**Queensland Water Directorate (*qldwater*)** ***e-*flash**

**Information for Water Industry Managers and Practitioners in the Queensland Water Industry**

**(Issue #425 – 20 March 2020)**

**1. COVID-19 update**

**2.  Managing Disinfection By-Products in Drinking Water: Stakeholder Consultation**

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**1.  COVID-19 update**

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To members,

We are aware that most organisations are immersed in business continuity planning and while it’s very difficult to speculate on how long this will all last, this is the best information we have at present.

1. There is little change to the way ***qldwater*** is working at the moment.  Most of our staff are already geared for teleworking with travel being a normal and significant part of our business.
2. The Department of Natural Resources, Mines and Energy has initiated a working group looking at critical operations skills and potential for support from larger utilities.  It met via teleconference for the first time on Wednesday, and you can expect to see information requests coming to you through us or the department in the fairly near future.  We are all hoping the COVID planning is a bit of over-reaction but the staff capacity issue they are trying to address is one we have been raising now for some years and at the very least this looks like a good opportunity to increase visibility of an important and increasing risk for the Qld sector.
3. There hasn’t been a significant response to our earlier request around emerging supply chain issues – the shortage of laboratory materials including reagents appears to be the most common concern.  We have communicated this information to our various regulators and will provide advice back as we receive it, but believe that the common-sense approach to managing dwindling supplies of materials is understood and will be taken into consideration should any compliance risks arise.  Please keep providing examples.
4. There is no **immediate** change to our position on ***qldwater*** events, but that could be modified soon.

The ***qldwater*** rationale is as follows:

* Our events are designed to support regional members and, subject to national or state advice or restrictions, we will rely on our members to determine when to progress.
* Our immediate upcoming events are small, local and able to be managed taking into account hygiene recommendations, including online options available for organisations or individuals that are unable to attend.
* We will not do anything to risk health of our regional communities but with sensible precautions will seek to provide regional communities with options to stay in contact and continue collaboration essential for facing issues such as the current health crisis.
* We do not rely on events for income and seek only cost-recovery.  As a result we probably have a little longer than most associations to make decisions.  Rest assured if you’ve sponsored or registered for an event which doesn’t proceed, we’ll sort it out.  If you are a sponsoring organisation and wish to withdraw due to the uncertainty now, let us know, we will happily organise refunds.

Our next conference planned for Gympie on 23/24 April and the Small/ Remote Communities workshop planned for Goondiwindi for 13/14 May (and rest of the Water Connections Tour) are clearly at risk, but as of the start of this week, both of these hosts were keen to proceed.

As per eFlash #424, please contact us at any time to raise questions or concerns and we will do our best to source useful information for you.  There has been a steady stream of enquiries in the last fortnight; apologies if there is a delay in responding.

Don’t forget our Zoho forum set up for these issues (<https://connect.zoho.com/portal/qldwater/group/covid-19>).  At the moment there are 150 or so users registered for this but plenty of members who aren’t but can be if they wish.  We have in the last 24 hours posted some good stuff – e.g. Fraser Coast Regional Council’s draft Management Plan and a number of useful links to trusted sources.

Dave Cameron

CEO

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**2.  Managing Disinfection By-Products in Drinking Water: Stakeholder Consultation
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**Managing Disinfection By-Products in Drinking Water: Stakeholder Consultation**

The National Health and Medical Research Council (NHMRC) and the Water Quality Advisory Committee (WQAC) is undertaking targeted consultation on possible approaches to managing disinfection by-products (DBPs) in Australian drinking water supplies and ***qldwater*** has been invited to submit. Members are invited to provide feedback directly to us for incorporation into a Queensland industry submission by 15 May 2020.

Feedback will help inform a revision of the Australian Drinking Water Guidelines (ADWG), alongside a rolling review of related fact sheets and guideline values for DBPs.

It has been emphasised that the focus of the Consultation Paper is on ways to manage DBPs in Australia, not on reviewing specific DBP guideline values.

**If you are interested in contributing to the submission, we invite you to download the** [**Consultation Paper**](https://qldwaterau.worldsecuresystems.com/LiteratureRetrieve.aspx?ID=253292) **and forward your feedback to** **lreeves@qldwater.com.au** **or** **dcameron@qldwater.com.au** **by 28 April (note we have made the deadline a little earlier than normal as we are moving offices in early May). The NHMRC has provided a** [**helpful template**](https://qldwaterau.worldsecuresystems.com/LiteratureRetrieve.aspx?ID=253293) **for feedback that will help to focus our submission, and we would appreciate if your feedback was similarly framed.**

**Further background**

Most water utilities in Australia (and Queensland) focus on optimising treatment to remain within any ADWG guideline value for a specific DBP concentration. One issue with this approach is that it makes no provision for the DBP that do not have guideline values, for which the risk to human health is unknown. The development of guideline values for the hundreds of DBPs that are present in disinfected drinking water supplies is both time consuming and expensive, as it requires toxicological data for each compound in order to develop a guideline.

However, the WHO notes that the concentration of DBPs such as trihalomethanes (THM) and haloacetonitriles (HAA) in drinking water will reflect the concentration of a wide range of related compounds, thus controlling the precursor in order to maintain the concentrations of these DBPs within guideline values will provide sufficient control over the other by-products. This approach removes the need for the development of additional guidelines for further individual DBPs, but does raise the question of the guideline values being repurposed as proxy indicators, which is outside the intent of those in the ADWG.

This is the approach that has been taken by the US and Canada, which have developed their guideline values with the intent that the acceptable levels of THM and HAAs are set low enough that they are likely to be protective for adverse effects from DBPs in general.

Two potential new approaches to DBP management and monitoring are being reviewed by the WQAC; reduction of DBP precursors in raw water, and alternative sum measures of DBP concentrations.

Reduction of DBP precursors centres around the reduction of natural organic matter – as typically measured by dissolved organic carbon (DOC) – as a major precursor for DBP production. The ADWG currently does not provide advice on appropriate target levels for DOC. Nor does it provide guidance on bromide and iodide as DBP precursors, which must also be considered if treatment to reduce DOC is undertaken.

Alternative sum measures of DBPs include the use of a total organic halogen (TOX) as an indicator as it measures both known (THM and HAA) and unknown DBPs. For this to be adopted as a bulk regulatory measurement for DBPs, further studies would be required to understand the relationship between the formation of THM/HAA and TOX, and the relationship between TOX concentrations and toxicity in Australian drinking water.

Bioassays are another means to measure the bulk toxicity of DBPs for which there is little conventional data. Cell-based bioassays quantify the effect that compounds have on organisms by measuring stress responses to exposure. However, these methods measure the effects of all biologically active compounds in the sample, not just the DBPs, and more work will be required to assess their suitability as a management and monitoring tool.

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**This message may be passed on to interested individuals and organisations.**

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