



An Australian Government Initiative



Australian & New Zealand
GUIDELINES FOR
FRESH & MARINE
WATER QUALITY

About the Water Quality Guidelines

2025-06-24

The objective of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality is to provide authoritative guidance on the management of water quality in Australia and New Zealand. Our guidance includes setting water quality and sediment quality objectives designed to sustain current, or likely future, community values for natural and semi-natural water resources.

The Water Quality Guidelines provide:

- a platform for consistent water quality management and planning
- technical support for Australia's National Water Quality Management Strategy and New Zealand's National Policy Statement for Freshwater Management
- sound tools for governments and the community to assess and manage ambient water and sediment quality.

Scope

The main focus of the Water Quality Guidelines is on water quality within the context of broader ecosystem health management.

Information in the Water Quality Guidelines:

- may be applicable to natural and seminatural waters in Australia and New Zealand, including freshwater, groundwater and estuarine and marine waters
- will support different [community values of water](#), such as aquatic ecosystems, drinking water, primary industries, recreation, and cultural and spiritual values.

The Water Quality Guidelines are not intended to directly apply to contaminant concentrations in industrial discharges or stormwater quality (unless stormwater systems are regarded as having relevant community value).

Topics in the Water Quality Guidelines cover:

- a detailed description of our recommended systematic approach to water quality management through an explicit [Water Quality Management Framework](#)
- guidance on [typical uses of the Water Quality Guidelines](#) within the framework, including planning, approvals and water quality monitoring and assessment
- [quantitative guideline values](#) for water and sediment quality (and guidance on their derivation) to support the protection of community values, and the context in which they should apply
- detailed guidance on [water quality monitoring](#) and its relationship to the Water Quality Management Framework.

The Water Quality Guidelines are a joint initiative of the Australian and New Zealand governments, in partnership with the Australian states and territories. Although there is a joint governance structure for the Water Quality Guidelines, the management context and jurisdictional responsibilities differ between Australia and New Zealand.

Governance

Revision of the ANZECC & ARMCANZ (2000) guidelines was managed previously by 4 groups responsible for different levels of governance:

- Project Coordination Group (PCG) — scientific members from relevant government agencies who managed technical aspects of the revision and content in the Water Quality Guidelines.
- Joint Steering Committee (JSC) — jurisdictional representatives who provided strategic direction, managed approved work plans and provided high level technical input supported by the PCG.
- Water Quality Policy Sub Committee (WQPSC) and National Water Reform Committee (NWRC), which sat above the JSC.

These groups have been updated as part of progressing the new National Water Agreement, and oversight of the Water Quality Guidelines is now the responsibility of:

- Water Quality Technical Working Group (WQTWG) – replacing the PCG, with members supporting jurisdictional representatives on WQSC.
- [Water Quality Strategy Committee \(WQSC\)](#) - replacing the WQPSC, with members advising their jurisdictional representatives on NWC.
- [National Water Committee \(NWC\)](#) – replacing the NWRC, comprising senior officials from Australian Government and all state and territory water agencies.

Australian context and jurisdictional responsibilities

Australia's [National Water Quality Management Strategy](#)  is designed to facilitate water quality management for the productive and sustainable use of Australia's water resources and to protect aquatic ecosystems.

The National Water Quality Management Strategy framework, including the Water Quality Guidelines, is voluntary, and different jurisdictions in Australia have different responsibilities.

The Australian Government is responsible for:

- managing water quality in the marine waters of the [Exclusive Economic Zone \(EEZ\)](#),  outside of state boundaries
- managing water quality in relation to certain matters under the [Environment Protection and Biodiversity Conservation Act 1999](#) 
- meeting commitments related to water quality under international agreements, including
 - [Convention on Biological Diversity](#)  (in particular Aichi Target 8)
 - Goal 6 of the United Nations Post-2015 Development Agenda's [Sustainable Development Goals](#),  'Ensure availability and sustainable management of water and sanitation for all'.

Australian state and territory governments hold most of the responsibility for management of inland waters and coastal natural resources. Implementation of the Water Quality Guidelines occurs through their relevant water

quality planning and management policy processes.

Complementary planning may occur at a regional or catchment level, with local or catchment management strategies developed and implemented by relevant stakeholders. This could include local governments and catchment management bodies.

New Zealand context and jurisdictional responsibilities

Primary responsibility for water management rests with the [regional councils in New Zealand](#). 

The [National Policy Statement for Freshwater Management](#)  provides a framework that directs how local councils go about managing freshwater quality under the [Resource Management Act 1991](#).  This includes nationally set minimum acceptable standards for water quality for the 'ecosystem health' and 'human health for recreation' community values of waterways.

The [New Zealand Coastal Policy Statement](#)  guides local councils in their management of the coastal environment under the Resources Management Act.

