

IMAGINE...A LIFE WITHOUT QUALITY WATER

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wsp



HOW MUCH IS CLEAN WATER WORTH TO YOU?

- DO YOU WANT TO DRINK THIS?
- OR THIS?



IS ENOUGH BEING DONE TO PREVENT THIS?



The background is a light blue gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. The text is centered in the middle of the image.

LEGISLATION ACROSS AUSTRALIA

WATER QUALITY AND PLANNING LEGISLATION

WATER REGULATION ACROSS AUSTRALIA

In Australia there are
three levels of
Government
legislation

Commonwealth, State
and Local

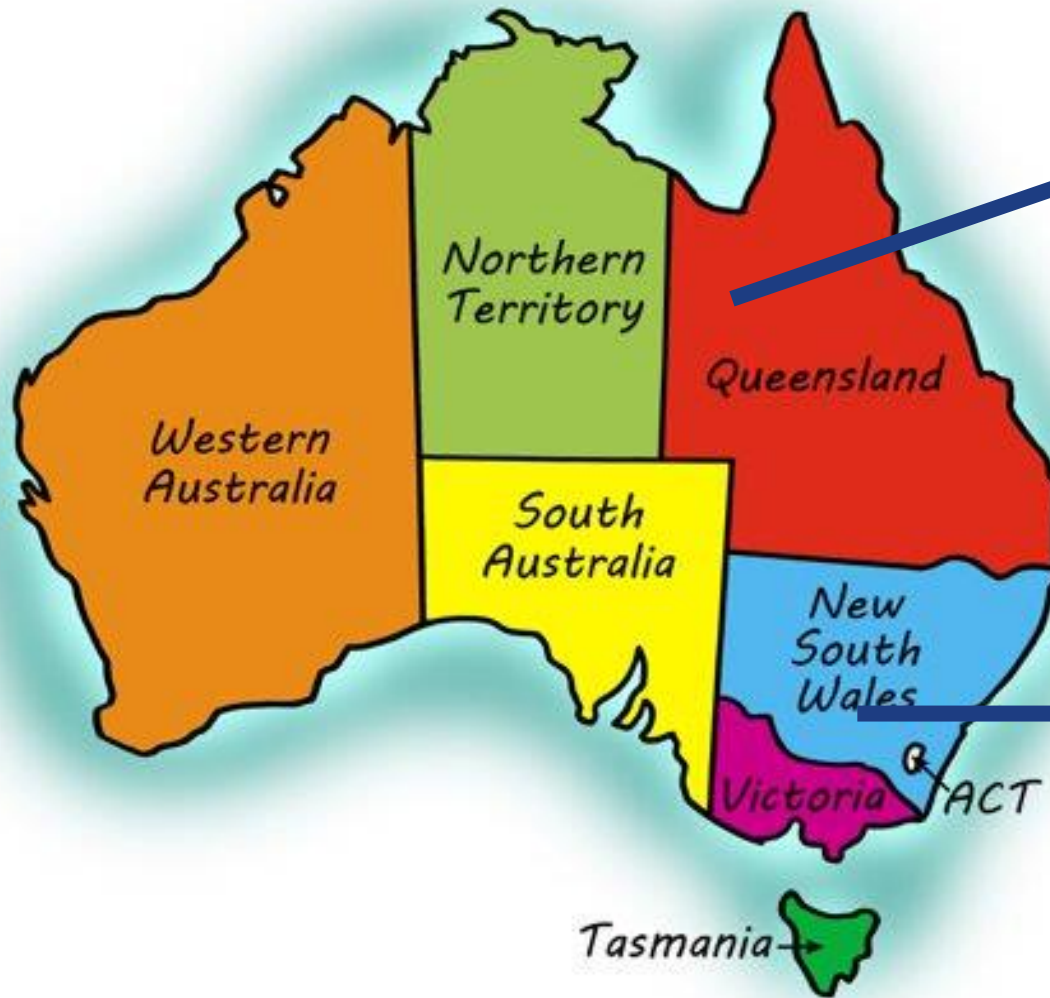
Each level has a water
quality regulator or
agency to protect the
water quality

