

**DRINKING WATER QUALITY
REGULATORY FRAMEWORK
FOR VICTORIA**

**PROPOSED SAFE DRINKING
WATER REGULATIONS:**

**ANALYSIS OF SUBMISSIONS
FROM REGULATORY
IMPACT STATEMENT**

May 2005



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MAIN REPORT

1. Introduction

The *Safe Drinking Water Act 2003* came into effect in Victoria on 1 July 2004. The Act is the first Act in Victoria to deal specifically with the regulation of drinking water supplies.

The Act requires water suppliers, as defined in the Act, to prepare and implement risk management plans in relation to their supply of water, deliver water that complies with standards for drinking water quality, communicate effectively with all stakeholders and publicly disclose relevant water quality information. The Act also sets out obligations for audits and sets powers for making regulations.

Water storage managers, also defined in the Act, will be required to prepare and implement risk management plans in relation to the supply of water to a water supplier, communicate effectively with all stakeholders and also publicly disclose relevant water quality information.

The Act contains the principal obligations and refers to subordinate regulations covering a number of technical aspects of the legislation. These include, among other things, standards for drinking water quality, monitoring requirements for drinking water, approval criteria for auditors and analysts, detailed disclosure requirements for annual reports and prescribed elements of risk management plans for water suppliers and water storage managers in Victoria.

In September 2004 the Department of Human Services publicly released a **Regulatory Impact Statement** in connection with the proposed Safe Drinking Water Regulations for Victoria. The objectives of the regulations are to give effect to the *Safe Drinking Water Act 2003*. The Statement was advertised in the Victorian Government Gazette special number 207 on 24 September 2004 and in newspapers circulating in Victoria on 25 September 2004. A copy of the Victorian Government Gazette special number 207 is included in Appendix 1.

Among other things, the Regulatory Impact Statement assessed the costs and benefits of the proposed regulations and other feasible alternative means of achieving the same objectives. It concluded that the benefits of the proposed regulations are likely to outweigh the expected costs. The draft regulations were appended to the Statement.

Written submissions were sought from interested industry, stakeholder or community groups and from the public in relation to any matter relevant to the proposed regulations. The consultation period closed on Monday 25 October 2004.

This report **summarises and analyses** the submissions received from this consultation period and sets out any necessary changes to the proposed regulations.

2. Process of consultation and analysis

The Safe Drinking Water regulatory framework has been developed over the period 2000 to 2004 with considerable public, water industry and stakeholder consultation.

The public consultation period for this round, for the exposure draft of the Safe Drinking Water Regulations, ran from Friday 24 September 2004 to Monday 25 October 2004. During this period, supplementary and background information was made available on the Department's environmental health web site. Details are provided in Appendix 1.

The Department also convened a workshop for water industry stakeholders, to discuss the proposed regulations. The workshop was held in Melbourne on 8 October 2004 and attracted approximately 40 representatives from the Victorian water industry and related water industry stakeholders. The Department's presentations from this workshop were also made available from the Department's environmental health web site.

In total, **26 submissions** were received in this round of consultation, of which 16 were from water businesses covered by the legislation. This represented approximately 30% of the 90 bodies invited to comment. All submissions were from businesses or agencies based in Victoria. The submissions were in general briefer than those received in previous rounds of consultations, ranging in length from tabulated reports to brief emails.

The submissions were usually prepared and signed by technical managers in the bodies, although a number were signed at Chief Executive Officer level. Information about the style, format and authorship of the submissions is included in Appendix 2. The remaining bodies that received invitations to make a submission but chose not to do so are also listed in Appendix 2. No submissions were received from the general public.

The submission from the Victorian Water Industry Association was provided on behalf of the Victorian water businesses that it represents. This submission incorporated and summarised comments made by a number of individual water businesses.

A number of submissions also provided general comments on the regulatory framework and a number commented on aspects of the text of the Regulatory Impact Statement.

Each submission was assigned a number based on the order in which they were received and an identifying code. The submissions are regarded as public documents and are also published on the Department's environmental health web site.

All submissions were reviewed and assessed to determine their compatibility with the policy objectives of the legislation and to determine whether the drafting instructions needed to be clarified, particularly in terms of language. The comments on the draft regulations and the policy responses are set out in the tables in chapter 4 of this report.

3. Comments supporting the framework and consultative process

A number of submissions specifically supported and appreciated the Department's consultative process for the draft regulations. They also endorsed the catchment to tap risk based focus of the framework, whilst making a number of particular comments on the wording of the draft regulations. No submission opposed or expressed concern with the consultative process for the regulations. This was in line with the support received during the previous (November 2003) round of water industry consultation.

A number of the comments supporting the framework are reproduced below:

"South East Water would like to place on record our appreciation of the consultative approach that has been taken by the Department of Human Services in the development of these regulations. We support the risk management approach being adopted by the Department as expressed in the Regulatory Impact Statement (RIS) for the Regulations."

South East Water

"VicWater is supportive of the direction and intent of the Regulations in particular the risk management approach being adopted by the Department as expressed in the Regulatory Impact Statement for the Regulations."

Victorian Water Industry Association

"Central Highlands has reviewed details of the documentation and wish to inform the Department that apart from some minor issues clearly support the movement from traditional guidelines to regulation and the application of risk management principles." ...

"The Act and the proposed regulations has identified and addressed many major deficiencies in the regulatory regime. In addition to this list there are other positives where significant business benefits have been realised across Central Highlands Water through the regulatory transition period.

- Greater staff awareness and focus on water quality issues extending to Executive Management, Board of Directors, customers and stakeholders*
- Recruitment of staff that provides a more professional, flexible and multi skilled water quality business approach.*
- Restructuring of business areas to provide additional water quality focus.*
- Injection of significant capital and operational budget to undertake major water quality improvement programs in line with determined long-term strategies.*
- Compiling intellectual knowledge and information from across the business to complement and support an integrated quality system approach." ...*

"Central Highlands Water would like to commend the Department regarding the consultation process undertaken to date and furthermore look forward to continued close working relationships into the future."

Central Highlands Water

"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."

Department of Sustainability and Environment

"We have examined the two documents and believe that they contribute significantly to the understanding and management of Victoria's drinking water quality."

Overall, City West Water finds the thrust of the Draft to be quite clear and reasonable with respect to its presentation and requirements."

City West Water

"The North Central Catchment Management Authority recognises the value these guidelines [sic] will provide for water quality standards and community health. We appreciate that the regulatory framework provides for integrated quality assurance and risk management of drinking water quality and imposes obligations on water suppliers and water storage managers."

North Central Catchment Management Authority

In summary, in their submissions to the Department during various rounds of consultation in 2001, 2003 and also this round in 2004, the water industry stakeholders in Victoria have expressed significant support for the regulatory framework.

4. Comments on aspects of the draft regulations

The Department invited comments on the exposure draft of the Safe Drinking Water Regulations. The comments are reproduced in the tables on the following pages. Where possible, they are directly quoted from the submissions concerned. In some instances they have been summarised or paraphrased, in the interests of brevity or clarity. The comments are identified by the code that was assigned to each submission. The codes are set out in the List of Submissions in Appendix 2.

Regulations 5, 6, 11, 13 and 15 attracted the most significant comments, as well as the most significant number of comments. These regulations pertain to the creation of water sampling points, risk management plans, frequency of sampling, accreditation of analysts and content of annual water quality reports respectively. Schedule 2 (water quality standards) also attracted a significant number of comments.

The breakdown of comments by regulation is shown in the table below.

Regulation	Subject	Number of comments
--	General comments on the regulations	9
1	Objective and outline	1
2	Authorising provisions	0
3	Definitions	3
4	Water sampling localities	7
5	Water sampling points	12
6 (1)	Risk management plan matters	6
6 (2)	Risk management plan risks	7
7	Risk management plan audits	2
8 and Schedule 1	Audit certificate	2
9	Approval of risk management plan auditors	4
10 (a) and 10 (b)	Drinking water quality standards in Schedule 2	2
10 (c)	Drinking water quality standards	6
11	Sampling frequency provisions	12
12	Samples of water must be analysed	5
13	Accreditation of water analysts	14
14	Reports of results of water samples	1
15 (1)	Additional details to be included in annual reports of water suppliers	11
15 (2)	Additional details to be included in annual reports of water storage managers	1
Schedule 2	Drinking water quality standards	17

The comments are categorised by regulation. Where an individual regulation attracted a large number of comments, the comments are categorised by sub-regulation. Discussion and response to the comment and any proposed amendment to the regulation are also shown.

In summary, the main issues that arose related to the:

- frequency of sampling and standards for chemicals added as part of the treatment process (especially monitoring for bromate and formaldehyde when disinfection with ozone was not used);
- creation of water sampling points;
- accreditation of analysts; and
- aspects of the content of annual water quality reports.

As a result, a number of amendments were made to the draft regulations.

A number of other issues were also identified, typically as typographical improvements or queries regarding specific terminology used in the regulations (such as defining 'risk', 'hazard' and changing 'accreditation' of analysts to 'approval' of analysts). Other matters will be handled by guidance notes to be issued by the Department, rather than as amended text in the regulations. The amendments have also necessitated swapping the order of regulations 13 and 14, in the exposure draft, so as to be regulations 14 and 13, respectively, in the final revised version. The amendments to the draft regulations are summarised overleaf.

Amendments should also be read in the context of section 41A of the *Interpretation of Legislation Act 1984* and the requirements of the *Subordinate Legislation Act 1994* and its associated guidelines. Please refer to Appendix 1 for information on how to obtain copies of these documents.

