L | NA | 0 | NA | NA | NA |
| Physical / chemical | turbidity | NTU | NA | 2368 | 0.08 | 2.02 | 17.71 |
| | true colour[1] | HU | NA | 260 | 7 | 11 | 18 |
| | chlorophyll - *a* | µg/L | 2-10 | 172 | 0.5 | 2.9 | 10.9 |
| | iron | mg/L | <1 | 260 | <0.010 | 0.093 | 0.580 |
| | aluminium | mg/L | <0.1 | 260 | <0.010 | 0.044 | 0.350 |
| | manganese | mg/L | 0.5 | 260 | <0.001 | 0.031 | 0.460 |

*[1] True colour is measured at 400 nm wavelength.*

*[2] Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000). These guidelines list water quality levels consistent with acceptable medium to long-term environmental water quality. Water quality may vary outside these ranges during disturbances of the raw water for example after heavy rain events in the catchments. During these occurrences, Sydney Water can treat the raw water and continued to provide safe drinking water that met all long-term health and aesthetic guidelines under the Australian Drinking Water Guidelines.*

*[3] Cryptosporidium & Giardia are monitored at irregular frequencies and in response to events.*

*Abbreviations: Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; µg/L = micrograms per litre; Min = minimum value; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres; cysts/10 L = Giardia cysts per 10 litres; oocysts/10 L = Cryptosporidium oocysts per 10 litres; NA = not applicable.*

Table 13 Upper Canal, quarterly results

| Quarterly Results – 1 July 2026 to 30 Sept 2026 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Characteristics | | Unit of measure | WaterNSW Reference levels[2] | No. of samples | Min | Ave | Max |
| Microbiological | *E. coli* | orgs/100 mL | NA | 6 | <1 | 8 | 24 |
| | *Cryptosporidium*[3] | oocysts/10 L | NA | 0 | NA | NA | NA |
| | *Giardia*[3] | cysts/10 L | NA | 0 | NA | NA | NA |
| Physical / chemical | turbidity | NTU | NA | 6 | 0.71 | 0.98 | 1.23 |
| | true colour[1] | HU | NA | 6 | 8 | 10 | 12 |
| | chlorophyll - *a* | µg/L | NA | 6 | <0.2 | 0.3 | 0.6 |
| | iron | mg/L | <1 | 6 | 0.310 | 0.375 | 0.460 |
| | aluminium | mg/L | <0.1 | 6 | 0.030 | 0.055 | 0.070 |
| | manganese | mg/L | NA | 6 | 0.006 | 0.011 | 0.017 |

*[1] True colour is measured at 400 nm wavelength.*

*[2] Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000). These guidelines list water quality levels consistent with acceptable medium to long-term environmental water quality. Water quality may vary outside these ranges during disturbances of the raw water for example after heavy rain events in the catchments. During these occurrences, Sydney Water can treat the raw water and continued to provide safe drinking water that met all long-term health and aesthetic guidelines under the Australian Drinking Water Guidelines.*

*[3] Cryptosporidium & Giardia are monitored at irregular frequencies and in response to events.*

*Abbreviations: Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; µg/L = micrograms per litre; Min = minimum value; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres; cysts/10 L = Giardia cysts per 10 litres; oocysts/10 L = Cryptosporidium oocysts per 10 litres; NA = not applicable.*

Table 14 Upper Canal, annual results

| Annual Results - 1 Oct 2025 to 30 Sept 2026 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Characteristics | | Unit of measure | WaterNSW Reference levels[2] | No. of samples | Min | Ave | Max |
| Microbiological | *E. coli* | orgs/100 mL | NA | 19 | <1 | 37 | 160 |
| | *Cryptosporidium*[3] | oocysts/10 L | NA | 0 | NA | NA | NA |
| | *Giardia*[3] | cysts/10 L | NA | 0 | NA | NA | NA |
| Physical / chemical | turbidity | NTU | NA | 19 | 0.71 | 1.73 | 6.94 |
| | true colour[1] | HU | NA | 19 | 8 | 12 | 17 |
| | chlorophyll - *a* | µg/L | NA | 19 | <0.2 | 0.9 | 2.6 |
| | iron | mg/L | <1 | 19 | 0.310 | 0.450 | 0.750 |
| | aluminium | mg/L | <0.1 | 19 | 0.030 | 0.098 | 0.300 |
| | manganese | mg/L | NA | 19 | 0.006 | 0.014 | 0.033 |

*[1] True colour is measured at 400 nm wavelength.*

*[2] Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000). These guidelines list water quality levels consistent with acceptable medium to long-term environmental water quality. Water quality may vary outside these ranges during disturbances of the raw water for example after heavy rain events in the catchments. During these occurrences, Sydney Water can treat the raw water and continued to provide safe drinking water that met all long-term health and aesthetic guidelines under the Australian Drinking Water Guidelines.*

*[3] Cryptosporidium & Giardia are monitored at irregular frequencies and in response to events.*

*Abbreviations: Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; µg/L = micrograms per litre; Min = minimum value; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres; cysts/10 L = Giardia cysts per 10 litres; oocysts/10 L = Cryptosporidium oocysts per 10 litres; NA = not applicable.*