COMMONWEALTH LEGISLATION

- WATER ACT 2007
- WATER REGULATION 2008
- WATER EFFICIENCY LABELLING AND STANDARDS ACT 2005
- THE COMMONWEALTH REGULATOR FOR WATER QUALITY IS THE COUNCIL OF AUSTRALIAN GOVERNMENTS (COAG)
- THE COAG IS MADE OF STATE AND TERRITORY REPRESENTATIVES WHO HAVE AGREED TO THE AUSTRALIAN AND NEW ZEALAND CONSERVATION COUNCIL (ANZECC) GUIDELINES FOR FRESH AND MARINE WATER QUALITY
- ANZECC GUIDELINES ARE A SERIES OF MEASURES AND STANDARDS THAT EACH STATE AND TERRITORY **VOLUNTARILY** APPLIES WHEN DELIVERING DRINKING WATER TO THE COMMUNITY



AROUND AUSTRALIA WE HAVE...



- QUEENSLAND WATER QUALITY IS REGULATED BY THE DEPARTMENT OF NATURAL RESOURCES (DNR).
- THE WATER ACT 2000 (QLD) PROVIDES PROTECTION FOR THE WATER RESOURCES
- THE PLANNING ACT 2016 (QLD) PROVIDES REGULATION FOR DEVELOPMENTS
- THE ABOVE POLICIES DO NOT SET OUT PARTICULAR REQUIREMENTS FOR THE IMPACT OF DEVELOPMENT ON WATER QUALITY
- PLANNING AND DEVELOPMENT WITHIN NSW IS REGULATED BY THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979
- UNDER THIS ACT SEPPS CAN BE MADE INCLUDING THE STATE ENVIRONMENTAL PLANNING POLICY (SYDNEY DRINKING WATER CATCHMENT) 2011
- WATER NSW ACT 2014

SYDNEY DRINKING WATER STATE ENVIRONMENTAL PLANNING POLICY

Applies only to the
Sydney drinking
water catchment
areas

Neutral or beneficial
effect on water
quality

Part 4 (smaller
developments) must
meet these
requirements

Public Authority
developments must
consider these
requirements

Introduced in 2011
by the former Sydney
Catchment Authority
(Now Water NSW)

AROUND AUSTRALIA WE HAVE...



- WATER QUALITY IS PROTECTED BY THE WATER ACT 1989
- MAIN REGULATORY AUTHORITY FOR WATER IN VICTORIA IS MELBOURNE WATER
- DEVELOPMENT APPROVALS WITHIN VICTORIA ARE MANAGED BY PLANNING AND ENVIRONMENT ACT 1987
- THE ABOVE POLICIES DO NOT SET OUT PARTICULAR REQUIREMENTS FOR THE IMPACT OF DEVELOPMENT ON WATER QUALITY
- ALTHOUGH THERE ARE WATER QUALITY OBJECTIVES FOR RIVERS STREAMS – ECOSYSTEM PROTECTION, THESE ARE ONLY A GUIDE

OTHER STATES AND TERRITORIES WATER AND DEVELOPMENT LEGISLATION

- OTHER STATES AND TERRITORIES MERELY TOUCH ON THE EMPHASIS OF PROTECTING WATER QUALITY
- DO NOT PROVIDE FOR CONSIDERATIONS ABOUT THE PROTECTION OF WATER QUALITY IN THE DEVELOPMENT ASSESSMENT PROCESS

