

Revised Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018

For over 25 years, governments across Australia and New Zealand have worked together to develop and support a set of water quality guidelines to manage the quality of our water. The Australian and New Zealand Guidelines for Fresh and Marine Water Quality (the guidelines, formerly ANZECC 2000) have now been improved and updated.

The guidelines provide water managers with tools and guidance to assess, manage and monitor the water quality of aquatic systems in Australia and New Zealand. The guidelines are designed to help support all community values associated with water, including the plants and animals that live in water, as well as a range of uses (primary industries and Indigenous cultural and spiritual values).

The guidelines have been jointly developed by the Australian and New Zealand governments and Australian state and territory governments, and provide a best-practice platform for consistent and effective water quality management and planning. They are not mandatory standards but have been used by state and territory governments to develop water management policy and/or regulation.

The improved and revised guidelines, which incorporate new science and knowledge developed over the past 20 years, are publically available through a new, easy-to-use and interactive website, waterquality.gov.au/anz-guidelines

In the future, the guidelines will be continuously updated to maintain their relevance.

Underpinning national water quality strategies

The guidelines are part of Australia's National Water Quality Management Strategy (NWQMS: waterquality.gov.au/about). The strategy aims to protect Australia's water resources by improving water quality while supporting the businesses, industry, environment and communities that depend on water for their continued development.

Revision of the guidelines

Since the guidelines were last revised in 2000, substantial new scientific data and techniques for establishing guideline values (GVs), and for monitoring and assessment, have become available. This best available science has been incorporated into the revised guidelines. The revisions also make the guidelines easier to use.

Revisions include:

- an updated and expanded water quality management framework
- new toxicant default guideline values
- a revised method for deriving toxicant default guideline values
- new physical and chemical stressor information and default guidelines values for more regions and the opportunity for NSW to derive and publish catchment/region-specific default guidelines values
- introduction of a weight-of-evidence approach to water quality assessment and management
- incorporation of Indigenous cultural and spiritual values associated with water quality
- improved guidance on monitoring and reporting.

A revised water quality management framework

The water quality management framework has been expanded to incorporate the world's best practice for adaptively managing water quality.

The framework integrates all aspects of assessing and managing water quality in a logical 10-step process. By clearly detailing each step and how they fit together, the new framework gives water quality managers structured guidance as well as specific guidance for seven typical uses for water. The framework helps decision makers consider local conditions. It also includes guidance on selecting appropriate indicators and water quality objectives for protecting identified community values for waterways.

Revised default guideline values

The guidelines provide default guideline values (DGVs), previously known as 'trigger values', which provide water managers with important information about physical and chemical stressors (for example, turbidity or nutrients) and toxicants. The DGVs identify levels where the risk of unacceptable effects may occur to a community value or values.

The revised guidelines include new DGVs for some toxicants. A list of new toxicants or those with new DGVs is available on the guidelines website.

The new toxicant DGVs are the result of applying a new derivation method agreed to by all governments, which is available on the guidelines website. This method represents a robust and defensible approach to support decision-making, and users will be able to use it to derive their own site-specific toxicant guideline values.

The Sediment Quality Guidelines have also been revised, with updated guidance on sampling and assessment approaches and with updated sediment quality default guideline values for some toxicants.

New physical and chemical stressor information

New and more relevant guidance, including physical and chemical stressor DGVs, has been developed for some regions in Australia and New Zealand. Governments will also be able to derive and publish catchment or region-specific physical chemical stressor default guideline values.

Weight-of-evidence approach

The newly developed weight-of-evidence approach encourages the use of more than one line of evidence for water quality decisions and management, and provides substantial guidance on how to undertake a weight-of-evidence assessment. This approach will improve confidence in the protection of community values as it:

- introduces a systematic approach to assessing a number of lines of evidence
- focuses on decision-making based on an integrated weight-of-evidence assessment.

Indigenous cultural and spiritual values

The importance of cultural and spiritual values associated with water in Australia and New Zealand is recognised in the revised guidelines through new principles and processes to enhance and protect those values. Part of this guidance includes using the DGVs from other community values to support the protection of Indigenous values.

Improved monitoring guidance

New guidance on monitoring has been included to help users integrate monitoring and reporting more effectively into water quality assessment and management. The updated guidance has brought together material from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) and the Australian Guidelines for Water Quality Monitoring and Reporting (2000).

Interactive website

The website, waterquality.gov.au/anz-guidelines, will revolutionise the way the guidelines are used.

The website provides easy access to the guidelines for water quality managers, industry, governments and community members via desktop and mobile platforms, which can be quickly and cost-effectively updated as new data becomes available or other changes occur.

The new website is fully interactive and includes information about how to tailor national default guidelines values, enabling users to personalise their use of the information and guidance for their own circumstances and local conditions.

Next steps

Visit waterquality.gov.au to access the revised guidelines.

For more information about the guidelines and how they will be used in NSW, please visit the NSW Department of Industry website, industry.nsw.gov.au/water/science