Summary of amendments to the proposed Safe Drinking Water Regulations

Regulation	Amendment
1	Minor corrections to 1 (g) and 1 (h) in changing 'accredited' to 'approved'.
3	Amending the definition of the term 'hazard' and minor corrections to 'approved water analyst' and 'relevant sampling frequency'.
5 (2) (a)	Specifying that the number of water sampling points for each water sampling locality must not be less than a number that is reasonably necessary.
6	Minor typographical corrections (e.g changing 'algae toxins' to 'algal toxins' and 'risks and hazards' to 'hazards and risks').
7 (c)	Simplifying the list of documents that must be inspected as part of the risk management plan audit (deletion of draft regulation 7 (c) (iii)).
10	Simplifying the description of the quality standards for drinking water (merging draft regulations 10 (a) and 10 (b) and changing 'algae toxins' to 'algal toxins' in draft regulation 10 (c)).
11	Expressly allowing for circumstances where samples of water are collected on behalf of a water supplier (regulation 11 (1)); Adding disinfection or treatment chemicals to the list of matters to be considered when determining whether to vary the sampling frequency (regulation 11 (4)) and deleting the obligation that the water sampling points must be specified in a notice (regulation 11 (5)).
12	Providing more specific rules regarding the circumstances under which analysis of drinking water for the parameters listed in Schedule 2 must be carried out, in particular with reference to whether certain chemicals or processes have or have not been used to disinfect or treat the water.
13	Amending the regulation pertaining to approval of analysts, to provide for specific conditions under which approval is made, denied or revoked and to redraft in terms of approval of an analyst rather than accreditation and renumber as regulation 14.
14	Amending the information that must be given to the Secretary in relation to this analysis and renumber as regulation 13.
15	Amending the additional details to be included in annual reports in relation to chemicals used to disinfect or treat water, details of steps taken for regulated water, information from previous two financial years that must be provided and deleting the requirement to include issues the water supplier had with compliance.
Schedule 2	Amended to simplify the headings, the calculations for compliance for disinfection and water treatment by-products, specifying the sample volume for <i>Escherichia coli</i> and the time period for compliance for turbidity.
(various)	Minor typographical corrections.

Subject (heading as used in draft regulations):

(unspecified or generic comment)

Comment from submission(s):

AMA - Water suppliers to whom the regulations apply are identified in section 3 of the Act, however they are not explicitly named. Can a schedule to the regulations be drawn up which names water suppliers who must comply with the regulations? This would enhance the public benefit value of the regulations.

EGW – would appreciate a timetable for a range of future regulatory activities.

YVW, SEW – Advised that their previous costings were not based on monitoring for aluminium, bromate and formaldehyde across all zones.

PARK – Most comments related to the applicability of the Act to Parks Victoria rather than the content of the regulations. Parks Victoria suggests that an exemption clause be inserted in the regulations to exclude a number of their water supply cases.

GMRW – provided further detail re their cost estimates for risk management plans.

MDU - Accreditation and approval of sample collectors [s56 (1) (b) (ii)] are not mentioned in the Regulations. The specification of analytical methods [s56 (1) (b) (iii)] has also been left out even though it is an important aspect of ensuring that the results obtained by various laboratories are comparable.

GVW - The absence of specific guidance or Regulation for analytical methods used for testing Standards will provide considerable ambiguity, will allow testing methodology implemented by different analysts to be open to subjective interpretation, and will potentially cause controversy concerning reporting of results. We strongly urge the Department to prepare a Regulation or guidance as soon as practicable to avoid these problems.

CHW – Given the transition to regulated standards the adoption of consistent analytical methodologies and detection limits should be considered. This becomes even more critical given discrepancies in chloroacetic testing recently undertaken by Melbourne Water across various NATA laboratories.

We have been extremely pro-active over the past two years producing annual reports that are in accordance with the Office of the Regulator General “Melbourne Water Retailer” template. Although formatting the initial report was time consuming we have found the outcomes to be most beneficial to our staff, customers and stakeholders. We do not consider this initiative to cause significant workload.

Discussion and response to the comment(s):

AMA – This information may change from time to time and can more readily be published by the Department or provided in its public annual report pertaining to drinking water quality, rather than listed in the regulations.

PARK – These matters are set by the Act and it is not possible to insert clauses into subordinate regulations that modify obligations set out in the Act. The Department is working separately with Parks Victoria on these matters.

GVW, CHW, MDU – Research for analytical methodologies and sample collection to be included in possible future regulations started in 2005, as foreshadowed in the Regulatory Impact Statement.

[Note: references to ADWG in text copied from submissions means the "Australian Drinking Water Guidelines" (National Health and Medical Research Council, Canberra). At the time of publication of the Regulatory Impact Statement and analysis of the submissions the 2004 edition of ADWG had not yet been published.]

Proposed amendment to regulation or drafting instruction:

None arising from this process.

<p>Subject (heading as used in draft regulations): Regulation 1 – Objective and outline</p>
<p>Comment from submission(s): <p>CWW – setting out “.... the further matters to be addressed”. The issue here is use of the word “further”, which raises the question of “Further to what?”</p> <p>GVW – no issues</p> </p>
<p>Discussion and response to the comment(s): <p>CWW - The term ‘further’ in the draft regulations means further to the primary matters set out in the Act.</p> <p>GVW – Where Goulburn Valley Water specifically stated that they had no issues with particular regulations, these comments are recorded in these tables.</p> </p>
<p>Proposed amendment to regulation or drafting instruction: None arising from this process.</p> <p>Sub-regulations 1 (g) (iv) and 1 (h) will need to correlate with any amendments made regarding changing accreditation of analysts to approval of analysts.</p>

<p>Subject (heading as used in draft regulations): Regulation 2 – Authorising provision</p>
<p>Comment from submission(s): GVW – no issues</p>
<p>Discussion and response to the comment(s): No other comments were received.</p>
<p>Proposed amendment to regulation or drafting instruction: None arising from this process.</p>

Subject (heading as used in draft regulations):

Regulation 3 - Definitions

Comment from submission(s):

SEW - Hazard – should be defined as a “biological, chemical, physical or radiological agent with potential to cause harm”.

VWIA - A “Hazard” should be defined as a ‘biological, chemical, physical or radiological agent with potential to cause harm’.

DSE – Definitions of terms incident and event would provide greater clarity. Proposed definition of ‘hazard’ is regarded as confusing, as it is in terms of water quality agents only but takes no account of acceptable or unacceptable levels.

Recommended 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.

GVW – no issues

NATA – Recommended use of the term ‘approved water analyst’ rather than ‘accredited water analyst’. With this change from ‘accredited’ to ‘approved’ draft regulation 3 would then contain ‘approved water analyst’ means a person approved under regulation 13.

MWC – The term ‘water sampling locality’ is similar to and can be confused with the term water sampling point (tap). Suggest replace with ‘water supply locality’, zone or ‘water supply area’ and modify definitions in regulation 3. Draft regulation 11 (1) uses ‘water supply locality’.

Discussion and response to the comment(s):

SEW, VWIA, DSE - Agree with suggested modifications of definitions of ‘hazard’.

The terms ‘incident’ and ‘event’ would retain their common or dictionary meanings.

A definition of ‘risk’ is regarded as unnecessary, for the reasons cited in the report “*Industry Draft of the Safe Drinking Water Regulations: Consultation History, Analysis of Submissions and New Cost Estimates*” (DHS, July 2004, page 8). (shown below):

The term ‘risk’ should have the same meaning in the Act and in the Regulations. Since the Regulations can not contain a definition of risk that applies to the Safe Drinking Water Act, it would be inappropriate to have a definition of ‘risk’ for the Regulations.

The phrases ‘*risk management plan*’ and ‘*risk management plan audit*’ are defined in section 3 of the Act, but the Act does not define ‘*risk*’. The word ‘*risk*’ in sections 9 and 10 must be interpreted within its context. Given the context, the word involves consideration of the probability of the harm occurring and the magnitude or seriousness of the harm.

There was discussion of the word 'risk' at a DHS/DSE meeting during the drafting of the Bill. It was noted at the meeting that risk involves consideration of the probability of the harm occurring and the magnitude or seriousness of the harm. It was not proposed at the meeting that 'risk' should be defined in the legislation.

Further, documents that are commonly available and used by the water industry offer commonly understood definitions of the term 'risk'. For example:

Risk (from Australian Standard AS/NZS 4360 – 1999 Risk Management, section 1.3.15): *'the chance of something happening that will have an impact upon objectives. It is measured in terms of consequence and likelihood'*

Risk (from Australian Drinking Water Guidelines 2002 version, Glossary): *'the likelihood of a hazard causing harm in exposed populations in a specified time frame, including the magnitude of that harm'*

As water suppliers are likely to refer to these documents in preparing their risk management plans, it can be concluded that these definitions will reasonably suffice without requiring one in the legislation.

MWC – Refer comments under regulation 4 pertaining to the terms 'geographic co-ordinate' and 'water sampling locality'. The term 'water supply locality' in draft regulation 11 was a typographical error.

NATA - Refer also comments under regulation 13 pertaining to use of the term 'approved' instead of 'accredited' for water analysts.

Proposed amendment to regulation or drafting instruction:

Amend the definition of 'hazard' to mean a biological, chemical, physical or radiological agent that has the potential to cause harm.

Subject to any adopted changes in regulation 13, amend 'accredited water analyst' to 'approved water analyst', meaning a person approved under regulation 14 (note that regulation 13 is to be renumbered as regulation 14).

[Note that the definition of 'relevant sampling frequency' has also been redrafted.]

Subject (heading as used in draft regulations):

Regulation 4 – Water sampling localities

Comment from submission(s):

BW – suggest amendment to require the Secretary to consult with the water supplier in determining the boundaries and locations of water sampling locations and points.

MWC – Is the step in sub-regulation 1 necessary for the standards to apply?

VWIA - It is recommended that the terminology 'water sampling localities' be replaced with 'water quality zones'. The term 'water quality zones' is a common term that is widely recognised in the water industry and the ADWG. Water quality 'zones' need to be assigned in consultation with water businesses.

DJP - In sub-regulation 4 (4) (b) you might consider in the case of a road or other 'boundary' of finite width whether you need in the regs. to mention that a side or centre-line is to be adopted as the boundary of the locality. In the previous definition of 'geographic coordinates' you might also wish to get specialist advice as to whether a reference to the AMG system might be appropriate.

NEW – Suggest that water sampling localities are defined with reference to the number of connections, population or land area per locality.

WES – Localities (zones) are not defined clearly enough.

DSE - Recommended that the boundary for regulated water supply be defined. Recommended 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 4 (4) (a) and 4 (4) (b). The ability to revise the map due to any changes over time should be provided.

GVW - suggest an additional subsection(s) to regulation 4 to:

- Define the basis or guidelines upon which Localities are to be assigned; and/or
- Restrict the number of Localities that the Secretary can specify; and/or
- Provide a mechanism for a water supplier to appeal the decision.