State or Territory	Water Protection Legislation	Water Regulation/Policy	Protection Authority	Planning Legislation
Commonwealth	<i>Water Act 2007</i>	<i>Water Regulation</i>	<i>Department of Agriculture and Water Resources</i>	-
South Australia	<i>Water Resources Act 1997</i> <i>Water Industry Act 2012</i>	<i>Water Industry Regulation 2012</i>	<i>Essential Services Commission of South Australia</i>	<i>Planning, Development and Infrastructure Act 2016</i>
Western Australia	<i>Water Agencies (Powers) Act 1984</i> <i>Rights in Water and Irrigation Act 1914</i> <u>Metropolitan Water Supply, Sewerage and Drainage Act 1909</u> <u>Waterways Conservation Act 1976</u>	<i>(Clearing Licence) Regulations 1981</i>	<i>Department of Water</i>	<i>Planning and Development Act 2005</i>

State or Territory	Water Protection Legislation	Water Regulation/Policy	Protection Authority	Planning Legislation
Northern Territory	<i>Water Act 2016</i>	<i>Water Regulations 2008</i>	<i>Department of Environment and Natural Resources</i>	<i>Planning Act 2017</i>
Australian Capital Territory	<i>Water Resources Act 2007</i>	<i>Drinking Water Code of Practice</i>	<i>Environment Protection Authority</i>	<i>Planning and Development Act 2007</i>
Tasmania	<i>Water Management Act 1999</i>	<i>Water Management Regulations 2009</i>	<i>Department of Primary Industries, Parks, Water and Environment</i>	<i>Land Use Planning and Approvals Act 1993</i>

BUT IS IT ENOUGH?

THE  AGE

INVESTIGATION NATIONAL VICTORIA WATER

Airport's toxic runoff leaves farmer's water they bought

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Giardia infection spike on north coast

Updated 15 Nov 2010, 8:30am

The North Coast Area Health Service says there has been a slight spike in the number of people infected with the parasite giardia.

Public Health director Paul Corben says the infection can be spread by drinking contaminated water.

He says so far this year there have been 59 cases on the north coast, which is slightly above the average of 55 cases a year.

He says the risk of infection is greater for those with limited access to town water.



PHOTO: A glass of water (Richard Johnson: ABC Local)

Dumping 15m tonnes of salt at Queensland creek 'considerable' risk to water

concludes considerable likelihood waste from coal seam gas operations could contaminate Stockyard Creek in headwaters of Sydney-Darling Basin



