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Dr Robert Hall
Director, Public Health and Chief Health Officer
Department of Human Services
120 Spencer Street
Melbourne, Victoria 3001

Our Ref: WB/07/0053

Dear Dr Hall

Safe Drinking Water Regulations 2004 - Submission

I have pleasure in providing comment on the Exposure Draft Safe Drinking Water Regulations 2004 and the associated Regulatory Impact Statement from the Water Sector Group of the Department of Sustainability and Environment. I note that the *Safe Drinking Water Act 2003* makes provision for the Minister for Health to consult with the Minister for Water and Environment prior to submitting a proposed regulation to the Governor in Council and apportioning the administration levy between water suppliers and water storage operators. My understanding is that a separate process will be implemented to address these requirements.

The Department supports the aims of the *Safe Drinking Water Act* in providing assurance in delivery of good quality drinking water through the four key principles of –

- Adopting a total system management approach from ‘catchment to tap’, based on risk management principles;
- Specified drinking water quality standards at the consumers tap;
- Information disclosure to consumers; and
- Flexibility for agreed local community-based variations for aesthetic drinking water quality standards.

Complementary application of these principles provides assurance in delivery of good quality drinking water to the benefit of consumers, water authorities and the overall Victorian community.

This submission provides an overview of the main comments on the Regulatory Impact Statement and the Exposure Draft for Safe Drinking Water Regulations together with more detailed comment in an attachments. Attachment A provides observations on the Regulatory Impact Statement and Attachment B provides detailed comment on the Exposure Draft for Safe Drinking Water Regulations.

Regulatory Impact Statement

The overall case made by the Regulatory Impact Statement to adopt the proposed regulatory regime is supported.

The Department considers that application of a risk management framework to manage the delivery chain from 'catchment to tap' with assurance provided through achievement of standards at consumers taps and independent audit of the processes employed is a best practice approach to provide good quality drinking water.

In this context it is important that there be clear understanding amongst stakeholders of what constitutes an effective risk management framework. The Department believes that the Secretary, Department of Human Services, plays an important role in providing direction in this area.

Accordingly it is recommended that Guidelines be produced by the Secretary to provide clarity on the form and content of the risk management plan built on the requirements specified in the *Safe Drinking Water Act* and Regulations. This will avoid ambiguity as well as enabling the Secretary to 'sign-off' on the plan. Further, this will enhance the Secretary's role in supporting continual improvement in the risk management practices adopted by water authorities and support critical evaluation of water authority drinking water investment strategies.

The Department would be able to provide of its considerable knowledge in development and application of risk management regulatory practice in the water industry to participate in development of such guidelines. This is particularly the case for integrated catchment management, recreational use of reservoirs and asset management.

The *Safe Drinking Water Act* makes consequential amendments to the *Food Act 1984* and its application to water authorities in delivery of drinking water. In particular the *Food Act 1984* provides a due diligence defence in supply of good quality drinking water. This is an important feature and should encourage water authorities to develop and implement sound risk management practices. No mention of this provision is made in the Regulatory Impact Statement. The Department believes the role of these two pieces of legislation should be made clear to water suppliers and water storage operators.

The regulations take a specific position in a number of areas. Further information would be of value in providing information on why the particular position has been taken to provide transparency. The proposed guideline is a useful vehicle to make such a statement. The attachment identifies areas that would benefit from further information.

Chapter 11 of the regulatory impact statement points out that improved practice can be achieved through the risk management process as well as through regulation. The Department supports, wherever possible, the adoption of a risk management approach in preference to prescription through regulation.

Exposure Draft for Safe Drinking Water Regulations

As discussed the Department advocates adoption of a risk management approach with effectiveness verified through achievement of drinking water quality standards at consumer taps.

Since only a limited number of parameters are specified as a standard, achievement of this requirement has added significance. This is particularly the case with the measurement of microbiological organisms. The Australian Drinking Water Guidelines states that “*Escherichia coli* should not be detected in a minimum 100 mL sample of drinking water”. The Department makes the case that this should be the standard for microbiological organisms and that the condition of “98% of all samples of drinking water collected in any 12 month period in accordance with these regulations contain no *Escherichia coli*” is not consistent with a risk management approach.

