

15 January 2010

Heather Bishop
Assistant Director Evidence Translation Section
National Health and Medical Research Council
GPO Box 1421
CANBERRA ACT 2601

Dear Ms Bishop

Water Quality Research Australia would like to take the opportunity to submit a response to the proposed revisions to the Australia Drinking Water Guidelines. The ADWG is an important framework to assure safe drinking water supplies in Australia. Through the ADWG, Australia is recognised as a world leader in establishing a risk-based approach to drinking water management. As such, it is pleasing to see that the ADWG is being revised to ensure that it continues to be up-to-date with current knowledge and world best practice.

I would be pleased to discuss any aspect of this submission with you.

Yours sincerely,



Jodieann Dawe
CEO
Water Quality Research Australia Ltd.

Water Quality Research Australia:
Submission on the Proposed Revisions to the Australian Drinking Water Guidelines

Water Quality Research Australia Limited (WQRA) is a national research organisation established to succeed the CRC for Water Quality and Treatment when the CRCWQT ended on 30 June 2008. WQRA is wholly owned and funded by its members who include Australian water utilities, research organisations and government departments, and is a not-for-profit company with an independent Chair and Board members nominated and elected from the Company's members.

WQRA brings together key water research groups and industry members across Australia to conduct targeted, priority research. These relationships place WQRA in a unique position to rapidly address current and emerging issues in public health and water quality.

This submission from WQRA reflects views across the WQRA membership and provides a holistic national water sector view.

This submission identifies a number of key issues in response to the proposed revisions. In addition, responses in relation to specific sections of the proposed revisions are also included.

Key issues

1. Establishment of a Continued Process for Review of the ADWG

It is imperative that a continuous review process of the ADWG is formally established and supported to ensure that the ADWG remains relevant and up-to-date. It is the belief of WQRA that the important foundation work in establishing the ADWG is strengthened through a regular and formalised rolling review process, which promotes and facilitates the inclusion of the best available information and industry best practice, in a clear and transparent manner.

It is recommended that the NHMRC, Water Quality Advisory Committee be continued to ensure appropriate and knowledgeable oversight of an ongoing ADWG review process. To maintain rigour and technical robustness the position of Chair should continue to be filled by an independent representative who is well respected in the water industry.

WQRA would be able to support the NHMRC, WQAC in providing independent scientific advice to help underpin future revisions. WQRA has established links with regulators, utilities, government departments and research institutions and is in a position to effectively assist future revisions to ADWG, if sufficiently resourced. WQRA also has well established international linkages to facilitate incorporation of international as well as national leading edge policies, guidelines and best practice.

2. Establishment of Health Based Targets

WQRA is supportive of the direction to establish health based targets for the microbial safety of Drinking water, as is demonstrated by our financial and corporate support of the NHMRC Partnership Project 'Establishing Australian Health Based targets for microbial Water Quality'. The proposal to implement this approach in 2012 still requires additional guidance on protozoan management. For example a fact sheet or look-up tables identifying the necessary treatment requirements to meet health based targets depending on the characteristics of the water supply system, combined with a consistent regulatory framework in which these targets are applied. Successful implementation of this approach must be supported by good governance frameworks and sufficient information to help aid utilities to develop appropriate capabilities to facilitate integration into current practices. WQRA recommends that a process be established to translate the discussion paper into implementation and support for targeted research to support the assessment of appropriate treatment processes given the raw water quality and supply risks. WQRA has the capability to coordinate and oversight relevant research and can contribute to a process that enables this information to be incorporated into the implementation of the DALY approach.

3. Revised *E.coli* compliance target

While Utilities constantly strive towards the target of zero tolerance, that is achieving 100% of samples being free from *E.coli*, in reality even with the best managed systems there is the occasional non-conformance, due to the nature of water supply systems and other events outside the control of the utilities not because of poor management. Thus, it is extremely unlikely that any utility would ever be able to meet this compliance target even with exceptional diligence and high quality practices in place. Non-compliance to such an un-achievable target sends the wrong message to consumers and may cause unwarranted concern to the public.

The critical aspect of water managers and utilities in maintaining safe water supplies is the management response and corrective actions that are undertaken when an *E.coli* exceedance occurs. It is these critical control points and corrective actions that are a real test of good water supply management and compliance should be based on an assessment of management actions together with a sensible target that pushes utilities to strive for 100% compliance.

Given that information on compliance with targets is reported annually, non-compliance in not meeting an unrealistic target sends an unnecessarily negative perception to the public regarding the safety of their water supply and undermines public confidence in water utilities. The focus of the 100% *E.coli* target and its implied drive towards end point monitoring rather than preventative measures is inappropriate and will not result in improved safety of water supplies, nor will it improve public confidence in the management of water supplies.

This proposed revision to the *E.coli* target is strongly opposed. A proposed alternative to a 100% target could be to report *E.coli* compliance together with non conformances, including, cause, utility

response, and corrective management actions. This would be consistent with the risk management philosophy of the ADWG.