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Tony Abbott says Nauru

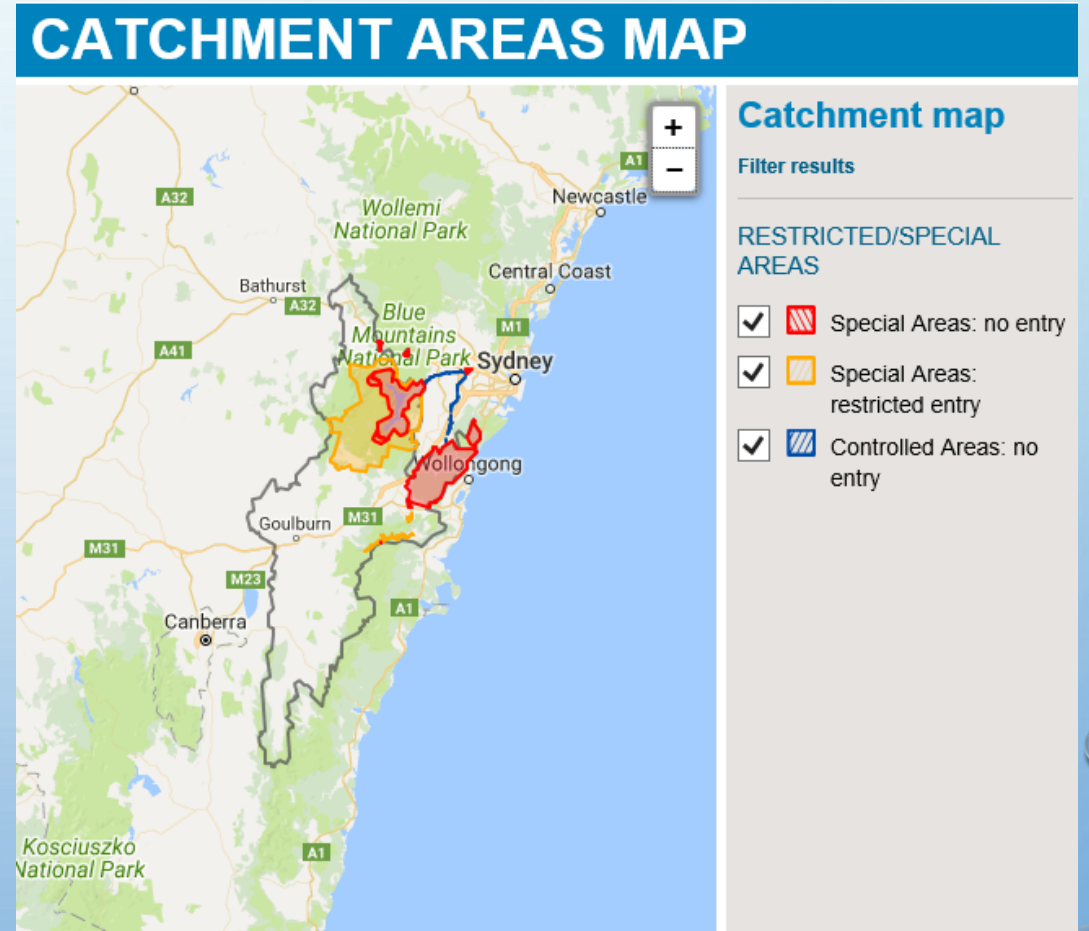
DRINKING WATER SUPPLY INFRASTRUCTURE ACROSS AUSTRALIA



- DRINKING WATER ON THE EAST COAST OF AUSTRALIA IS SOURCED VIA DAMS, CREEKS AND CANALS
- FOR OTHER CENTRAL AND WESTERN AREAS OF AUSTRALIA, THERE IS LIMITED RAINFALL AVAILABLE TO RELY ON SURFACE WATER FOR DRINKING WATER SUPPLY
- GROUNDWATER BORES SUPPLY WATER FOR WESTERN AUSTRALIA, SOUTH AUSTRALIA AND CENTRAL AUSTRALIA