Discussion and response to the comment(s):

BW, VWIA – The Secretary would consult in this matter but this process detail is not normally set out in regulations.

MWC, VWIA – The terminology "water sampling localities" must be retained as it most closely aligns with the power set out in section 56 (1) (b) of the Act.

MWC - Whilst it is convenient to create water sampling localities to assess whether drinking water supplies comply with the standards, it is not essential. Section 17 of the Act requires drinking water to comply with standards.

NEW – These can be considered under draft regulation 4 (2) (c), however they would not be defining factors, due to the wide variability of these measures across the state (especially in comparing small town supplies with large metropolitan supplies).

GVW - The basis of definition is set out in the regulations already. Restricting the number of localities restricts flexibility and may be inconsistent with the over-riding need to ensure that water quality is assessed consistently throughout the state. Mechanisms for appeal were considered earlier in the policy development process but were rejected on the grounds that involving an appeal body (for example, such as VCAT) would be too cumbersome for such matters.

DSE – A boundary for regulated water, if needed, may be determined under section 6 (3) of the Act. Otherwise agree with suggestions regarding the term 'map' and ensuring that the localities can be updated or amended from time to time.

The present wording of regulation 4 permits the notice in the Government Gazette to be in the form of a map or text (or both) and permits amending boundaries from time to time (for example, subject to the Secretary receiving advice of material change in the factors set out in sub-regulation 4 (2)). Amendments are possible pursuant to section 41A of the *Interpretation of Legislation Act 1984*.

DJP – Concept of a centreline or edge of a road reservation has merit, particularly when localities are likely to abut at such roads and there are numerous and different water supply pipes on either side of wide roads (as in the Melbourne metropolitan area). However the current wording of regulation 4 (4) (b) (i) allows the Secretary to specify the centreline or either edge of such thoroughfares if necessary.

With regard to the term 'geographic co-ordinate', there is no need to refer to AMG (Australian Map Grid) co-ordinates, as standard map programs can convert from one system to another. The correct Commonwealth Government agreed datum for Australia, from 1 January 2000, is known as the "Geocentric Datum of Australia".

This can be inferred from the concepts of meridian of longitude and parallel of latitude, so there is no need to add the words "based on the Geocentric Datum of Australia" to the current definition of geographic co-ordinate in regulation 3.

Proposed amendment to regulation or drafting instruction:

Ensure that all uses of the term 'water sampling localities' are consistent throughout the regulations (especially with regard to the drafting error in regulation 11).

Subject (heading as used in draft regulations):

Regulation 5 (1) and general comments – Water sampling points

Comment from submission(s):

BW – suggest amendment to require the Secretary to consult with the water supplier in determining the boundaries and locations of water sampling localities and points.

WES - sub-regulation 5 (1) - this section must be worded so there is no doubt that the term 'water sampling point' refers to sampling at customer taps.

NEW - sub-regulation 5 (1) – this should specify that a water sample must be taken at the customer’s tap.

DJP - sub-regulation 5 (1) - The use of the word ‘tap’ to represent a ‘bib-cock’ or similar, might be thought informal since the word ‘tap’ also has other technical meanings such as the tool for cutting a thread in a drilled hole.

GVW - suggest that the phrase “at the point of supply to customers” be inserted at a convenient place in this Regulation.

VWIA, GVW- suggests an additional subsection to Regulation 5 be inserted to provide a mechanism for a water supplier to appeal the creation of a sampling point as specified by the Secretary.

Discussion and response to the comment(s):

WES, NEW, GVW – It is agreed that the taps so specified should represent supplies to customers, rather than at upstream locations. However this is believed to be covered sufficiently by the introductory wording “... representative of the drinking water supplied in that locality”.

VWIA, GVW – As with the creation of water sampling localities, mechanisms for appeal were considered earlier in the policy development process but were rejected on the grounds that involving an appeal body (for example, such as VCAT) would be too cumbersome for such matters.

DJP – Research has indicated that the confusion regarding ‘tap’ meaning bib-cock or similar is unlikely.

BW – As with the creation of water sampling localities, the Secretary would consult in this matter but this process detail is not normally set out in regulations.

Whilst no amendments arise from the submissions, a typographical error in sub-regulation 5 (1) (b) should be rectified. Further, as with water sampling localities, the creation and amendment of water sampling points is possible pursuant to section 41A of the *Interpretation of Legislation Act 1984*.

Proposed amendment to regulation or drafting instruction:

Amend sub-regulation 5 (1) (b) from “... referred in ...” to “... referred to in ...”.

Subject (heading as used in draft regulations):

Regulations 5 (2) and 5 (3) – Water sampling points

Comment from submission(s):

WES - sub-regulation 5 (2) (b) – unclear why number of taps must not exceed 100 and claims that some metropolitan zones already have more than 100 customer taps.

NEW - sub-regulation 5 (2) (a) – a schedule showing the required number of water sampling points per number of connections, population or land area would provide clarification.

CWW – sub-regulation 5 (2) (a) – reference to the number of sampling taps being not greater than ... should mean not fewer than.

MWC - sub-regulation 5 (2) (a) – sentence is too long, suggest “must be representative of the drinking water supplied in that locality”.

DJP - sub-regulation 5 (2) (b) - the concept of limiting the number of sampling points is reasonable, however the figure of 100 seems high. If as many as 100 points were indeed necessary, surely it could be argued the quality was NOT in fact the same throughout the locality and therefore two (or more) separate localities should therefore be defined.

YVW - sub-regulation 5 (2) (a) and (b) - We believe that having a few extra taps will not compromise the representation of the water quality in the water sampling locality. It is considered that a maximum is not required to be specified. Suggest:

“The number of taps specified as water sampling points for each water sampling locality must be a number that is reasonably necessary to ensure that samples of drinking water collected within the water sampling locality in accordance with these Regulations are, so far as practicable, representative of the drinking water supplied in that locality.”

SEW - sub-regulation 5 (2) (a) – Could be better phrased as: “should not be greater than a number reasonably necessary to ensure that the samples of drinking water collected ...”.

For sub-regulation 5 (2) (b) - The number 100 is arbitrary, it would be better if the number was linked to population, as per the ADWG. This could be done through referencing a table in an appendix to the regulation. Alternatively this clause could be removed.

MDU - sub-regulation 5 (2) (a) – There is nothing in this clause that states the criteria used to determine the number of taps that are specified as sampling points. Is it sufficient to imply [by taking the opposite meaning in 5 (2) (a)] that the number is “as far as practicable, representative of the drinking water supplied in that locality”?

DSE - sub-regulation 5 (2) (b) - 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. Recommended that the number of sampling points be at least adequate to demonstrate the variation in water quality across a water sampling locality.

VWIA - For sub-regulation 5 (2) (a) – queries not being greater than a number and recommended that sub-regulation 5 (2) (a) be replaced with:

“The number of taps specified as water sampling points for each water sampling locality must be a number that is reasonably necessary to ensure that samples of drinking water collected within the water sampling locality in accordance with these Regulations are, so far as practicable, representative of the drinking water supplied in that locality.”

Guidance is also required on the number of sampling points to be sampled at defined frequencies to ensure that the data is statistically valid which will enable easy comparison across the State. VicWater requests DHS advise the water industry in writing as to the calculations required for 5 (2) (a). It is not requested that this calculation would be part of the Regulations.

Suggest that sub-regulation 5 (2) (b) re a maximum of 100 water sampling points be removed, as the number 100 is believed to be arbitrary.

Discussion and response to the comment(s):

The maximum number of taps was set to fetter the power of the Secretary and this should be retained. The number of 100 was set because all localities are expected to require fewer than 100 taps. Advice from South East Water indicated that the currently largest locality in Victoria, at Notting Hill, requires fewer than 100 taps.

The points made by the submissions above in regard to the concept of setting a minimum number of taps rather than in terms of ‘not greater than’ have merit. As currently drafted, the Regulation provides two maximum limits for the number of taps specified as water sampling points for each water sampling locality.

Agree with amending sub-regulation 5 (2) (a), along the lines of the Yarra Valley Water and VWIA suggested wording, whilst retaining the fettering power of a maximum number of taps being 100 from sub-regulation 5 (2) (b).

Subject to the requirements of draft regulation 5, it is open for the Secretary to publish more detailed tables in guidance documents pertaining to (for example) sampling points per number of connections, population or land area.

Having regard to section 41A of the *Interpretation of Legislation Act* 1984, which provides a general power to undo something that has been created by legislation, the Secretary may subsequently revoke or vary a specification once it has been created. For instance, if the Secretary specified 80 sampling points in a water sampling locality, there may be a subsequent need to vary the original specification by removing 30 previous sampling points and added a further 25 sampling points.

Proposed amendment to regulation or drafting instruction:

Amend sub-regulation 5 (2) (a) in a manner which will enable a reasonable number of taps to be nominated as a minimum number of water sampling points rather than as a maximum.

Subject (heading as used in draft regulations):

Regulation 6 (1) – Matters in risk management plans

Comment from submission(s):

BW – suggest amendment such that a risk management plan must reference these matters, not necessarily contain all the matters.

SGW – Suggest change opening expression from “a risk management plan must contain the following matters” to words similar to “a risk management plan must address and provide references to the following matters”. The reason is to keep the plans clear and succinct by allowing the information to be placed in referenced documents.

VWIA - VicWater would prefer the expression “a risk management plan must provide reference to the following matters”.

GMRW – Suggest insert “as a minimum” into opening expression, amending to “a risk management plan must contain, as a minimum, the following matters”. Without this, readers may see that this is all that the risk management plans must contain.

For sub-regulation 6 (1) (b) suggest insert “to be” in details of the activities [to be] undertaken”, to change tense as the activities are incorporated into the plan before being undertaken.

SEW - Regarding the wording ‘a risk management plan must contain the following matters’, South East Water would prefer the expression ‘a risk management plan must provide reference to the following matters’. The current wording implies that the plan must contain all of the following matters, whereas our current plan provides reference to other relevant documents in order to minimise administration when changes in dates, and documentation occur.

DSE - Recommended that the following paragraph be added:

“details of the monitoring activities undertaken and measures taken to ensure data collected on water quality is as objective and accurate as possible”.

This is 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.

For sub-regulation 6 (1) (d) - the term ‘risks and hazards’ used, whereas elsewhere the regulations refer to ‘hazards and risks’.