The Department considers that the case for a ‘98% condition’ is only relevant to address ‘false positive’ results in a regulatory environment with no statutory risk management requirement. Adoption of a risk management approach requires all positive *Escherichia coli* results be investigated as a potential incident. Further such an incident demonstrates a need for the water supplier to investigate the effectiveness of risk management practices through the delivery chain. Accordingly a requirement to address incidents of non-compliance with a standard through the risk management process, should be included in the regulations. Such a requirement would encourage continual improvement in risk management practices. It is noted that implicitly the regulations address the potential for ‘false negative’ results through NATA accreditation and associated audit processes.

Similarly the Department is concerned that periodic monitoring will not demonstrate effective risk management. A significant body of evidence is now available to demonstrate that non-achievement of a standard is caused by an emergency, incident or event. Periodic compliance monitoring may thereby not necessarily be effective in sampling such conditions and hence not provide effective assurance mechanism in complementing risk management practices.

The Department advocates that the regulation for sampling frequency includes a requirement for sampling during emergencies, incidents and events.

It is noted that the regulations do not specify any aesthetic parameters. The regulations do though explicitly require a water supplier to report annually on the actions taken to manage the aesthetic characteristics of the water supplied. Community participation in establishing aesthetic drinking water quality was one of the key features of the *Safe Drinking Water Act 2003* and accordingly the level of community involvement and consultation should be a key feature of such reporting.

If you require any further information regarding this submission please contact Peter Guttman, telephone number 9637 9240.

Yours sincerely

Greg Wilson
Deputy Secretary Water Sector Group

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Attachment A - Observations on the Regulatory Impact Statement

Page	Section	Observation
5	Summary	Comparison of the alternatives is stated as a difference of \$3.3 M over ten years whilst in Table 6 and page 41 estimates the difference at \$3.7 M?
8	1	<p><u>Consequential Amendments</u></p> <p>The RIS identifies that the <i>Safe Drinking Water Act 2003</i> amends the applicability of the <i>Food Act 1984</i> 'to water supply authorities in Victoria'.</p> <p>The <i>Food Act 1984</i> specifically recognises in section 17E the Defence of Due Diligence which will now apply to water authorities.</p>
12	5	<p><u>Summary Description of the Regulations</u></p> <p>No comment has been provided on Regulation 8 and 9. A brief overview of the intent of these regulations would provide clarity of intent.</p>
18	6.1.1	<p><u>Efficiency benefits in management of water businesses.</u></p> <p>The section correctly identifies that the proposed legislation is anticipated to result in improved management of water authorities based on the requirement for all water suppliers and water storage managers to implement risk management plans. The section does not however, nor is this mentioned elsewhere in the RIS, describe the benefit provided through the <i>Food Act 1984</i>. In particular due diligence defence to an offence relating to the quality of water supplied based on taking 'all reasonable precautions and exercised all due diligence to prevent the commission of the offence'.</p> <p>Information should be provided to explain the role of <i>Safe Drinking Water Act 2003</i> and the <i>Food Act 1984</i>.</p>
32	Table 3	<p><u>Summary of Estimated Costs of Elements of the Regulatory Framework</u></p> <p>No costs have been identified for Rural Water Authorities. Clearly the legislation places some new responsibilities on some rural water authorities as water storage managers. An indication of the magnitude of such costs should be provided and information on the responsibility for payment of such costs.</p> <p>The opportunity to resolve this issue does not appear to have been taken in the last round of consultation, post passage of the <i>Safe Drinking Water Act</i> and drafting of the proposed regulations.</p>
36	Table 5	Unclear how the annual incremental monitoring costs for regional urban water authorities and metropolitan businesses relates to the figures stated in Table 3 for monitoring?