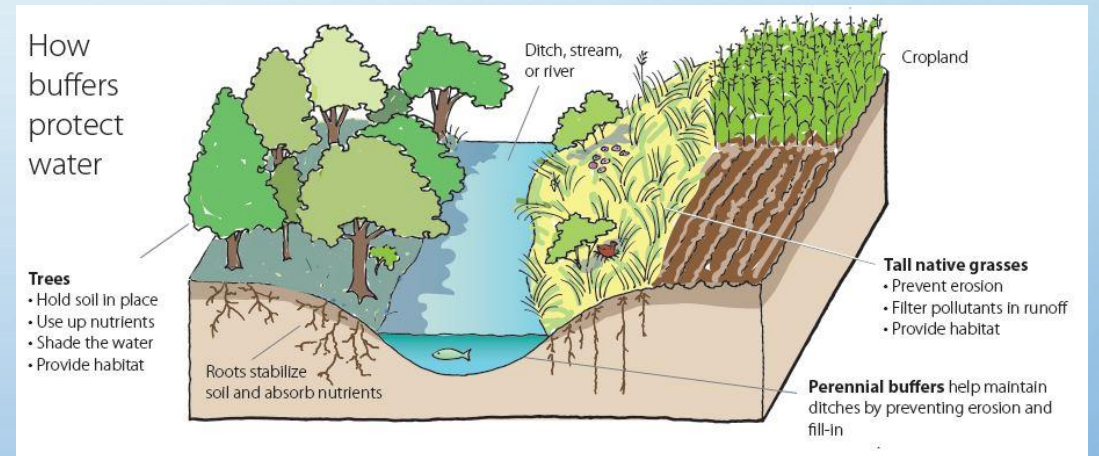
NSW WATER SUPPLY INFRASTRUCTURE

- SYDNEY WATER SUPPLY DAMS ARE SURROUNDED BY EXTENSIVE PROTECTED CATCHMENT AREAS KNOWN AS THE SYDNEY DRINKING WATER CATCHMENT
- THE CATCHMENT SURROUNDS THE WATER SUPPLY ASSETS, INCLUDING RIVERS, CREEKS AND SUPPLY DAMS.
- THE CATCHMENT INCLUDES OVER 364,000 HECTARES OF LAND PROTECTED FOR NATURAL VEGETATION AND DEVELOPMENTS ARE RESTRICTED WITHIN THE CATCHMENT BY THE SYDNEY DRINKING WATER SEPP
- THE SYDNEY DRINKING WATER CATCHMENT AREAS HAVE BEEN PROTECTED FOR OVER 100 YEARS, AND THE LEVEL OF PROTECTION STILL CONTINUES TODAY FOR DRINKING WATER
- REGIONAL NSW RELIES ON WATER FROM LOCAL CREEKS AND WATER SUPPLY DAMS. THEY DO NOT HAVE PROTECTED CATCHMENTS WITH NATURAL VEGETATION



VICTORIA WATER SUPPLY INFRASTRUCTURE

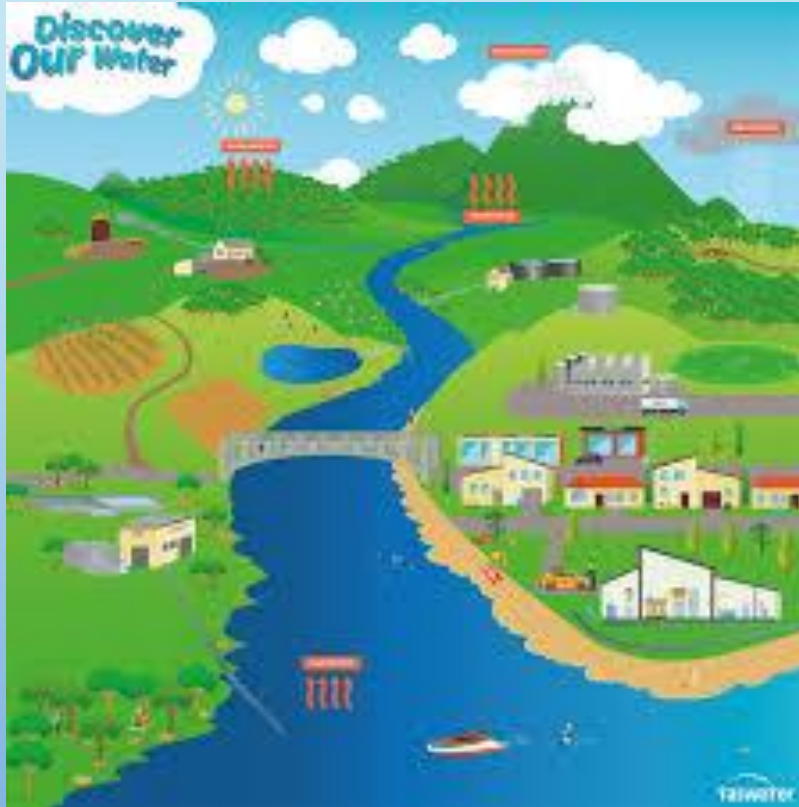
- MELBOURNE WATER MAINTAINS A CATCHMENT FOR THE PROTECTION OF WATER QUALITY
- OVER 135,000 HECTARES OF NATIONAL PARKS AND EXCLUSIVE AREAS ARE RESTRICTED FOR PUBLIC ACCESS AND FROM DEVELOPMENT
- THE REGULATION OF MELBOURNE'S CATCHMENTS HAS CONTRIBUTED TO THE CATCHMENT'S ABILITY TO FILTRATE POLLUTANTS IN THE WATER AND HAS LED TO A REDUCTION IN THE NEED FOR TREATMENT



