

4500+

individual members across the whole water cycle

20 November 2015

Samantha Robertson
Executive Director, NHMRC
GPO Box 1421,
Canberra, ACT, 2601
By email: water@nhmrc.gov.au

Australian Water Association submission to the Draft Water Quality Advisory Committee Work Plan and Proposed Priorities for 2015-2018

600+

corporate members including utilities, large water users contractors, consulting firms, research and suppliers.

Dear Samantha,

The Australian Water Association welcomes the opportunity to provide comment on the Draft Water Quality Advisory Committee Work Plan and Proposed Priorities for 2015-2018.

As the national peak organisation to the water sector, the Australian Water Association provides a platform for our water experts, practitioners and businesses to share information, grow expertise and collaborate effectively. Our members include professionals and practitioners working in utilities, science and research, energy and resources, manufacturing and agriculture.

100+

water utilities servicing 20+ million customers

The Association supports the development of the draft guidelines by the WQAC and agree that all key priorities have been captured. We agree that incorporating the Microbial Health Based Targets (HBT) into the ADWG is a high priority, as is revising the guidelines around disinfection by-products. What is of critical importance is the development of a policies and procedures manual that informs the review of the guidelines. We believe a formal evaluation mechanism is required to ensure that all feedback and solutions are adequately captured and actioned. The review of the Recreational Water Guidelines is timely and needed, however we suggest that this could include a section on the cyanobacteria alert framework, the scoping of which could also include a section dealing with spas and swimming pools. Importantly we suggest the WQAC review the need to update the “augmentation of drinking supplies” guidelines once the NatVal outcomes and the Phase 1 review processes are complete.

50+

years servicing the water sector.

In our submission we address each of the priorities in turn and provide discussion of their priority ranking and the purpose and scope of the work.

Yours sincerely,



Jonathan McKeown
Chief Executive
Australian Water Association

HIGH PRIORITY

Microbial Health Based Targets

The Association agrees that further development of microbial HBTs to be incorporated in the ADWG is a high priority. The development of a framework and principles by the WQAC is much needed and timely to ensure the scientific content of the guidelines is maintained and represents best practice. A further advantage of HBTs is it will bring about alignment with the recycled water guideline on augmentation of drinking water supplies.

We acknowledge that progress towards the introduction of HBTs is already well advanced. There has been extensive consultation with industry since 2009 who are supportive. We would encourage the incorporation of support material that has already been prepared by the Water Services Association of Australia and Water Research Australia.

Disinfection by-products (DBP) discussion paper

In light of the new evidence on health effects potentially associated with DBP, which has been recognised internationally and has resulted in revised guideline values based on this science, the Association agrees that the NHMRC and the WQAC should review the new epidemiological evidence, which may require the ADWG to be revised.

The Association agrees that this should be done by establishing an expert advisory committee to assist in scoping the project and determine if further work is needed. The management of the DBPs is influenced by raw water Natural Organic Matter. Better control and understanding of these processes will improve compliance with guideline values. This is worth enhanced investment and increased monitoring.

We note that Australian guideline values are higher than the USA and WHO for DBPs (THMs, HAAs, the oxyanions, etc.). We do not have a guideline value for chlorate or perchlorate. There is very little testing of the oxyanions. These issues will likely be better addressed if the policy procedure (next item) is enhanced and there is therefore a better chance to deliver outcomes.

We note that this is a matter that has generated some controversy with concern that a more rigorous guideline figure for DBP could introduce the possibility of microbial contamination due to a reduction in the use of chlorine¹ or that compliance will require significant and potentially costly augmentation of existing systems. However, guideline figures in the ADWG should reflect the best

¹ Chemicals used in water treatment may pose a risk because of the potential for inadvertent contamination, and they should be monitored accordingly. By-products of disinfection should also be monitored, because of the possible adverse health effects from chronic exposure to these chemicals. However, it remains uncertain whether exposure to disinfection by-products at the levels typically found in drinking water causes human disease, and given the established health risks associated with waterborne microbial pathogens, disinfection should never be compromised.

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available science. Agreement should be reached on the most appropriate methodology to determine the guideline value (for inclusion in the policy and procedures manual).

The Australian Water Association recommends that the WQAC prepares a wide ranging discussion paper that details future options.

Policies and procedures manual for the rolling review of the ADWG

The Association believes that implementing a policies and procedures manual for the rolling review of the ADWG is the activity with the highest level of importance. At present there continues to be an ongoing series of meetings and assessments with loose recommendations, resulting in ad hoc identification of priorities. We suggest that the on-going review of the ADWG should be underpinned by a formal evaluation process. This will aid in the identification of gaps as well as redundancies.

We suggest that the ADWG should be more outcome focussed. Committees composed of scientists, policy makers and operators start with diametrically opposed initial positions, which are difficult to reconcile. A rigorous process should be developed to identify the appropriate risk based limit, with consideration given to the provision of guideline information for acute and chronic exposure and an assessment of the uncertainty involved in setting the limits. This process should be clearly separated from any policy decisions by water suppliers about how they address a limit in consultation with their regulator to avoid the potential for influence on the limit set in the guidelines.

