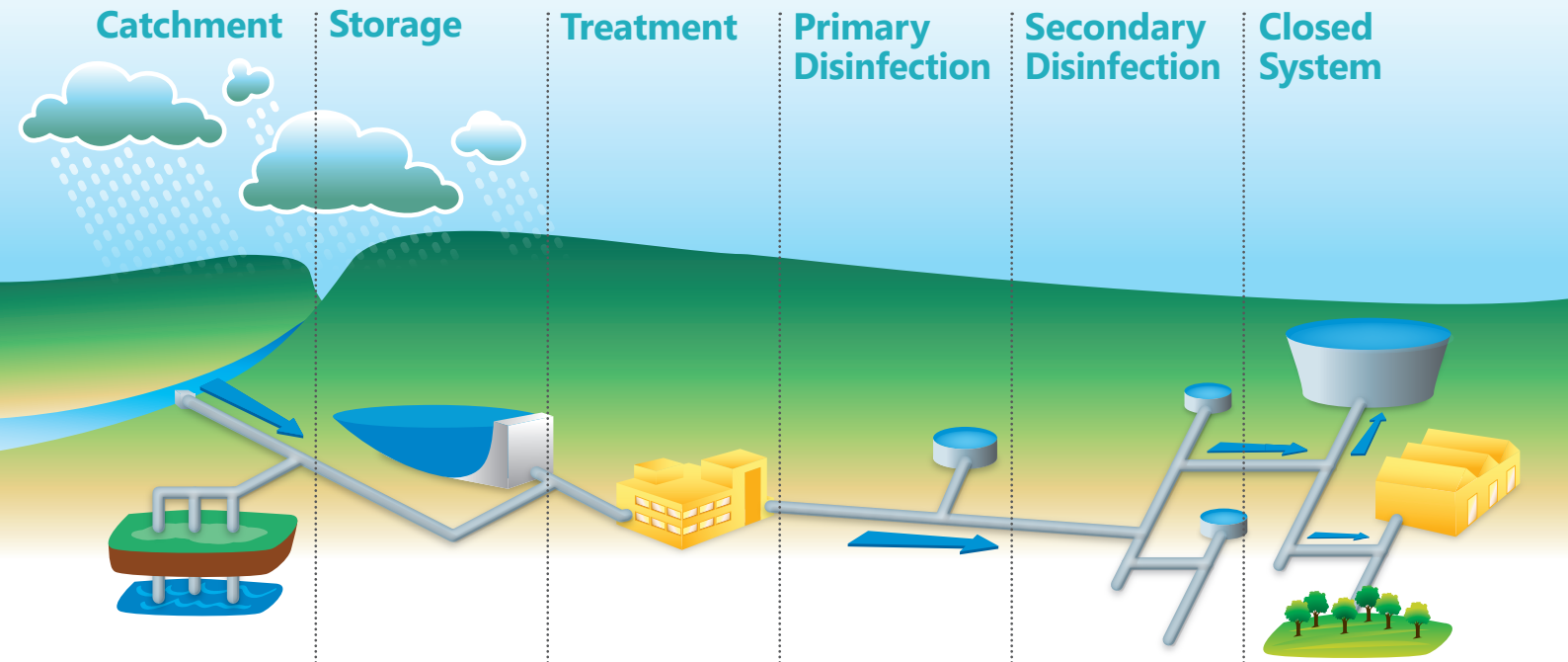
Annual Summary of Drinking Water Quality

1 July 2017 to 30 June 2018

Central Coast Council

MULTI-BARRIER APPROACH TO PROTECTING DRINKING WATER QUALITY



Catchment

- Buffers between roads and storage
- Limit access
- Fire management
- Wild animal control
- Management of livestock impacts
- Deep bores
- Regular monitoring
- Landowner education
- Chemical collections

Storage

- No recreational use
- Restricted access
- Destratification
- Oxygenation
- Regular monitoring

Treatment

- Blending of source waters
- Alkalinity adjustments
- Manganese oxidisation
- Coagulation/ Flocculation
- Sedimentation
- Pre-chlorination
- Filtration
- Regular monitoring

Primary Disinfection

- Chlorine dosing
- Regular monitoring

Secondary Disinfection

- Maintenance of chlorine residual
- Multiple re-chlorination stations
- Minimise time to reach customers
- Maximise circulation in pipes and reservoirs
- Regular monitoring

Closed System

- Development control
- Cross-connection and backflow prevention
- Maintenance of pressure
- Roofed, sealed and secure reservoirs
- Adhereence to the Plumbing Code of Australia
- Dial Before You Dig

Our on-going drinking water quality management program is a holistic plan – starting at the catchment and ending at your tap. It involves a suite of capital works; maintenance, monitoring and operational strategies – along with communication initiatives – to protect, manage and maintain drinking water quality.