QUEENSLAND

SEQwater manages water supply through dams, and desalination in the south east

SEQwater drinking water supplies have catchments areas; however these areas are open to the public for recreational use



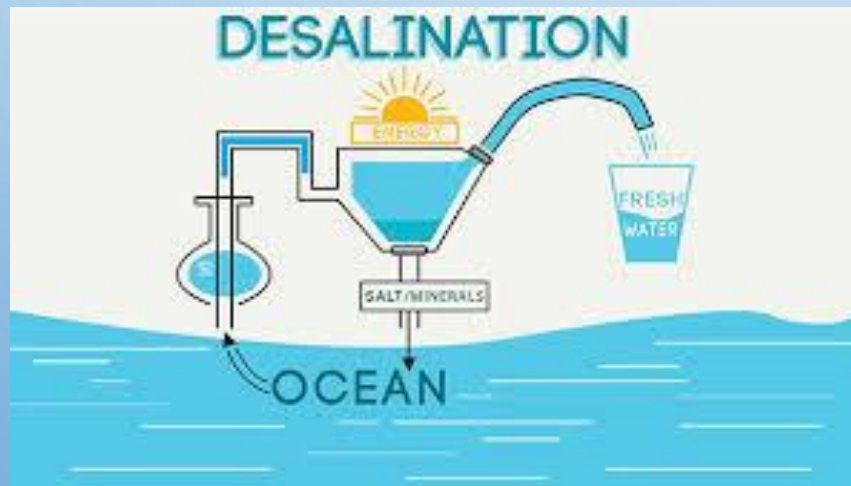
OTHER STATES

TASMANIA

- RELIES ON NATURAL RIVERS AND CREEKS AND LOCATION BASED TREATMENT PLANTS
- NO PROTECTED CATCHMENT AREAS

WESTERN AUSTRALIA

- PERTH RELIES ON DESALINATION AS THERE IS LOW RAINFALL
- OTHER REMOTE AREAS RELY ON GROUNDWATER BORES



OTHER STATES AND TERRITORIES

NORTHERN TERRITORY

- LARGE SUPPLY DAMS
- NO CATCHMENT AREAS AROUND THE DRINKING WATER SUPPLY

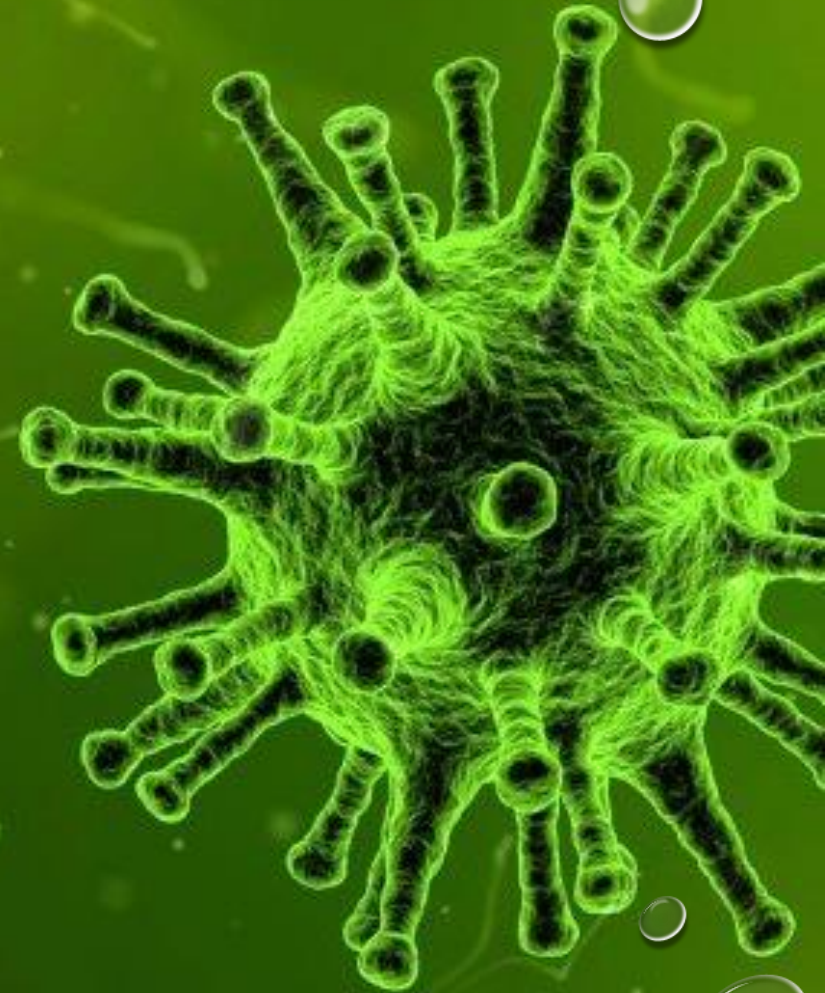


SOUTH AUSTRALIA AND CENTRAL AUSTRALIA

- WATER SUPPLIES ARE DRAWN FROM UNDERGROUND AQUIFERS AND IN THESE AREAS WATER IS GENERALLY FILTERED THROUGH SANDSTONE AND ROCK AND AS A RESULT SUCH WATER INCLUDES A HIGHER MINERAL CONTENT