GVW – no issues

Discussion and response to the comment(s):

The term “must contain” arises from terminology used in section 9 (1) (e) of the Act. Legal advice is that a reasonable interpretation incorporates the concept of making reference to, providing the documents that are referred to exist and are described clearly. There is no benefit in specifying also “as a minimum”, as this is implied.

Although it is true that a sound water quality monitoring program is an essential component of a risk management plan, it is regarded as implicit in sub-regulation 6 (1) (b) as one of the activities undertaken to manage hazards and risks.

For sub-regulation 6 (1) (d), risks and hazards should be read as hazards and risks, for consistency with the remainder of the regulations.

Proposed amendment to regulation or drafting instruction:

Redraft sub-regulation 6 (1) (d) as 'hazards and risks to ...' instead of 'risks and hazards to ...'

Subject (heading as used in draft regulations):

Regulation 6 (2) – Risks for risk management plans

Comment from submission(s):

GMRW – Suggest insert “as a minimum” into opening expression, amending from “a risk management plan must contain the following matters” to “a risk management plan must contain, as a minimum, the following matters”. Without this, readers may see that this is all that the risk management plans must contain.

SRW – Sub regulation 6 (2) (a) – suggest inserting “drinking” in the opening sentence as “the risk to human health that arises from the presence in drinking water of”. If left unchanged the present wording implies that SRW must for example include risks to human health from recreational exposure.

SEW – Sub regulation 6 (2) (a) – “the risk to human health that arises from the presence in water of –”. It is recommended that this be changed to “the risk to human health that arises from the presence in drinking water”.

VWIA – recommends change to “the risk to human health that arises from the presence in drinking water” (i.e. preference for the terms ‘drinking water’ or ‘regulated water’ rather than ‘water’ alone).

MWC - Sub regulation 6 (2) (a) – suggest amending reference to water to reference to drinking water or (if intended) regulated water specifically.

The intent is to have catchment to tap risk management, which would involve assessing risks at each stage (process) of the water supply system. Sub regulations 6 (2) (b) and 6 (2) (c) imply this but these clauses are unclear.

Sub regulation 6 (2) (a) (v) - Replace algae with algal (adjective) toxins

DJP - Sub regulation 6 (2) (a) (v) - The adjectival form usually adopted is ‘algal’.

DSE – For sub-regulation 6 (2) (a) - 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? Recommended that greater clarity in regulatory intent be provided.

For sub-regulations 6 (2) (b) and 6 (2) (c) - Recommended that the requirement for sampling during emergencies, incidents and events be incorporated in the standard in Schedule 2.

GVW – no issues

Discussion and response to the comment(s):

As before, the term "must contain" arises from terminology used in section 9 (1) (e) of the Act and can be inferred as meaning refer to.

There is no benefit in specifying also "as a minimum" as this is implied.

The original policy intent was to leave this term 'water' open (i.e. not explicitly as drinking water or regulated water), to ensure that risks were assessed throughout the entire catchment to tap chain without a debate of only looking at the post-treatment plant or finished water sections. The specific labelling of drinking water or regulated water is set out in the Act itself, where necessary, however the regulation must follow section 9 of the Act, which uses the term 'water' by itself.

Risks to human health from recreational contact with the water in a storage are outside the intent of the regulatory framework. Health risks arising from drinking the water are to be considered, in terms of drinking that is part of a reticulated water supply chain, rather than ingesting it in the reservoir, or body contact with chemicals during bathing in the reservoir, or other matters pertaining to public liability resulting from public access to a water storage.

A manager of a water body where risks to human health from recreational contact with the water may arise would be expected to manage those risks in a manner that is based on their assessment of matters such as public liability risk. These are independent of obligations under the drinking water quality regulatory framework.

Monitoring that a water supplier or water storage manager may need to do in regard to the items listed in sub-regulation 6 (2) (a) would be determined as part of that business' risk management plan, as would the responses to any identified hazards. This is quite separate to the sampling specified in Schedule 2, which is intended for compliance purposes rather than being the primary means of detecting or responding to incidents or events.

The intent of sub-regulation 6 (2) (a) is to ensure that risks arising from such hazards are incorporated into a risk management plan. This would be determined on a case by case basis for the water supply concerned and would involve an assessment of the magnitude of such risks.

The intent of sub-regulations 6 (2) (b) and (c) is to ensure that water suppliers and water storage managers consider risks arising from events such as contamination, meteorological, or environmental events that may affect water quality (for example, fires, floods, significant rainfall, chemical spills or human-caused contamination).

The suggestion regarding replacing algae with algal is accepted.

Proposed amendment to regulation or drafting instruction:

For sub-regulation 6 (2) (a) (v), replace 'algae toxins' with 'algal toxins'.

For sub-regulation 10 (c), replace 'algae toxin' with 'algal toxin'.

<p>Subject (heading as used in draft regulations): Regulation 7 – Risk management plan audits</p>
<p>Comment from submission(s): <p>SRW – sub-regulation 7 (c) (iii) (B) - suggest redraft to read “in the case of a water storage manager, water being supplied that, even following adequate treatment by water supplier, poses a risk to human health.” As currently drafted the clause implies that raw water that we supply [to water suppliers] should meet drinking water standards.</p> <p>DSE - sub-regulation 7 (c) - Recommended that risk to aesthetic quality and ‘fit for purpose’ requirements be included. Recommended that sub-regulation 7 (c) (iii) be redrafted as it is regarded as difficult to understand as a plain English statement.</p> <p>GVW – no issues</p> </p>
<p>Discussion and response to the comment(s): <p>This regulation is a list of documents rather than a policy requirement regarding incident management. Nevertheless, sub-regulation 7 (c) (iii) (B) may imply that raw water should meet drinking water standards, which is not the policy intent.</p> <p>Risks to aesthetic quality are included in the wording “may adversely affect the quality of ...”.</p> <p>Recommend deletion of sub-regulation 7 (c) (iii), as regulations 7 (c) (i) and 7 (c) (ii) are regarded as sufficient.</p> </p>
<p>Proposed amendment to regulation or drafting instruction: Delete sub-regulation 7 (c) (iii).</p>

Subject (heading as used in draft regulations):

Regulation 8 and Schedule 1 – Audit certificate

Comment from submission(s):

SGW – the audit certificate should identify areas of the plan that require more work rather than outright compliance.

GVW - The format of the audit certificate only caters for an overall pass or fail. This approach could be improved upon greatly by indicating the compliance status for individual aspects of the risk management plans.

We suggest enhancement of the audit certificate to indicate compliance for individual aspects of the risk management plans (eg. tick boxes), with allowance for comments relating to each aspect.

Discussion and response to the comment(s):

The audit must determine whether the water supplier or water storage manager has or has not complied with their entire obligations under sections 7, 8 and 9 of the Act.

The option remains to provide commentary on areas of the plan that require more work elsewhere in the certificate, either attached or under the heading “The details for the reasons for non-compliance are ...”.

Proposed amendment to regulation or drafting instruction:

None arising from this process.

Subject (heading as used in draft regulations):

Regulation 9 – Approval of risk management plan auditors

Comment from submission(s):

GMMW - Sub regulation 9 (1) (a) - the required accreditation to be held by an auditor is unnecessarily vague. Suggest that membership of a specific institution, such as the Institute of Risk Management, or the Risk Management Society of the Institution of Engineers Australia, or equivalent, be substituted as a minimum qualification.

Sub regulation 9 (2) - the applicant for an auditor’s approval must provide a written declaration that there is no conflict of interest. This implies that approval will need to be sought for every audit, as otherwise it is impossible to determine beforehand whether or not there will be a conflict. Suggest that the requirement be that the declaration is made part of the audit certificate, rather than at the approval stage.

CHW - I understand that details for certification of approved auditors is yet to be finalised, however our preferred position is to utilise experienced technical professionals that understand the working of the water industry, in particular drinking water quality. We believe that a HACCP food industry background may not fully complement the drinking water quality audit process and outcomes.

An additional issue for concern is the potential constraint placed on water engineering consultants that have been actively involved in the development of the water quality risk management plans, and the fact that they may be prevented from becoming auditors due to potential conflict of interest.

MDU - Sub regulation 9 (1) (b) – suggest adding at end “... to conduct audits of risk management plans of water storage and supply systems”.

GVW - It is not clear whether it is only the lead auditor that needs to be approved, or whether each and every member of the audit team needs to be approved.

Discussion and response to the comment(s):

GMMW – The policy intent is to permit the Secretary to determine the suitability of an institution, rather than naming institutions in the legislation. It is also essential that the conflict of interest declaration precede the audit.

CHW – Auditors with experience of audits outside the paradigms of the Victorian water industry may yield better outcomes than results arising from audits by auditors whose skill is based primarily on understanding of the working of the water industry. As the water industry in Victoria has adopted risk management based on HACCP principles from the food industry it is reasonable to argue that HACCP based auditors from outside the water industry are also likely to generate similar benefits.

MDU – the qualification is unnecessary as risk management plans are defined by the Act.

GVW – our policy intent is that the team leader(s) of the audit team need to be approved without necessarily every member being approved.

The term 'conduct audit' incorporates the team leader and senior team members who take responsibility for the outcome of the audit but not that every person involved needs the approval.

Proposed amendment to regulation or drafting instruction:

None arising from this process.

Subject (heading as used in draft regulations):

Regulations 10 (a) and 10 (b) - Drinking water quality standards

(issues specifically pertaining to Schedule 2 or sampling requirements are listed later in this document)

Comment from submission(s):

MWC – sub-regulations 10 (a) and (b) – the wording is very similar and could be easily combined without losing meaning. It is recommended to delete (b). In (a) delete “that is a microbiological organism” and add “the parameter must meet”.

GVW - suggest that the Regulation be reworded such that Standards apply only to those Water Sampling Localities for which the relevant type(s) of chemical treatment is used. [note: refer similar comments under regulation 11]

Discussion and response to the comment(s):

MWC - The wording of sub-regulations 10 (a) and (b) needs to correlate to the specific wording of Schedule 2.

Whilst a need to differentiate between meeting a standard and not exceeding a standard formerly existed, requested changes to Schedule 2 eliminates the need for this distinction.