Table 15 Prospect Reservoir/Prospect Lake, quarterly results

| Quarterly Results – 1 July 2026 to 30 Sept 2026 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Characteristics | | Unit of measure | WaterNSW Reference levels[2] | No. of samples | Min | Ave | Max |
| Microbiological | *E. coli* | orgs/100 mL | NA | 4 | <1 | 1 | 2 |
| | *Cryptosporidium*[3] | oocysts/10 L | NA | 2 | <1 | <1 | <1 |
| | *Giardia*[3] | cysts/10 L | NA | 2 | <1 | <1 | <1 |
| Physical / chemical | turbidity | NTU | NA | 204 | 1.58 | 2.71 | 16.54 |
| | true colour[1] | HU | NA | 4 | 6 | 7 | 8 |
| | chlorophyll - *a* | µg/L | 2-10 | 6 | 2.4 | 4.9 | 7.6 |
| | iron | mg/L | <1 | 4 | 0.090 | 0.140 | 0.170 |
| | aluminium | mg/L | <0.1 | 4 | 0.060 | 0.093 | 0.110 |
| | manganese | mg/L | 0.5 | 4 | 0.006 | 0.009 | 0.013 |

*[1] True colour is measured at 400 nm wavelength.*

*[2] Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000). These guidelines list water quality levels consistent with acceptable medium to long-term environmental water quality. Water quality may vary outside these ranges during disturbances of the raw water for example after heavy rain events in the catchments. During these occurrences, Sydney Water can treat the raw water and continued to provide safe drinking water that met all long-term health and aesthetic guidelines under the Australian Drinking Water Guidelines.*

*[3] Cryptosporidium & Giardia are monitored at irregular frequencies and in response to events.*

*Abbreviations: Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; µg/L = micrograms per litre; Min = minimum value; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres; cysts/10 L = Giardia cysts per 10 litres; oocysts/10 L = Cryptosporidium oocysts per 10 litres; NA = not applicable.*

Table 16 Prospect Reservoir/Prospect Lake, annual results

| Annual Results – 1 Oct 2025 to 30 Sept 2026 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Characteristics | | Unit of measure | WaterNSW Reference levels[2] | No. of samples | Min | Ave | Max |
| Microbiological | *E. coli* | orgs/100 mL | NA | 12 | <1 | 11 | 90 |
| | *Cryptosporidium*[3] | oocysts/10 L | NA | 6 | <1 | 2 | <3 |
| | *Giardia*[3] | cysts/10 L | NA | 5 | <1 | 1 | <2 |
| Physical / chemical | turbidity | NTU | NA | 764 | 1.07 | 2.60 | 16.54 |
| | true colour[1] | HU | NA | 12 | 4 | 5 | 8 |
| | chlorophyll - *a* | µg/L | 2-10 | 18 | 2.4 | 5.3 | 8.1 |
| | iron | mg/L | <1 | 12 | 0.050 | 0.127 | 0.260 |
| | aluminium | mg/L | <0.1 | 12 | 0.030 | 0.090 | 0.160 |
| | manganese | mg/L | 0.5 | 12 | <0.001 | 0.012 | 0.026 |

*[1] True colour is measured at 400 nm wavelength.*

*[2] Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000). These guidelines list water quality levels consistent with acceptable medium to long-term environmental water quality. Water quality may vary outside these ranges during disturbances of the raw water for example after heavy rain events in the catchments. During these occurrences, Sydney Water can treat the raw water and continued to provide safe drinking water that met all long-term health and aesthetic guidelines under the Australian Drinking Water Guidelines.*

*[3] Cryptosporidium & Giardia are monitored at irregular frequencies and in response to events.*

*Abbreviations: Ave = average value; E. coli = Escherichia coli; HU = Hazen Units; Max = maximum value; mg/L = milligrams per litre; µg/L = micrograms per litre; Min = minimum value; NTU = nephelometric turbidity units; orgs/100 mL = organisms per 100 millilitres; cysts/10 L = Giardia cysts per 10 litres; oocysts/10 L = Cryptosporidium oocysts per 10 litres; NA = not applicable.*

# Review of drinking water literature

**Every quarter, we review a topic from the latest water quality research from around the world.**

## Sydney Water Instantaneous Filtration Technology (SWIFT)

Increasingly frequent extreme weather events across Sydney, including droughts, bushfires and floods, have created greater variability in raw water quality, challenging the resilience of Water Filtration Plants (WFPs). To address this challenge, Water Process & Integration team in Water Supply & Production has developed the **Sydney Water Instantaneous Filtration Technology (SWIFT)**, a pioneering real-time optimisation platform that transforms the way WFP operations teams optimise the coagulation and filtration processes.

Traditionally, coagulant dosing relied on manual jar testing, operator expertise and reactive adjustments, limiting the ability to respond quickly to rapidly changing water conditions. SWIFT ingests live, minute-by-minute operational data from plant SCADA (Supervisory Control and Data Acquisition) and applies advanced predictive algorithms to calculate optimal chemical dosing in real time. Within minutes, the system provides operators with precise, actionable insights in plant SCADA that enhance decision-making and strengthen process control.

By integrating the SWIFT model directly into existing SCADA systems, Sydney Water has significantly reduced the need for manual intervention. Coagulant dosing is now dynamically optimised based on continuously updated raw water conditions, improving treatment efficiency and operational reliability. The solution leverages existing plant instrumentation and routine water quality testing, eliminating the need for major new infrastructure while unlocking powerful automation capabilities.

SWIFT represents a major advance in digital water operations. Delivering improved water quality, more stable plant performance, and a scalable, data-driven platform that supports operator decision making and demonstrates Sydney Water's commitment to innovation, efficiency, and safe, reliable drinking water for the community. SWIFT does not replace the operator's decision-making; rather, it provides predicted data and insights to inform the decision.

## Reference

Curtis, M., Mohiuddin, A., Wang, Y., Liberatore, D. (2026), *Teaching an Old Dog New Tricks: Integrating Advanced Process Models in Day-to-Day Operational Technology Systems*, AWA 2026.



# Contact us

If you have any questions or concerns about the information in this report, contact us on our website. For issues about water quality, call 13 20 90, available 24/7.

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