CONTAMINATION MONITORING

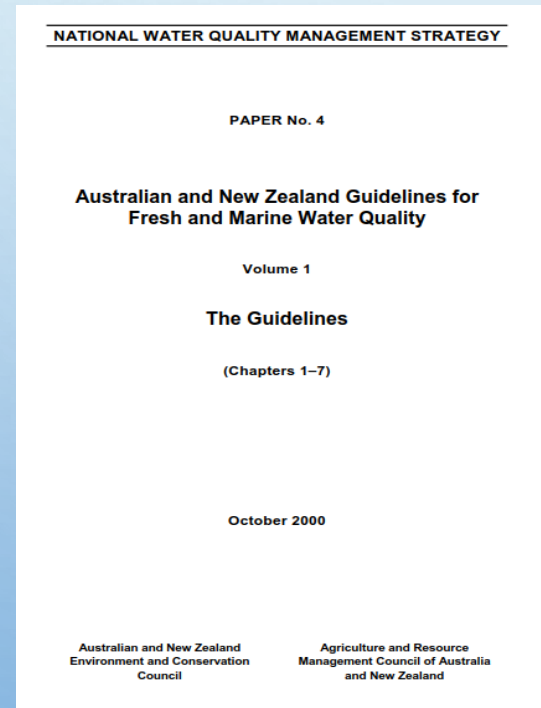
- ANZECC GUIDELINES INCLUDES PARAMETERS FOR WATER QUALITY TO BE TESTED REGULARLY
- IF TESTING INDICATES CONTAMINATION, THEN PUBLIC HEALTH AGENCIES ISSUE AN ALERT TO BOIL ALL TAP WATER BEFORE DRINKING (WATER BOIL ALERT)
- COMMON PATHOGENS IN DRINKING WATER WHICH CAN IMPACT ON HEALTH INCLUDE E. COLI, CRYPTOSPORIDIUM AND GIARDIA



AUSTRALIAN DRINKING WATER GUIDELINES

MICROORGANISMS, INCLUDING:

- BACTERIA
- PROTOZOA
- TOXIC ALGAE
- VIRUSES.



PHYSICAL CHARACTERISTICS

- RADIONUCLIDES; AND
- CHEMICALS, INCLUDING:
 - INORGANIC CHEMICALS
 - ORGANIC COMPOUNDS
 - ORGANIC DISINFECTION BY-PRODUCTS
 - PESTICIDES.

IS OUR WATER MEETING ANZECC DRINKING WATER GUIDELINES?