It should be noted that for *Escherichia coli*, where the standard is expressed in terms of at least 98% of samples must contain no *Escherichia coli* in any twelve month period, ‘not exceed’ means that the number of *Escherichia coli* organisms detected in a sample must ‘not exceed’ zero in at least 98% of samples in any twelve month period. It should not be interpreted as meaning that the percentage of samples with zero *Escherichia coli* organisms must ‘not exceed’ 98%.

GVW – Refer discussion under regulation 11 regarding the need for monitoring based on which water treatment or disinfection chemicals are used. However, it should be noted that, under section 17 of the Act, the standards will apply to all drinking water supplied by a water supplier to another person.

Proposed amendment to regulation or drafting instruction:

Combine regulations 10 (a) and 10 (b), requiring that “parameters” (rather than microbiological and non-microbiological organisms) not exceed the standard set out in Schedule 2.

Subject (heading as used in draft regulations):

Regulation 10 (c) - Drinking water quality standards

(issues specifically pertaining to Schedule 2 are listed later in this document)

Comment from submission(s):

MWC – suggest rephrasing as “... that may pose an unacceptable risk ...”, as risk management requires that an acceptable level of risk be adopted, rather than no risk.

EGW – suggest that this be deleted and/or relocated to regulation 3 as a definition of safe drinking water under section 56 of the Act.

YVW – Suggest replace sub regulation 10 (c) with: “If the drinking water contains an algae toxin, or any other pathogen, or any substance or chemical not specified in column 1 of the Table in Schedule 2 in such amounts that may pose a risk to human health, immediate corrective actions stated in the Risk Management Plan must be implemented.”

BW – suggest deletion of “may” in sub-regulation 10 (c) and recommend that a definition of “human health” be provided scoped towards the health of the general public (i.e. excluding “extreme cases”).

DSE - The sub regulation 10 (c) 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).

Recommended that following phrase be added ‘... risk to human health and or create an unacceptable risk or detriment aesthetic quality values’.

GVW – Suggest delete Regulation 10 (c), as all aspects of this clause are fully catered for by Regulation 6, and the wording is not typical of a prescriptive Standard.

Discussion and response to the comment(s):

The purpose and policy intent of sub-regulation 10 (c) is to create an obligation for drinking water regarding constituent health-related criteria that are not covered by the specific standards set out in Schedule 2. The comments provided in the submissions that were requesting deletion or qualification of the sub-regulation were not accepted, as they were found to be inconsistent with the policy intent of creating an obligation relating to the safety of the drinking water supplied to customers.

MWC – Qualifying adjectives such as ‘acceptable’ are not suitable in regulations of this nature as, like ‘significant’, introducing it may generate debate as to its own meaning. Consequently it is unlikely to enhance the clarity of legislative objectives.

GVW, EGW – The requested changes, from an obligation to deliver water that is safe to deletion or a definition of drinking water that was safe, or an obligation to initiate corrective actions if certain parameters were detected in drinking water, were not accepted. There was no information provided to show how the proposed changes ensured that these substances were not present in drinking water supplied to customers in a manner that would have been superior to the draft’s wording.

YVW – The same argument applies regarding no benefit, as the proposal converts an outcome-based obligation placed on water suppliers into a reactive action relating to risk management plans.

BW – deletion of 'may' could restrict application of this sub-regulation and is not supported. The policy intent has been reviewed and it is confirmed that it applies to all members of the public (i.e. including infants, the elderly etc).

Water suppliers are expected to ensure that drinking water supplied to customers is safe at all times and does not contain pathogens of any kind at levels that may pose a risk to human health, including the health of infants and the elderly.

DSE – sub-regulation 10 (c) relates to health-related criteria and the policy intent was not to include aesthetic criteria within it. If it eventuated that further aesthetic related standards were required, it remains possible to create standards for specific parameters at a later date.

Proposed amendment to regulation or drafting instruction:

None arising from this process.

However, note amendment arising from a comment under regulation 6 (2) pertaining to replacing the term 'algae toxin' with 'algal toxin'.

Subject (heading as used in draft regulations):

Regulation 11 – Frequency of sampling for drinking water

Comment from submission(s):

BW – Supports the frequencies cited for *E. coli* and turbidity. For the chemicals, suggest that prescriptive sampling frequencies only apply for those water sampling localities where the chemicals to be sampled are likely to be used in water treatment applicable to that locality.

NEW – If we are using an external party (the laboratory) to sample, and they miss a sample from our agreed sampling regime, or a sample is lost or damaged, how does the penalty apply?

CWW - By using the word “must”, sub-regulation 11 (1) clearly appears as a stand-alone mandatory requirement to adopt the sampling frequencies shown in the Table in Schedule 2. However, sub-regulation 11 (3) suggests that sub-regulation 11 (1) can be varied. Is this correct? To avoid potential confusion, it is suggested that sub-regulations 11 (1) and 11 (3) should cross-reference each other

MWC - Water suppliers are required to sample for disinfection by-products whether or not that treatment method is used. This seems to be an additional cost (above that in the Regulatory Impact Statement) with no risk reduction benefit to consumers.

DJP - In sub-regulation 11 (1) the wording appears to preclude the taking of more than the stipulated minimum number of samples, which would be absurd, thus the words “not less than” need to be added before “the relevant sampling frequency”.

In sub-regulation 11 (2) the requirement appears not to be stated correctly. No doubt the intention is that all sampling points be sampled at an equal frequency. The current wording:

- would at an extreme allow only two points within a locality to be sampled alternately, and
- would appear to prevent a sampling regime from sampling more than half the points in a locality at the one time (because on the ‘next’ occasion, at least one point would have been sampled on the ‘previous’ occasion)

It is quite clear that the more initial samples are taken, the better the information about the quality, therefore this does not seem correct. However, there is a need to exclude ‘retests’ where a quality failure has occurred, or there is scope to bias the results.

It is therefore suggested that the following changes be made:

Add new sub-regulation 6 (3), as set out below:

- a. For the purposes of complying with paragraph (a) of sub-reg.(2), a water supplier must include in the risk management plan a Water Quality Compliance Verification Program for each water supply locality.

- b. The Water Quality Compliance Verification Program –
- i. must include the parameters listed in column 1 of Schedule 2
 - ii. is not limited to such parameters
 - iii. must set out the sampling frequencies for each parameter included in the Program, which shall not be less than the minimum frequencies nominated in column 2 of Schedule 2
 - iv. must set out a procedure to ensure that, as far as is practicable, samples of drinking water shall be collected within a water sampling locality such that each water sampling point is equally represented over any period of six months
[Note the expression "as far as is practicable" has a precedent in sub-reg. 5(2)]

Amend sub-regulation 11 (1) of Reg. 11 to read:

... collect samples of drinking water (words deleted) within each water supply locality in accordance with the Water Quality Compliance Verification Program

Amend sub-regulation 11 (2) to read:

Nothing in sub-regulation 11 (1) shall prevent a water supplier from collecting water samples additional to those prescribed by the Program.

Amend sub-reg. (3) to read:

... vary the minimum frequency at which water samples are to be collected within a water sampling locality ...

GWMW - In sub-regulation 11 (2) it is implied that a water sample cannot be taken from the same location twice in succession. Some of the smaller towns only have two sampling points, making the implied randomness of the testing a complete nonsense.

Suggest that the wording be amended to include the proviso that the sampling points be selected at random and not negate the possibility that the same sampling point be used twice.

PARK - Parks Victoria supports the Section 11 powers in the regulations which provide for the Secretary to vary the frequency of sampling and believes that the regulations need to provide further powers to allow for the application of Specific Water Quality Standards or exemptions for Parks Victoria.

WES - sub-regulation 11 (1) – the inference from this paragraph is that the water authority must collect a sample and analyse for each of the parameters in Schedule 2 Table. It makes no reference to the chlorine or ozone or aluminium based chemical by products as needing to be monitored only if the Authority is using them.

In sub-regulation 11 (2) - Reference to random sample point selection is missing.

DSE - sub-regulation 11 (1) – Frequency for regulated sampling should incorporate sampling incidents and events. Recommended that the requirement to demonstrate that incidents and events have been sampled and reported through the standard compliance process be introduced.

In sub-regulation 11 (2) - The implications of sub-regulations 11 (1) and 11 (2) are that there be a minimum of two 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. Recommended 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.

MDU - sub-regulation 11 (1) – this regulation does not inform me on how many samples will need to be taken each week.

GVW, VWIA – In sub-regulation 11 (1) the wording precludes a water supplier from routinely taking more samples than the relevant sampling frequency in some or all of its water supply localities and/or including their results within reports.

Suggests insertion of the term "minimum" within Regulation 11 to describe the required sampling frequencies, or otherwise make it clear that the values in column 2 of the Table in Schedule 2 are minima eg. "at least one sample per month".

VWIA - regulation should be amended to clearly state that these parameters should only be tested when a particular water treatment process is used. The monitoring of all parameters in Schedule 2 Table will lead to unnecessary and substantial increase in operating costs to water businesses with no community benefit.

VicWater strongly recommends that sub-regulation 11 (1) be amended to test for parameters depending on treatment process. For example:

- "Additional Standards for Supplies with Chlorine based chemicals"
- "Additional Standards for Supplies Disinfected by Ozone"
- "Additional Standards for Supplies Treated with Aluminium-based Chemicals ..."

For sub-regulation 11 (2), it is noted that there is no mention of any requirement for the selection of weekly or monthly sampling points to be random.

VWIA - request that the terms "chlorine based chemicals" and "aluminium based chemicals" require better definition or rewording to eliminate any ambiguity. For example, is chlorine dioxide a "chlorine based chemical"? Is bentonite an "aluminium based" chemical?

Also, there are bromine based chemicals that may be used that may cause generation of THMs and HAAs as by-products in the same fashion as chlorine based chemicals. It is suggested that these terms be replaced with "Disinfectants containing chlorine and/or bromine" and "Aluminium based coagulants", or otherwise the types of chemicals concerned be listed specifically.

[note: similar comment by Goulburn Valley Water under Schedule 2]

Discussion and response to the comment(s):

[Please note that, as most of the submissions for this regulation raised a number of related matters, the discussion and response is not ordered in terms of individual submissions, except where that submission raised a distinct matter.]

For **sub-regulation 11 (1)**, the comments pertaining to allowing it to be expressed as a minimum sampling frequency, without other controls, are not supported, as this would not specify which samples are to be used to compile the compliance data.