Page	Section	Observation
		<p>Regional urban sector annual incremental monitoring costs – Table 5 - \$1,847,00, Table 3 shows total monitoring cost \$750,000 + \$789,000 = \$1,539,000. Metropolitan businesses – Table 5 \$274,000, Table 3 \$20,000 + \$94,000 = \$114,000.</p>
40	Table 6	<p>Unclear why ‘Other Costs’ differs by \$0.2 M between Alternative 2 and that stated for Proposed Regulations and Alternative 1?</p>
45	11	<p><u>Implementation and Future Regulatory Developments</u></p> <p>The section correctly points out that matters can be appropriately dealt with through the risk management process, rather than being dealt with prescriptively via regulation.</p> <p>Comment is provided on requirements in relation to accreditation of collectors of samples, development of sample collection protocols and specification of standardised methodologies to be used to analyse samples of drinking water.</p> <p>It is recommended that a body of evidence support any statutory change in these areas. Accordingly water suppliers should be encouraged, through the risk management process, to advise the Secretary of identified shortcomings.</p>

Attachment B – Detailed Comment on Exposure Draft for Safe Drinking Water Regulations

Page	Sub-regulation	Comment and Proposal
3	3	<p><u>Definitions</u></p> <p>Incidents and events</p> <p>The terms are used in the regulations but are not defined in the definitions, a description is provided in 6(2)(b). The terms are used elsewhere in the regulations, a definition would thereby provide greater clarity.</p> <p>Hazard and Risk</p> <p>Definition for Hazard is confusing since it is in terms of water quality agents only but takes no account of acceptable or unacceptable levels.</p> <p>There is no definition for Risk that is a term repeatedly used in the regulations. This is understood to have been a deliberate strategy in development of the regulatory arrangements. The rationale behind this strategy should be provided to support transparency and clarity in regulatory intent.</p> <p><i>Recommended</i> that a definition of all the terms used in the regulations be provided for clarity. If such definitions do not appear in the regulations then they should be included in accompanying guidelines.</p>
4	4	<p><u>Water sampling locality</u></p> <p>It is unclear how the boundary for a ‘regulated water’ supply is to be defined or how such a supply is to be sampled?</p> <p><i>Recommended</i> that the boundary for regulated water supply be defined.</p>
4	4(4)	<p>Boundary</p> <p>Unclear whether a water sampling locality can be described by a map which shows the features as described in this sub-regulation?</p> <p>Suggested that a map is the preferred means to describe the water sampling locality boundary for water suppliers and consumers. It should be noted that some of the features specified in (4)(b) might change over time.</p> <p><i>Recommended</i> that the word ‘map’ be included in the sub-regulation and that, as appropriate, the map include representation of the items described in sub clauses (a) and (b). The ability to revise the map due to any changes over time should be provided.</p>
5	5(2)	<p><u>Water Sampling Points</u></p>

Page	Sub-regulation	Comment and Proposal
		<p>The proposal regarding the number of taps is quite prescriptive. No information has been provided on why such an approach is adopted.</p> <p>A maximum number of taps is specified but there is no comment on a minimum number of taps?</p> <p>The relationship between the requirements of this regulation and that specified in regulation 11 should be explained.</p> <p>The Secretary clearly requires assurance that sampling points suitably demonstrate potential variation in a water sampling locality. It is argued that a minimum number of taps should be specified to ensure that the potential for variation within a water sampling locality due to such matters as system hydraulic performance is addressed.</p> <p>It is argued that establishing sampling points greater than that required by the Secretary is a management responsibility rather than one to be specified in regulation.</p> <p>The intent may be to ensure there is no built in statistical bias in the results presented to the Secretary. If this is the case it should be more clearly stated and the rationale provided.</p> <p><i>Recommended</i> that the number of sampling points be at least adequate to demonstrate the variation in water quality across a water sampling locality.</p>
6	6(1)	<p><u>Risk Management Plan</u></p> <p>To provide assurance that water suppliers and water storage managers have suitable water quality monitoring practices in place demonstrating that reported compliance data is representative of actual system performance.</p> <p><i>Recommended</i> that the following paragraph be added –</p> <p>‘details of the monitoring activities undertaken and measures taken to ensure data collected on water quality is as objective and accurate as possible.’</p>
6	6(1)(d)	<p>The term ‘risks and hazards’ used, whereas elsewhere the regulations refer to ‘hazards and risks’.</p>
7	6(2)(a)	<p>Standards in Schedule 2 recognise that parameters are present but standard requires that the level be below a threshold level. Does then the presence or level in water of the organisms, substances and matters referred to in subsets (i) to (v) cause a risk?</p> <p><i>Recommended</i> that greater clarity in regulatory intent be provided.</p>
7	6(2)(b) and (c).	<p>Identifies ‘the risk arising from an incident or event that may cause’ such a requirement is though not reflected in the monitoring and reporting requirement specified in Schedule 2 which is based on</p>