QLD

- Numerous water boil alerts in far north, Atherton tablelands and regional areas have been issued earlier this year

TAS

- 48 water boil alerts were in place prior to recent upgrades of water treatment plants

VIC

- Three water boil alerts were issued including for Gippsland and Goulbourn Valley which recorded water quality incidents and in Melbourne for mixed plumbing issues where recycled water was plumbed into drinking water supplies

IS OUR WATER MEETING ANZECC GUIDELINES?

Town forced to boil water for months as Queensland Government checks safety

ABC Far North | By [Sharnie Kim](#), [Kier Shorey](#) and [Anna Hartley](#)

Updated 11 May 2018, 1:39pm



PHOTO: Ravenshoe Hotel owner Wendy Stanford says boiling drinking water for patrons comes at a significant cost to her business.

A business owner is worried stores might have to close their doors and residents have been forced to buy bottled water for three months as the government investigates whether a far north Queensland town's water is safe to drink.

Just over two weeks ago, the local council deemed the town's water safe — but Queensland Health did not agree and has ordered more tests for different parasites.

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Drinking water repeatedly contaminated with pathogens in rural NSW towns

By [Greg Miskelly](#)

Updated 9 Oct 2017, 1:33pm

NSW Health documents obtained by the ABC reveal areas where deadly pathogens are regularly detected at dangerous levels in unfiltered drinking water pumped from rivers, lakes and dams.

The water safety reports, obtained after a lengthy freedom-of-information battle, also show more than 100,000 NSW residents were issued protective boil-water alerts in the last five years.

Grafton, Kempsey, Scone, Jindabyne and Bega are cited as the five worst-performing areas, with repeated "contamination incidents" triggering "potential health risks".



PHOTO: Over 100,000 NSW residents have been issued with 'boil-water' alerts in the last five years. (ABC Tropical North: Sophie Kesteven)

IS IT ENOUGH?

My research shows that the cleanest water supplies are located in Sydney and Melbourne

Only Sydney and Melbourne have restricted public access to catchment areas and regulation to consider impacts on water quality in the development assessment process

South East QLD does have a catchment area, but it is not protected from public access is a risk to water quality

There is no legislation in QLD, unlike in NSW and VIC (for Sydney and Melbourne), to protect water supply in the assessment development process

IMPACT OF WATER QUALITY

Beneficial for the
management and
protection of native flora
and fauna

Water borne pathogens
can become widespread
very quickly potentially
causing death especially
amongst those with a
weakened immune system

Water quality determines
the quality of the
environment

WHAT HAS WORKED WELL?

- VEGETATION BUFFERS AND PROTECTED CATCHMENTS ARE THE REASON THAT BOTH MELBOURNE AND SYDNEY WATER SUPPLIES ARE HIGH QUALITY
- COMPARED TO THE MANAGEMENT OF OTHER WATER SUPPLIES AND OTHER REGIONAL AREAS WHICH RELY PURELY ON THE TREATMENT OF WATER AT THE SOURCE LEVEL THERE ARE STILL NUMEROUS WATER CONTAMINATION ISSUES
- THE SYDNEY DRINKING WATER SEPP GUIDELINES HAVE CONTRIBUTED TO THE REDUCTION IN CONTAMINATION ISSUES IN SYDNEY

LETS BE THE CHANGE

The Sydney Drinking Water Catchment SEPP was developed through extensive research

It requires the protection of water quality at the planning stage of development

More emphasis on management of water quality at a catchment level and at the development assessment stage is required across Australia to address water quality issues and contamination problems

WILL IT WORK?



- IT CURRENTLY IS WORKING IN SOME AREAS EFFECTIVELY
- IT IS WORTH PROTECTING OUR HEALTH
- BENEFITS THE QUALITY OF THE ENVIRONMENT

SUMMARY

There are numerous water quality issues across Australia

These have been known to occur when water quality is not considered in the development assessment process and where there are no protected catchment areas

By applying water quality protection across Australia, particularly with development legislation then an overall improvement in water quality is possible

Current legislation is insufficient to maintain water quality across Australia