The principal need is for a clear and definable set of samples to be used for compliance purposes. Water suppliers may sample for compliance purposes at greater or lesser frequencies than that set out in the Schedule, in accordance with the procedures set out in draft sub-regulations 11 (3), 11 (4) and 11 (5). They may also sample for purposes other than compliance without referring to the frequencies in the Table in Schedule 2.

The provisions of draft sub-regulations 11 (3), 11 (4) and 11 (5) should remain, for use when a water supplier may apply to increase or reduce a sampling frequency or in the eventuality that a water supplier is not, in the reasonable opinion of the Secretary, doing enough sampling. These sub-regulations need to be read in the context of the entirety of regulation 11, including sub-regulation 11 (1). It should be noted that the term 'relevant sampling frequency' in sub-regulation 11 (1) is defined in regulation 3 in a manner that is linked to sub-regulation 11 (3).

The comments pertaining to the need for sampling drinking water for disinfection by-products or water treatment residues where such a process or chemical has not been employed are supported. Since the chemicals and other substances used to disinfect or treat the drinking water may be a significant factor in varying a sampling frequency under sub-regulation 11 (3), it is recommended that this aspect be listed as a criteria under sub-regulation 11 (4).

For **sub-regulation 11 (2)**, the intent of the comments are supported. The policy intention is to allow any reasonable selection from the previously defined set of water sampling points that yields useful data. This may be random selection or a more systemic program. However, the existing wording is required in order for the provisions of sub-regulation 11 (1) to be clear.

Sub-regulation 11 (2) allows the sampling to fairly represent the quality of drinking water supplied in that locality and leaves it open for the water supplier to select a substantially random process or a more systemic process, provided two consecutive samples are not taken from the same water sampling point.

NEW - The penalty for sub-regulation 11 (1) would apply to the water supplier, not a contracted third party. However, sub-regulation 11 (1) does not prevent a water supplier from contracting out this activity to a third party if it so wishes. The water supplier retains the liability under the regulations. This sub-regulation will be redrafted to clarify that samples may be collected by third parties.

DSE – the policy intent of the regulatory framework does not provide for the Secretary signing off any component of the risk management plan, including a monitoring program. Essentially, the sampling referenced under regulation 11 and Schedule 2 pertains to routine compliance sampling for standards verification purposes, rather than detection of or response to incidents or other operational matters. The goal sought is supported, however it is addressed directly through the components of the risk management plans (regulation 6) rather than regulation 11.

PARK – the comments regarding further powers pertain to provisions of the Act rather than the regulations (specifically, section 20 of the Act).

VWIA – Whilst it is understood that it is possible to disinfect drinking water using bromine based disinfectants, the practice does not occur in Victoria at present. In the event that such disinfection was used then the generic risk management obligations under sub-regulation 6 (2) (a) would apply. In the case of bentonite or chlorine dioxide, these would need to be considered on a case-by-case basis.

For **sub-regulation 11 (5)**, deletion of (c) is required as it erroneously linked a sampling frequency, which applies to a water sampling locality as a whole, to particular water sampling points. This change did not arise from the submissions but was required in order to correct the error.

[There is further commentary in relation to the sampling frequency for *Escherichia coli* under Schedule 2]

Proposed amendment to regulation or drafting instruction:

Amend sub-regulation 11 (1) by amending the reference to a 'water supply locality' to read 'a water sampling locality' and clarify that 'must collect' specifically allows for circumstances where collection may be undertaken by third parties on behalf of the water supplier.

Amend the regulations (either as regulation 11 or regulation 12) to:

- Require monitoring for the chlorine based chemicals (chloroacetic acid, dichloroacetic acid, trichloroacetic acid and trihalomethanes) in accordance with the frequency in the Schedule[#] where the drinking water is disinfected with chlorine based disinfectants, but otherwise not to require it.
- Require monitoring for bromate and formaldehyde in accordance with the frequency in the Schedule[#] where the drinking water is disinfected with ozone based disinfectants, but otherwise not to require it.
- Require monitoring for aluminium in accordance with the frequency in the Schedule[#] where the drinking water is treated with aluminium based chemicals, but otherwise not to require it.
- Require monitoring for *Escherichia coli* and turbidity in accordance with the frequency in the Schedule[#] for all drinking water supplies.

[# or at a frequency varied pursuant to sub-regulation 11 (3).]

Amend sub-regulation 11 (4) to include the types of chemicals used to treat or disinfect water as factors which may be considered by the Secretary when considering whether or not to vary the frequency of sampling required.

Delete sub-regulation 11 (5) (c) and insert an 'and' after sub-regulation 11 (5) (a).

Subject (heading as used in draft regulations):

Regulation 12 – Samples of water must be analysed

Comment from submission(s):

NATA - NATA notes that the Department interprets the reference to analysts in the Act to mean individual persons. As discussed previously we believe it would be much more appropriate for analysts to be defined as organisations that perform analyses.

If analysts continue to be defined as persons then we believe the Regulations should be worded to ensure that the analyses are done in a NATA accredited laboratory that has the parameters in its scope of accreditation.

The best way to do this would be to extend regulation 12 to include the requirement that the results of analyses are the subject of NATA endorsed reports.

With regard to analysts NATA strongly recommends that they be "approved" not "accredited". Note that in the NATA system we accredit "laboratories" but "approve" individuals as signatories. Does the Department have a particular reason for wanting to use the term "accredited"?

If our recommendations are accepted draft Regulation 12 could then state:

"A water supplier must cause an analysis of every sample of drinking water collected in accordance with these Regulations to be conducted by an approved water analyst and reported on a NATA endorsed test report."

DJP - Renumber existing wording as sub-regulation 12 (1) and add the following words as sub-regulation 12 (2):

"All analyses of drinking water shall be undertaken in a laboratory that is accredited by NATA to conduct analyses of, and report on, samples of water."

[This is an important implied requirement which however is nowhere actually stated!]

MDU - This requires the analyses to be "conducted by an accredited analyst". There should be a definition for conducting an analysis to include supervision of the analysis.

VWIA, GVW - This Regulation, as currently worded, does not account for inevitable situations where a sample is inadvertently lost or broken, and therefore cannot be analysed or non-representative of the drinking water supply. Suggest amendment to:

"unless:

- (a) the sample is lost;
- (b) the sample container is damaged and the sample is irretrievable;
- (c) it becomes known or is suspected that the sample is not representative of the water intended to be tested."

GVW – For these reasons also, suggest that, in Regulation 11 and the Drinking Water Quality Standards Table within Schedule 2, the words "sample" and "sampling" be replaced with terms indicating "test" or "analysis".

Discussion and response to the comment(s):

The suggestion to amend from 'accredited water analyst' to 'approved water analyst' is supported. The Act allows us to do either and it is more convenient to align with the terminology used by NATA, which also more closely aligns with our policy intention of approving rather than, for example, establishing an accreditation program. It also aligns with terminology used in the *Health Act* 1958 and the *Food Act* 1984.

Analysts are natural persons, however legal advice indicates that "conducted by an accredited water analyst" need not mean actually carrying out the day to day aspects of the analysis but can involve the role of taking responsibility for the conduct of the analysis and reporting its results.

The policy preference is not to incorporate a reference to a "NATA endorsed report" in regulation 12, as this will be covered sufficiently in regulation 13.

Redrafting the regulation in the manner suggested by GVW to allow for breakage or loss of samples is not supported. The Department intends to work co-operatively with water suppliers regarding such things and spelling out these matters as exclusions from regulation 12 may minimise the incentive for water suppliers and laboratories to ensure that such events were very rare.

Proposed amendment to regulation or drafting instruction:

Amend to refer to approved water analyst rather than accredited water analyst (and consequential amendment to definition in regulation 3 and elsewhere).

[Note that regulation 12 has been substantially amended, compared to the version in the exposure draft, as a result of the changes described in the comments under regulation 11 pertaining to chemical monitoring.]

Subject (heading as used in draft regulations):

Regulation 13 (1) to 13 (5) and general comments – Accreditation of water analysts

Comment from submission(s):

MWC – The accreditation needs to be only valid whilst the analyst operates from the laboratory where he/she was accredited. Also accreditation must be relevant to the parameter being analysed, which appears to be the intent of 13 (5) (a) but needs to be explicit also in 13 (4) (b) to ensure that the laboratory is also NATA accredited for that parameter.

Suggest amending 13 (4) (b) as ‘... and report on, samples of water, for the relevant regulated parameters’. Add that 13 (5) (c) is only valid whilst the analyst is working at the laboratory where he or she was accredited.

WSL - We believe that the process in place by NATA of accreditation and auditing signatories is the best way to ensure laboratories are performing their duty of care.

If the regulations insist on the accreditation of water analysts we feel very strongly that the accredited analysts should be a supervisory position rather than the individual analyst. If the regulations call for accreditation of individual analysts there will be a large administrative burden placed on both the laboratories and the Department as we have for example approximately 50 analysts at our Richmond site who would need to be accredited. There would also need to be several accreditation visits required per year to account for staff movements.

The EPA has a system of EPA Accredited Analysts in place that could be used as a model by the Department and EPA have produced a “Guide for Analysts Appointed under the Environment Protection ACT 1970 - Publication Number 685”. The EPA system was put in place for different reasons (i.e. litigation) though it would still be a useful guide for the Department to consider.

NATA - Throughout regulation 13 "accredited" would be replaced with "approved" where it refers to the analyst. The reference in 4(b) to "accredited by NATA" continues to be appropriate.

In support of the above recommendations the Department's attention is drawn to the system used in the recent OHS (Asbestos) Regulations 2003. These regulations contain:

"105 Definitions

In these Regulations -

"approved analyst" means an analyst approved by NATA to perform asbestos fibre counting or to identify asbestos in samples, and to issue findings as endorsed reports under the authority of a NATA accredited laboratory or by some other scheme as determined by the Authority;"

We would expect it to be the Departments intention to only approve analysts for conduct of analyses that are included in the scope of the laboratory in which they are employed. NATA therefore also recommends that in regulation 13 4 (b) the laboratory be required to be accredited for the particular type of parameter for which approval is sought. This sub-regulation would then become:

"4 (b) the person is employed by a person or body that operates a laboratory that is accredited by NATA to conduct analyses of, and report on samples of water for the parameters specified in their approval."