The procedures manual should include an agreed process for interpreting toxicological data and converting into guideline values. Development of procedures would be facilitated by better partnerships with other relevant agencies and groups. For example:

- NICNAS, AVPMA and Department of Environment in the area of evaluation of chemicals.
- The review of the National Water Quality Management Strategy, in particular, 'The Australian and New Zealand Guidelines for Fresh and Marine Water Quality'.

The Association would welcome the opportunity to contribute through its specialist groups such as 'Catchment Management' and 'Water Management Law and Policy'.

Under the current guideline review process it is not clear how an individual gives feedback, or what the formal mechanism for providing feedback is. We believe a capture mechanism is necessary to capture all issues raised and feed into the formal evaluation mechanism suggested above. At the same time a mechanism for registering solutions is also necessary to ensure that all involved are registered and up to date.

Chemical Working Group review of 1996 chemical fact sheets, and development of new fact sheets.

As referred to above, a prioritised process for review of the 1996 chemical fact sheets should be an important component of the 'Procedures Manual' to be developed. Close alignment with the work of Chemical Assessment group (Department of Environment), NICNAS, APVMA is paramount.

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Ensuring the fact sheets are up to date is a critical priority as they are heavily relied upon. However in assessing the 50 ADWG fact sheets that have not been upgraded, it seems that many are mostly fit for purpose. There has not been significant new water science concerning hardness, colour, iron, chloride, sulphate, sulphide, cyanide, cyanogen chloride, ammonia, etc. in the last 50 years. Ensuring we are relying on the best available science is critical, however any changes must be needed and underpinned by rigorous scientific evidence, not changed for the sake of change.

MEDIUM PRIORITY

Review of Recreational Water Guidelines (2008)

A review of the Recreational Water Guidelines is needed to provide nationally consistent guidance on secondary contact and sanitary survey methods.² The USEPA have advanced advice on bather guidelines drawn from an international analysis of data, we would suggest that Australian guidelines would draw from this.

An additional important component that should be included in this review is the cyanobacteria alert framework. The scoping of which could also include a section dealing with spas and swimming pools.

LOW PRIORITY

Cyanobacteria alert framework

More broadly the Association suggests that a review of cyanobacterial advice in the guidelines should be a higher priority and include coverage of potential impacts of acute and chronic exposures and, if possible, guideline values for short and long-term exposures. This could be undertaken by a dedicated panel of experts and be peer reviewed by a sub-group of experts involved in the biennial cyanobacteria workshops.

A separate committee or group should be formed to discuss and evaluate the acute and chronic impacts from exposure to low levels of certain cyanobacteria to inform criteria. This group would be responsible for producing a separate fact sheet or section in the guidelines that detail the potential impacts of acute and chronic exposure.

The cyanotoxin guidelines should be reviewed and revised with the recommendations of an expert sub-committee. At present, we have a 'real guideline' only for microcystin; and proposed guidelines for cylindrospermopsin and saxitoxin. Nodularin has a factsheet, but no guidelines. We already have established cyanobacteria alert framework – Page 31 and Table 9 (<http://www.wqra.com.au/publications/document-search/?download=106>), but need to establish the guideline values.

Australian Guidelines for Water Recycling (Phase 2 – drinking water augmentation)

² Cyanobacteria (or blue-green algae) are a common and naturally occurring component of most recreational water environments. They are of public health concern because some types produce toxins that can have a harmful effect on recreational water users. A single guideline value is not appropriate.

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The Association suggests the WQAC review the need to update the “augmentation of drinking supplies” guidelines once the NatVal outcomes and the Phase 1 review processes are complete. This is an important priority given that the AGWR are extensively applied and now quoted in various legislation.

A key concern is the inconsistent application of the AGWR across jurisdictions. The Association believes a nationally consistent approach to recycled water regulation and the application of the AGWR is needed. There are a number of bodies which could provide support such as the Australian Water Recycling Centre of Excellence; and the National Recycled Water Regulators’ Forum. The Australian Water Association also has a ‘Water Recycling Network’ that, inter alia, has as one of its goals to ‘Facilitate the adoption of standard legislation, regulation, policy and guidelines”, so we would welcome the opportunity to be consulted in this process.

Guidelines for managing risks in spas and swimming pools

At present no national guidelines exist for managing risks in spas and swimming pools. The Association supports the development of nationally consistent guidelines to be included in the Guidelines for Managing Risk in Recreational Water.

Accessibility of ADWG document

Given that the ADWGs are currently only available in pdf, the Association supports greater accessibility, including the introduction HTML. In accordance with modern trends, investigation of more up to date accessibility should also be undertaken, e.g. the possible use of ‘Apps’. The ‘Australian and New Zealand Guidelines for Fresh and Marine Water Quality’ will be shortly moving to a web platform. Engagement with this process could be useful.