MONITORING DRINKING WATER QUALITY

We monitor water quality at every stage of the supply system to ensure you receive drinking water that meets the requirements of the Australian Drinking Water Guidelines 2011. In addition to online monitoring of critical treatment processes, water samples are taken from the catchment, before and after water treatment plants, from reservoirs and the reticulation system before entering homes. All samples are tested by Council and/or independent laboratories accredited with the National Association of Testing Authorities.

The results presented in this report are from samples obtained from customer taps throughout the supply system to verify that the water supplied to homes and businesses meets the quality requirements of the Australian Drinking Water Guidelines 2011.

WHAT'S TESTED?

Your water is regularly tested for a range of physical, chemical and biological characteristics in accordance with the NSW Health Drinking Water Monitoring Program and the Australian Drinking Water Guidelines 2011.

Event specific and research monitoring is also undertaken as required. This report provides a summary of the key parameters regularly tested by Council and NSW Health.

PERFORMANCE SUMMARY

From 1 July 2017 to 30 June 2018.

WATER QUALITY TEST RESULTS

1 July 2017 To 30 June 2018

Microbiological sampling and analysis				
Parameter	Guideline value[1]	Guideline basis	Result[2]	Number of samples
E.coli	100% of test results contain no *E.coli*	Health	99.87% of test results contain no *E. coli*	793

Physical sampling and analysis						
Parameter	Units of measure	Guideline value[1]	Guideline basis	Average result	95th percentile result	Number of samples
PHYSICAL						
True Colour	HU	15	Aesthetic	1.1	2	22
Turbidity	NTU	5	Aesthetic	0.13	0.4	22
Total Dissolved Solids (TDS)	mg/L	600	Aesthetic	133	150	22
Total Hardness as CaCO3	mg/L	200	Aesthetic	55.0	69.0	22
CHEMICAL						
Aluminium	mg/L	0.2	Aesthetic	0.04	0.06	22
Antimony	mg/L	0.003	Health	< 0.001	< 0.001	22
Arsenic	mg/L	0.01	Health	<0.001	0.001	22
Barium	mg/L	2	Health	0.020	0.029	22
Boron	mg/L	4	Health	< 0.1	< 0.1	22
Cadmium	mg/L	0.002	Health	< 0.0005	< 0.0005	22
Calcium	mg/L	-	-	16	21	22
Chloride	mg/L	250	Aesthetic	42	52	22
Chromium	mg/L	0.05	Health	<0.005	0.005	22
Copper	mg/L	2 (1)	Health (Aesthetic)	0.037	0.12	22
Fluoride	mg/L	1.5	Health	0.62	0.95	22
Free Chlorine	mg/L	5	Health	1.1	1.8	789
Iodine	mg/L	0.5	Health	0.03	0.05	22
Iron	mg/L	0.3	Health	0.025	0.07	22
Lead	mg/L	0.01	Health	<0.002	0.0025	22
Magnesium	mg/L	-	-	3.9	4.7	22
Manganese	mg/L	0.5 (0.1)	Health (Aesthetic)	0.007	0.017	22
Mercury	mg/L	0.001	Health	<0.0001	0.0001	22
Molybdenum	mg/L	0.05	Health	<0.005	0.005	22
Nickel	mg/L	0.02	Health	<0.01	<0.01	22
Nitrate	mg/L	50	Health	1.4	3.5	22
Nitrite	mg/L	3	Health	<0.1	<0.1	22
pH		6.5 - 8.5	Aesthetic	7.6	7.2 - 8.0	22
Selenium	mg/L	0.01	Health	< 0.002	< 0.002	22
Silver	mg/L	0.1	Health	< 0.002	< 0.002	22
Sodium	mg/L	180	Health	27	42	22
Sulfate	mg/L	500 (250)	Health (Aesthetic)	21	33	22
Uranium	mg/L	0.017	Health	<0.005	<0.005	21
Zinc	mg/L	3	Health	0.024	0.06	22

H.U = Hazen Units. N.T.U = Nephelometric Turbidity Units. mg/L = milligrams per litre (or parts per million). NA = not applicable.

[1]Australian Drinking Water Guidelines 2011. The Australian Drinking Water Guidelines 2011 recognise that occasionally throughout the year there may be health or aesthetic related test results above the Guidelines values, and that these results are not necessarily an immediate threat to health. As such, the Guidelines do not require a 100 per cent result in all cases, with the exception of E.coli. Each test result above the guideline value for E. coli is investigated and actions taken where necessary to minimise the risk of a recurrence. Disturbances and operational changes can result in occasional localised elevated levels of aesthetic water quality characteristics such as turbidity.

[2] E. coli: An E. coli result of 1 cfu/100 mL was received for a water sample collected in April 2018. Intensive monitoring of the water system was immediately undertaken, and no E. coli were detected in the additional samples analysed. Following investigation, it was concluded that the sample was likely to have been contaminated whilst in transit to the testing laboratory. Sample storage procedures have been modified to reduce the risk of a similar event occurring.