DJP – suggest amending sub-regulation 13 (1) to read:
 "to be accredited as a water analyst for the purposes of these regulations".

Suggest amending sub-regulation 13 (2) to read:

- include evidence of the applicant’s qualifications, experience and competence to undertake analyses of drinking water, and
- include an undertaking to carry out the analysis of drinking water only in full accordance with these regulations and the limitations (if any) which the Secretary may impose upon the accreditation of the applicant.

Suggest amending sub-regulation 13 (3) to read:

- On receipt of an application under sub-reg. (1), and after any investigations of enquiries which he or she considers appropriate, the Secretary may (etc)

Suggest amending sub-regulation 13 (4) to read:

- ... appropriately qualified and competent
- the Secretary is satisfied that the person will only carry out analyses in conformity with sub-regulation 12 (2).

Suggest amending sub-regulation 13 (5) to read:

- ... type of parameter or test methodology or equipment specified ...

[A competent person may be perfectly suitable to work with one test procedure or type of equipment while not being adequately experienced with a different method]

YVW - A new sub regulation should be included after sub regulation 13 to ensure that test methods are accredited. Include new sub regulation after sub regulation 13:

"A laboratory must apply to the Secretary for test methods and equipment to be accredited to conduct an analysis of samples of drinking water collected in accordance with these Regulations." [see also comments below from South East Water and VWIA]

SEW, VWIA - This section should state that the registered analyst must undertake their analysis in a NATA registered laboratory.

A new sub regulation should be included after sub regulation 13 to ensure that test methods are accredited. Therefore it is suggested a new sub regulation following sub regulation 13: [note: this is similar to the Yarra Valley Water comment above]

"A laboratory must apply to the Secretary for test methods and equipment to be accredited to conduct an analysis of samples of drinking water collected to determine compliance with the Standards outlined in Table 2 of these Regulations."

GMMW – For sub-regulation 13 (1) the requirement to accredit water analysts is unnecessarily restrictive and adds no value to the process.

Suggest that the requirement be to utilise NATA accredited laboratories. The NATA registration and accreditation process is a recognised and credible process that has served the needs of the water industry for many years. It is a model for accreditation in other industries. This will also ensure consistency in approach across the country.

WES - For sub-regulation 13 (2) (b) – does sub-regulation 13 (8) contradict this with respect to conflict of interest?

BW - For sub-regulation 13 (4) (b) – suggest amendment to "... to conduct analysis of, and report on, samples of water tested for the water quality standards listed in Schedule 2".

DSE - For sub-regulation 13 (4) (b) – Recommended that further clause be added to ensure that the person accredited must be a NATA signatory.

MDU - For sub-regulation 13 (2) (b) – if the main reason for having an accredited analyst is to ensure the quality of the analysis, it would seem prudent that one of the qualifications is accreditation as a NATA signatory. The accredited analyst must operate in a NATA accredited laboratory.

NATA signatory status is test specific and links the technical knowledge of the person to the laboratory set-up (facility, Quality assurance arrangements, etc). Under NATA rules, that person does not take the "qualification" with him/her when he/she leaves that position. This condition will address the need to revoke the analyst accreditation from time to time and ensure that accredited analysts have current involvement with the analyses.

If the reason for the accreditation of analysts includes the need to be able to act as an expert witness, then additional requirements would include those parameters that are relevant to legal proceedings such as chain of custody of samples and the ability to communicate complex scientific matter to lay people.

GVW - Although an analyst will need to hold appropriate qualifications and must be employed by a NATA certified body, there is no actual requirement for the analyses to be conducted using valid methodologies, according to rigorous quality assurance procedures (eg. ISO/IEC 17025 standard), in accredited facilities, or using equipment that is adequate. There is a need to reword this Regulation to close this loophole.

Discussion and response to the comment(s):

The comments pertaining to ensuring that the analyst works in a laboratory that is accredited by NATA for the parameter in question are supported.

Sub-regulation 13 (8) is not believed to conflict with sub-regulation 13 (2) (b).

The comments pertaining to requiring the laboratory to apply to the Secretary for accreditation are not supported, as the regulatory framework is structured around the Secretary accrediting or approving analysts rather than laboratories. The Regulatory Impact Statement has foreshadowed that analytical methodologies will be determined for the regulations in future, however they would be likely to be expressed as an obligation on water suppliers rather than on a laboratory.

Provided that analysts can perform a supervisory function rather than the entire analysis process, being a NATA signatory can be incorporated as a compulsory prerequisite. However, these details would be set out in subordinate documents.

The submissions have raised the issue of the details of the process or conditions by which the analyst retains the approval or may lose it. It is proposed to amend the regulations to include this feature.

Proposed amendment to regulation or drafting instruction:

Amend references to accreditation of analysts to approval of analysts (however, note that reference to "accredited by NATA" in sub-regulation 13 (4) (b) remains correct).

Amend sub-regulation 13 (4) (b) so that the Secretary may only accredit a person under regulation 13 (3) if the person is employed by a person or body that operates a laboratory that is accredited by NATA to conduct analyses of, and report on, the parameters to which the Secretarial accreditation relates.

Amend sub-regulation 13 (5) to allow the Secretary to specify conditions such as a time period for the approval and ensuring that the analyst must remain employed by the person or body that operates the NATA laboratory referred to in sub-regulation 13 (4) (b).

[Note that regulation 13 in the exposure draft has been renumbered to regulation 14 in the final draft.]

<p>Subject (heading as used in draft regulations): Regulation 13 (6) to 13 (8) – Accreditation of water analysts</p>
<p>Comment from submission(s): <p>CWW – sub-regulation 13 (8) – is “be” superfluous?</p> <p>MWC - For sub-regulation 13 (8) - suggest “a person is not to be ...”</p> <p>YVW - sub-regulation 13 (8) should read “A person is not to be prohibited ...”.</p> <p>SEW, VWIA - For sub-regulation 13 (8) - Add the word ‘to’ - ‘A person is not to be prohibited....’</p> <p>DSE - For sub-regulation 13 (8) - Typographical error - ...is not ‘be’ prohibited ...?</p> </p>
<p>Discussion and response to the comment(s): The typographical error needs correction.</p>
<p>Proposed amendment to regulation or drafting instruction: Delete “be” from sub-regulation 13 (8), so as to read “A person is not prohibited from being an approved ...”.</p> <p>[Note that regulation 13 (8) in the exposure draft has been renumbered to regulation 14 (10) in the final draft.]</p>

Subject (heading as used in draft regulations):

Regulation 14 – Reports of results of water samples

Comment from submission(s):

DSE - The requirement appears to be different from that specified in *Safe Drinking Water Act* 2003 section 23 (2). It is unclear what might be the implications and impact of earlier disclosure to the public than the Secretary?

Recommended that uniform arrangements be in place for reporting to the public and the Secretary.

GVW – no issues

Discussion and response to the comment(s):

There is believed to be no adverse implications of public disclosure under section 23 of the Act within seven days preceding disclosure of the compliance summaries to the Secretary under regulation 14 as worded. All contamination events must be notified immediately, under section 22 of the Act.

Proposed amendment to regulation or drafting instruction:

None arising from this process.

[Note that regulation 14 in the exposure draft has been amended and renumbered to regulation 13 in the final draft, as a result of changes to regulation 12 regarding chemical monitoring results. This has also incorporated amending 'taken' to 'collected', so that the terminology aligns in all regulations.]

Subject (heading as used in draft regulations):

Regulation 15 (1) (a) to 15 (1) (f) – Additional details to be included in annual reports of water suppliers

Comment from submission(s):

DSE - sub-regulation 15 (1) (c) – Recommended that a summary of the results from investigation of incidents where a positive *Escherichia coli* result was obtained be published in the annual report.

For sub-regulation 15 (1) (d) – The difference between ‘drinking purposes generally’ and ‘posed a risk to human health’ in the context of this sub-regulation is not clear.

For sub-regulation 15 (1) (f) - Recommend revision from financial year to ‘... from previous years’, with the intent to demonstrate consistency in compliance or improving performance over time.

SGW – sub-regulation 15 (1) (d) - unclear what constitutes an event and would wish to avoid both under and over reporting incidents to be consistent with other authorities.

BW - sub-regulation 15 (1) (d) – suggest amendment such that only emergencies that required regulatory intervention need be reported.

SEW, VWIA – sub-regulation 15 (1) (d) - Clarification should be given such that only emergencies, incidents or events that require regulatory intervention need to be published.

YVW, VWIA - sub-regulation 15 (1) (d) - Reporting should not include minor incidents e.g. every chlorinator failure. Suggest inserting “significant” before incident and event i.e. “information about actions taken by the water supplier in respect of each emergency, significant incident or significant event that has arisen that has affected -”.

NEW - sub-regulation 15 (1) (b) – What constitutes an issue should be clearly defined. A format for summarising all this information would be extremely helpful considering the number and variety of supplies we have.

SWWA – would like to see greater advice for the content of the annual report, including a basic template.

VWIA, GVW- It is suggested that the term “annual report” be replaced with “water quality annual report”, as named in the Act, to avoid any confusion with corporate annual reports.

[Note: for sub-regulation 15 (1) (d) - also echoed comments from Yarra Valley Water, South Gippsland Water, Goulburn Valley Water and South East Water in this regard.]

GVW - We suggest including the phrase “that may have posed a risk to human health” to Regulation 15 (1) (d).

WES – request also that water authorities should report on the percentage of samples from entry points that have zero coliforms as this is a measure of the effectiveness of their disinfection systems.

Discussion and response to the comment(s):

The proposed regulation 15 sets out content requirements for annual reports in some detail. The term ‘annual report’ is used in section 26 of the Act so is retained here.

The present wording, especially of sub-regulation 15 (1) (d), sets out the policy intent in this regard. That is, each incident, event or emergency that has arisen that has affected the quality of drinking water generally supplied or caused the supply to pose a risk to human health would need to be referred to in the annual report. This will include *Escherichia coli* detects in drinking water, as they would constitute a notifiable contamination incident or event under section 22 of the Act.

Adjectives such as ‘significant’ in this context are undesirable as they do not clarify the intent and introducing it may generate debate as to its own meaning.