Page	Sub-regulation	Comment and Proposal
		<p>frequency (as defined by a period) rather than an incident or event.</p> <p><i>Recommended</i> that the requirement for sampling during emergencies, incidents and events be incorporated in the standard.</p>
9	7(c)	<p><u>Risk Management Plan Audits</u></p> <p>There is also a need to consider emergencies, incidents and events associated with regulated water supply.</p> <p>Clearly human health is of importance but so is aesthetic quality and ‘fit for purpose’ requirements for regulated water.</p> <p><i>Recommended</i> that risk to aesthetic quality and ‘fit for purpose’ requirements be included.</p>
9	7(c)(iii)	<p>This clause is difficult to understand as a plain English statement.</p> <p><i>Recommended</i> that the sub-regulation be redrafted.</p>
11	10(a)	<p><u>Drinking Water Quality Standards</u></p> <p>The requirements as specified would appear to create a conflict between compliance with a quality standard and an incident.</p> <p>The regulation has adopted as the parameter for measurement of microbiological quality <i>Escherichia coli</i>.</p> <p><i>E. coli</i> is the most common thermotolerant coliform present in faeces and is regarded as the most specific indicator of recent faecal contamination. <i>E. coli</i> should not be present in a minimum 100mL sample of drinking water. The presence of these organisms is indicative of faecal contaminations and suggests a potentially serious fault in the integrity of the water supply system (Australian Drinking Water Guidelines – Fact Sheet 3).</p> <p>Adoption of a microbiological organisms quality standard that allows ‘at least 98% of all samples of drinking water collected in any 12 months period’ implies that up to 2% of samples could not have met the ‘no <i>Escherichia coli</i>’ requirement in Schedule 2. No explanation for such an allowance is provided.</p> <p>Clearly the regulations are intended to support the continual delivery of good quality drinking water. In this context the potential rationale for a ‘98%’ standard could be to minimise the potential impact of a ‘false positive’ result. If such a rationale is to be adopted a similar approach is required for a ‘false negative’ result but again a case is not presented. Although the accreditation and auditing process for analytical laboratories is seen as a means to address ‘false negative’ results.</p> <p>The risk management process should be used to address incidents of non-compliance with a standard. This would involve introducing a</p>

Page	Sub-regulation	Comment and Proposal
		<p>requirement that non-compliance incidents be addressed through the risk management process. Such a requirement would encourage continual improvement in risk management practices to the benefit of all stakeholders.</p> <p><i>Recommended</i> that either zero presence for <i>Escherichia coli</i> be adopted in Schedule 2 or the requirement that if a positive <i>Escherichia coli</i> result is recorded the event should be treated as an incident and addressed through evaluation of the risk management process employed by the water supplier and reported to the Secretary.</p>
11	10(c)	<p>The sub-regulation specifically refers to risk to human health. This should be extended to include consideration of impact on aesthetic quality to complement the requirement specified in 15(1)(k).</p> <p><i>Recommended</i> that following phrase be added ‘... risk to human health and or create an unacceptable risk or detriment aesthetic quality values’.</p> <p>Unclear where samples for parameters not specified in Schedule 2 are to be taken and the practices to be employed.</p> <p><i>Recommended</i> that this be addressed through the additional statement on monitoring to be included in Regulation 6.</p>
11	11(1)	<p><u>Frequency of Sampling for Drinking Water.</u></p> <p>Frequency within the regulations has been defined on the basis of period. Schedule 2 indicates the sampling frequency for quality standards.</p> <p>Periodic sampling implies that a regular sample can adequately represent the quality of water supplied. This may not necessarily be correct. It is recognised that an incident or event causes variation in water quality (confirmed by requirements of 6(2)(b) and (c)). Variation in quality may or may not be detected through a periodic sampling process. The role of monitoring to meet regulated requirements should be to provide confidence in the quality of water provided. It is argued that such confidence can only be provided once the impact of a range of incidents and events has been monitored and demonstrated to be well managed as a result of the risk management practices that are in place.</p> <p>Clearly the Secretary will require such information prior to making any variation in sampling frequency as enabled under 11(4).</p> <p>Frequency for regulated sampling should incorporate sampling incidents and events.</p> <p><i>Recommended</i> that the requirement to demonstrate that incidents and events have been sampled and reported through the standard compliance process be introduced.</p>