Contributors

As with previous revisions, [developing the Water Quality Guidelines](#) was challenging and complex. A large amount of content had to be drafted or updated, and then translated to an online platform.

The Water Quality Guidelines website has been made possible with substantial assistance from many people and organisations across Australia and New Zealand, from 2009 to 2018.

Management of the website development was undertaken by Dr Angela Slade from the Australian Government Department of Agriculture and Water Resources (and formerly New Zealand Ministry for the Environment). Technical coordination of the revision was shared by Dr Rick van Dam and Dr Chris Humphrey from the Environmental Research Institute of the Supervising Scientist (ERISS), within the Australian Government Department of the Environment and Energy.

Content development

PCG–Web Subgroup members, John Bennett from Queensland Department of the Environment and Heritage Protection (now Department of Environment and Science), Dr Chris Humphrey, Dr Angela Slade and Dr Rick van Dam, developed the website information architecture, and contributed, reviewed and edited content for all website sections.

Australian governments and the New Zealand Government would like to acknowledge the contributions from the following organisations and individuals, by website section.

About section

Hydrobiology (led by Dr Ross Smith) for drafting initial content.

Water Quality Management Framework section

Hydrobiology (led by Dr Ross Smith) for drafting initial content.

Guideline values

ARRIS for updates to primary industries content; CSIRO (led by Dr Merrin Adams) for toxicant default guideline value (DGV) derivations; Golder Associates (led by Kirsten Broadgate and Dr Carolyn Brumley) for toxicant DGV derivations; Hydrobiology (led by Drs Ross Smith and Graeme Batley, CSIRO) for drafting initial content for subsections; Jacobs (led by Dr Celeste Wilson) for toxicant DGV derivations; NIWA (led by Dr Chris Hickey) for toxicant DGV derivations; and Natural Resource Assessment (led by Alicia Hogan) for managing the technical review of new and revised toxicant DGVs. Development of Burrlioz 2.0 software was led by Dr Simon Barry. Development of the cultural and spiritual values content was led by Roku Mihinui and Bradley Moggridge. Development of the 2015 and 2018 toxicant DGV derivation methodology was led by Dr Michael Warne, with development of the 2025 version led by Dr Rick van Dam. Development of the (shiny)ssdtools software was led by Professor David Fox (Environmetrics Australia), Joe Thorley and Seb Dalgarno (Poisson Consulting) and Dr Rebecca Fisher (AIMS).

Your location section

AgResearch (led by Dr Richard McDowell and Ton Snelder) for New Zealand physical and chemical (PC) stressor DGV derivations for rivers; CSIRO (led by Jason Hartog) for Australia's PC stressor DGV derivations for marine water, PC stressor derivation methodology and ecoregional reports for Australia's marine regions; Hydrobiology (led by Phil Whittle) for ecoregional reports for some of Australia's drainage divisions; and NIWA for the New Zealand estuaries sedimentation rate DGV.

Monitoring section

CSIRO (led by Dr Brent Henderson) for revising study design and data analysis and interpretation content; and Hydrobiology (led by Drs Ross Smith and Graeme Batley, CSIRO) for a limited revision of the monitoring program objectives, field sampling and laboratory analysis content to ensure currency.

Resources section

Hydrobiology (led by Drs Ross Smith and Graeme Batley, CSIRO) for drafting some initial content.

General assistance

Contributions were provided throughout the revision project by members of the PCG from Australia and New Zealand, in particular: John Bennett, Monika Muschal (New South Wales Department of Primary Industries), Dr Evan Harrison (New Zealand Ministry for the Environment), Dr Chris Hepplewhite (Department of Agriculture and Water Resources), Dr Chris Humphrey, Dr Clive Jenkins (Environment Protection Authority, South Australia), Kevin McAlpine (Western Australian Environmental Protection Authority), Leon Metzeling (Environment Protection Authority, Victoria), Dr Angela Slade and Dr Rick van Dam, Chair.

We would like to give particular thanks to the water quality experts from the working groups in Phase 1 of the revision of the Water Quality Guidelines.

The Department of Agriculture and Water Resources provided secretariat, project, copyediting, legal and communications support.

We would also like to acknowledge the contributions of the web writer (Tristan Viscarra Rossel), website designer (Thomas Buckland) and website developer (Mehmood Rehman).

Many other organisations and individuals contributed to the review and, although they are too numerous to list here, we would like to thank them all.

Referencing the 2018 Guidelines

Reference:

ANZG 2018. [Australian and New Zealand Guidelines for Fresh and Marine Water Quality](#). Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia.

Citing in the text:

ANZG (2018)

References

ANZECC & ARMCANZ 2000, [Australian and New Zealand Guidelines for Fresh and Marine Water Quality](#). Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Canberra.

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