4. Philosophy of the ADWG

The principle of the ADWG is that it is a risk-based approach to managing drinking water supplies. As reported in the National Water Commission Benchmarking Report, the ADWG Guideline Values are broadly adopted; however, the risk based approach to managing drinking water supplies is not. Establishing drivers to encourage implementation of the risk management framework underpinned by the ADWG, not just the guideline values, requires strengthening. The first step in strengthening this approach would be for greater linkages between the different sections of the ADWG to reflect the inter-related nature of the framework and the philosophy of a multi-barrier approach. Strengthening of the risk-based approach would also be reinforced through the development of National Regulation to the management of drinking water and wastewater supplies.

5. Rationale for proposed changes to guideline values

Guideline values have changed, and new guideline values have been included, without the inclusion of a justification for the changes. Without this information it is not possible to evaluate the appropriateness of the proposed changes. Some of the proposed changes are related to aesthetic values, e.g. TDS, which have additional implications for Government Investment in Salinity Management, particularly in the Murray-Darling Basin. There are other values that have been included, such as the 140 new pesticide values, without any guidance on what to monitor or what pesticides are of concern (i.e. Is there evidence of these in water supplies, thus that is why they are included, or are they simply a list of all known pesticides with human health guideline values?). It would be cost prohibitive for utilities to monitor all of these. If assessment was through evaluating land-use it would be useful/necessary to include pesticides that are for used specific land uses/management practices in each climate zone.

6. Revised turbidity target

There are many inconsistencies in the revised requirements for turbidity. The fact sheet does not include the justification for the change in guideline value. There is justified concern that in order to meet this revised target, many water authorities would require substantial capital and operational changes. These changes would be a significant expense. This significant expenditure would only result in marginal reductions in the risk to public health. It is not established in the documentation whether the <0.1 NTU value is a health guideline or an arbitrary end-point compliance target. As raised previously, the implied drive towards end point monitoring rather than preventative measures is inappropriate and will not result in improved safety of water supplies nor will it improve public confidence in the management of water supplies.

7. National regulatory framework

To support implementation of a risk based approach to managing Australia's drinking water supplies, it would be advantageous to have a National regulatory framework, based on the approach now being implemented in some Australian States. Although, while consistency of approach across Australia is desirable, WQRA supports the principle that water quality should be regulated by the State Health Departments.

The scope of a National regulatory framework should include the audit of plans for management of drinking water, alternative water supplies and wastewater, minimum standards and levels of qualifications for operators of treatment and wastewater plant, and improved reporting requirements. The expanded reporting requirements could build upon the existing National Water Commission Annual Benchmarking Report, developing additional indicators to include other aspects of water quality, application of the ADWG or other risk based approaches, qualifications of operators, investment in R&D, and quality of source water.

8. Communication and Education

The key to successful implementation of any revisions to the ADWG is communication with key stakeholders and users of the ADWG, highlighting the modifications and the underlying reasons for these alterations. To assist in uptake of the revisions it is suggested that knowledge transfer sessions be convened across Australia, specifically aimed at utilities and other water managers to learn about the revisions to the ADWG and the implications for their water supply and management regime. This proactive approach would empower water managers to accept and adopt changes to the ADWG.

Specific Comments in relation to the Documents open for review

Microbial Discussion Paper:	<ul style="list-style-type: none"> - It is not clear what the implementation requirements for industry will be and more importantly how this will be supported. - Unclear on the processes that will be facilitated to support implementation/inclusion of this approach through the ADWG
Chapter 9:	<ul style="list-style-type: none"> - A greater focus on operational monitoring of Process Control Points and Critical Control Points is required rather than verification monitoring. This would then be consistent with the risk based management philosophy of the ADWG.
Chapter 10: 10.4 – small, community water managed supplies	<ul style="list-style-type: none"> - The National Water Commission has funded a WQRA project to develop a <i>Field Guide</i> to support implementation of the Community Water Planner in remote, indigenous communities across Australia. It is recommended that this product is referred to as another tool to support small community water supply management. The <i>Field Guide</i> has been reviewed by the NHMRC. - The concept of using Field Kits for testing microbial water quality has value, however, there is little or no information regarding the reliability or robustness of these field kits. It would be recommended that work is undertaken in this area to inform the next review of the ADWG to enable relevant information to be considered in the decision making process.
Fact Sheets:	<ul style="list-style-type: none"> - All fact sheets, where relevant, should include the justification for changes to guideline values. - It is necessary to differentiate between a health based guideline and a compliance target.
Information Sheet 3.3 – Statistical Methods	<ul style="list-style-type: none"> - There are some issues in relation to the appropriate statistics recommended, in particular where there is a mismatch between the statistics required and the recommended monitoring frequency.
Fact Sheets – Physical and Chemical, Chlorine Dioxide, Chlorite, Chlorate	<ul style="list-style-type: none"> - The revision of the Chlorate guideline value to 0.3 has implications for Utilities who have moved away from gas to hypochlorite to reduce OHS incidents.
Pesticide Fact Sheets	<ul style="list-style-type: none"> - There is no guidance on the relative priorities of the pesticides, which ones are common and should be of concern or any other information important in assessing the risks. - These fact sheets should be presented in a separate section together with supporting information regarding the relationship between land-use, climate zones and pesticides.