Page	Sub-regulation	Comment and Proposal
11	11(2)	<p>The implications of 11(1) and 11(2) are that there be a minimum of 2 sampling points. Such a requirement should be broadened to demonstrate that sampling is undertaken in a statistically random manner which will provide evidence of the variability in water quality across a water sampling locality. This can be addressed through a more explicit requirement for monitoring practices to be implemented as part of the risk management plan.</p> <p><i>Recommended</i> that this sub-regulation be redrafted to explicitly require sampling frequency to complement a monitoring plan that has been ‘signed-off’ by the Secretary as part of the risk management plan.</p>
14	13(4)(b)	<p><u>Accreditation of Water Analysts</u></p> <p>Need to ensure that the person who ‘signs’ for the result is responsible for the workings of the laboratory.</p> <p><i>Recommended</i> that further clause be added to ensure that the person accredited must be a NATA signatory.</p>
15	13(8)	<p><i>Typographical error</i> - First line ...is not ‘be’ prohibited...?</p>
15	14	<p><u>Report of Results of Water Samples</u></p> <p>The requirement appears to be different from that specified in <i>Safe Drinking Water Act 2003</i> section 23(2). It is unclear what might be the implications and impact of earlier disclosure to the public than the Secretary?</p> <p><i>Recommended</i> that uniform arrangements be in place for reporting to the public and the Secretary.</p>
16	15(1)(c)	<p><u>Additional Details to be Included in Annual Reports of Water Suppliers or Water Storage Managers</u></p> <p>The quality standard of 98% limits the potential for useful information to be collected and disseminated by the Secretary in regard to this sub-regulation.</p> <p>The Secretary plays an important role in supporting on-going improvement by water suppliers and water storage managers in the delivery of good quality drinking water. One aspect of which is to gain knowledge from incidents and for this to be disseminated across water authorities.</p> <p><i>Recommended</i> that a summary of the results from investigation of incidents where a positive <i>Escherichia coli</i> result was obtained be published in the annual report.</p>
16	15(1)(d) and 15(2)(a).	<p>Unclear whether this refers to actions prior, during or post the emergency, or all three?</p> <p>The difference between ‘drinking purposes generally’ and ‘posed a risk</p>

Page	Sub-regulation	Comment and Proposal
		<p>to human health' in the context of this sub-regulation is not clear.</p> <p><i>Recommended</i> that sub-regulation be redrafting to provide clarity of intent.</p>
16	15(1)(f)	<p>'comparison ... results from the previous financial year'</p> <p>Essentially such a comparison provides trend in performance. If this is intended, the intent of the sub-regulation should not be limited to the previous 'financial' year but be extended for the period of record or at least a period where there has been consistency in service delivery.</p> <p>Intent should be to demonstrate consistency in compliance or improving performance over time.</p> <p><i>Recommended</i> that the sub-regulation be revised to '...from previous years'</p>
18	15(1)(l)	<p>Unclear, what are the reporting 'details' required for regulated water?</p> <p><i>Recommended</i> that explicit requirements for regulated water be stated.</p>
19	15(2)(d) and (e)	<p>There will be cases where the water storage manager does not disinfect the supply, apply any other process and / or use any chemicals. This should be considered in the sub-regulation by inclusion of an exclusion statement such as 'where applicable'.</p> <p>A water storage manager may well add chemicals or other substances to manage the water stored for other than disinfection purposes eg algal management. How is this to be addressed?</p> <p><i>Recommended</i> that 'where applicable' be added and that a clear statement be provided on how substances used for other than disinfection be addressed.</p>
21	Schedule 2	<p>Trihalomethanes</p> <p><i>Typographical error</i>, word missing - ...must <u>be</u> less than or ...</p>