The suggestion to incorporate reference to earlier years than the previous financial year has merit, provided it is unambiguous and does not generate excessive data. It has been concluded that the previous two financial years should be incorporated.

The data to be reported in the annual report is focussed on data pertaining to the quality of water as supplied to customers. There is no policy intent at this time to include or summarise data from upstream locations in these reports. However, such data, such as total coliform data at entry points, must be publicly disclosed within seven days of being compiled, pursuant to section 23 of the Act. The Secretary may however specify this in future, pursuant to section 26 (3) of the Act.

NEW – This comment is supported, with recommended deletion of sub-regulation 15 (1) (b) as its purpose is unclear.

NEW, SWWA – Whilst it may be argued that a format may be useful, the policy intent is to leave the general format to water suppliers and water storage managers at this time, with general guidance given about the required content under each part of the report.

Proposed amendment to regulation or drafting instruction:

Delete sub-regulation 15 (1) (b).

Amend sub-regulation 15 (1) (f) so that it requires data to be supplied from the previous two financial years, rather than one.

Subject (heading as used in draft regulations):

Regulation 15 (1) (g) to 15 (1) (m) – Additional details to be included in annual reports of water suppliers

Comment from submission(s):

SGW – sub-regulation 15 (1) (h) – not clear at what point information on response complaints should be provided within the annual report. Brian Ashworth indicated that this referred to not including the analysis and responses to the complaints.

YVW, VWIA - sub-regulation 15 (1) (h) - It is considered that only a summary of the responses to the water quality complaints should be required rather than actual responses recorded. Suggest "a summary of complaints received by the water supplier and responses provided by the water supplier relating to the quality of drinking water supplied and any analysis of the issues arising from the complaints; and ..."

VWIA, GVW- For sub-regulation 15 (1) (k) – suggest replacement of the term "odor" with "odour".

[Note: for sub-regulation 15 (1) (h) - also echoed comments from Yarra Valley Water, South Gippsland Water, Goulburn Valley Water and South East Water in this regard.]

MWC – suggest that matters under sub-regulation 15 (1) (k) relating be also a defined requirement of a risk management plan under regulation 6. Suggest also replacing "clarity" with colour and turbidity and that "odor" is replaced by the Australian spelling odour.

DSE - sub-regulation 15 (1) (l) – Regarded as unclear reporting 'details' required for regulated water. Recommended that explicit requirements for regulated water be stated.

Discussion and response to the comment(s):

The comments on sub-regulation 15 (1) (h) seem to relate to interpretation of the sentence as meaning a summary of complaints and (separately) every individual response, whereas the intention is a summary of complaints and a summary of responses.

Agree also to replace 'odor' with 'odour' but no need to amend clarity, as clarity can incorporate a number of concepts not just colour (turbidity, which essentially is a measure of the clarity of the water, is already covered as a standard).

DSE – agreed to request to clarify details and suggest this would be met by requiring disclosure of obligations pertaining to regulated water under section 25 of the Act.

See comment on next page regarding amending sub-regulation 15 (1) (j). This is particularly relevant in the metropolitan situation, where the water suppliers (City West Water, Yarra Valley Water and South East Water) may not further treat or disinfect drinking water received from Melbourne Water.

Proposed amendment to regulation or drafting instruction:

Amend sub-regulation 15 (1) (h) to clarify that it means a summary of responses.

Amend sub-regulations 15 (1) (i) and (j) so as to also refer to chemicals or processes used to treat the water as well as those used to disinfect the water.

Redraft sub-regulation 15 (1) (k) by replacing 'odor' with 'odour'.

Redraft sub-regulation 15 (1) (l) to require details of the activities pursuant to section 25 of the Act as well as details of any declaration made under section 6 of the Act.

Subject (heading as used in draft regulations):

Regulation 15 (2) – Additional details to be included in annual reports of water storage managers

Comment from submission(s):

DSE - For sub-regulation 15 (2) (a) – The difference between ‘drinking purposes generally’ and ‘posed a risk to human health’ in the context of this sub-regulation is not clear. Recommended that sub-regulation be redrafted to provide clarity of intent. (Likewise comment on sub-regulation 15 (1) (d))

For sub-regulations 15 (2) (d) and 15 (2) (e) - 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’.

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?

Recommended that ‘where applicable’ be added and that a clear statement be provided on how substances used for other than disinfection be addressed.

Discussion and response to the comment(s):

The comment pertaining to sub-regulation 15 (2) (a) is covered by the previous discussion on sub-regulation 15 (1) (d), where no change is required.

Whilst the treatment cases cited by the submission exist, the concept of ‘where applicable’ is implied in the existing wording. Where no such chemicals or processes are used, no obligation would arise. Amendment of the disclosure obligation for water suppliers is supported, to include those cases where a water supplier does not disinfect or treat water that has already been treated or disinfected by a water storage manager.

However, the current wording of sub-regulation 15 (2) (e), as well as the similar sub-regulation 15 (1) (j), focus on chemicals and substances specifically added for disinfection purposes, rather than the original intent of chemicals added for water treatment purposes generally. Consequently, they do not match sub-regulations 15 (2) (d) and 15 (1) (i).

It has been agreed to amend these sub-regulations. Verbal opinion was sought from officers of key stakeholders regarding their view on this, in the event it was interpreted as an unannounced increase in regulatory obligations. The replies from officers of Melbourne Water, Goulburn Murray Rural Water, City West Water, South East Water, Central Highlands Water and Barwon Water all supported this change.

Proposed amendment to regulation or drafting instruction:

Broaden the application of sub-regulations 15 (2) (d) and (e) to include not just a list of all chemicals and substances used to disinfect the water supplied, but also those used for any other process or to treat the water.

Subject (heading as used in draft regulations):

Schedule 2 – Drinking Water Quality Standards

Comment from submission(s):

BW – Suggest that the *E. coli* standard be expressed per 100 mL and that each of the chemical standards be "... assessed over a rolling twelve month period, calendar month by calendar month". [*note: similar comment by Goulburn Valley Water*].

CWW – Standard for *E. coli* should be expressed as "per 100 mL". No time period is specified for the chemicals.

The Table provides no guidance as to the minimum number of samples that are to be used in determining the statistical summaries (i.e. confidence limits, percentiles). This needs to be specified so that consistent reporting takes place.

The Regulations should allow for appropriate data analysis to be undertaken and for statistical transformations to be used (e.g. logarithmic transformations) in the interests of obtaining statistically valid performance measures.

SGW – Sampling frequency for zones that do not use ozone as a disinfectant should be annually unless a problem is identified.

AMA – Consideration should be given to scheduling all of the thirty eight parameters originally identified in the "*Proposed Standards for Drinking Water Quality in Victoria*" (DHS, 2001). However, frequency of sampling and quality standards could remain limited to those factors already identified in Schedule 2. Such additional scheduling would clearly establish community expectations about water quality issues.

Satisfied that the quality standards for each water sampling locality are consistent with the values set out in Australian Drinking Water Guidelines (1996). However, I note the guidelines specify monitoring frequencies for microbiological quality based upon populations serviced by the water supplier. So for a population above one hundred thousand people the minimum sample frequency is six samples per week, which exceeds the once per week frequency proposed in Schedule 2. I would be concerned if the standard is being set so as to allow a simple, state-wide standard rather than being set to manage the real risks that the individual water supplies face.

MWC – suggest that haloacetic acids be removed from Schedule 2.

Suggest for aluminium, move "acid soluble" from column 3 to column 1. Suggest that aluminium and turbidity be labelled as aesthetic standards as per section 19 of the Act.

It is unclear whether the column 2 heading means the sampling frequency is for sampling points (taps) or sampling localities ('zones'). Please simplify the heading to avoid misinterpretation, suggest as "Relevant sampling frequency for each water sampling locality" or "relevant sampling frequency for each water sampling point".

EGW – Suggest replacing statistical expressions with maximum allowable limits (MAL) for the proposed standards with a percentage of samples to be compliant over a twelve month period (e.g. MAL for turbidity ≤ 5 NTU for 90% of samples taken).

DJP – suggest separating the quality standard from the statistic, and simplify the requirements. The schedule then would look like this:

Column 1	Column 2	Column 3	Column 4
Parameter	Minimum sampling frequency to be adopted in the Water Quality Compliance Verification Program for each water sampling locality	Quality Standard	Water Quality Compliance Statistic for a set of drinking water samples collected in any 12 month period in accordance with these regulations
<i>Escherichia coli</i>	One sample per week	Not present	(a) at least 98% of all samples in such a set must contain no <i>E. coli</i> , and (b) no such sample shall contain more than five (5) <i>E. coli</i> bacteria
Chloroacetic acid	One sample per month	0.15 milligrams per litre	The 95 th percentile for all samples in such a set shall not exceed the quality standard
Turbidity	One sample per week	5.0 Nephelometric Turbidity Units	The arithmetic mean for all samples in such a set shall not exceed the quality standard

YVW - It is not clear whether sampling frequency applies to each water sampling point (i.e. one sample per week per water sampling point) or to the entire water sampling locality (i.e. one sample per week per water sampling locality). Suggest replace Column 2 heading with:

“Relevant sampling frequency for each water sampling locality”. This should be undertaken with appropriate rewording for Regulations 11 (1) and 11 (2).

For *E. coli*, there is no guidance in the regulations to the methodology for calculation of minimum number of water sampling points for a water supply locality. It is recommended that table (in page 28) in the Drafting Instructions issued on November 2003 for computation of *Escherichia coli* for samples based on zone population be included in this schedule. For *E. coli*, column 3 should read ...“contain no *Escherichia coli*/100mL.”

For all chemical standards, suggest insert “in any twelve month period” into the expression in column 3.

For chlorine based chemicals, the description should clearly state that these standards only apply where chlorine is used for disinfection. Suggest replace column 2 parameter description with “Where Chlorine is used for disinfection.”

We consider testing for chloroacetic acids to be excessive for all water sampling localities. Suggest replace column 2 with: “one sample per month for chloroacetic acid, dichloroacetic acid and trichloroacetic acid if THM concentration is above the standard, or if the chlorine disinfection dose is increased substantially, or if source of supply is changed”.

For ozone based chemicals, testing for bromate and formaldehyde should only be limited to supplies disinfected with ozone. Suggest replace column 2 with: "Where Ozone is used for disinfection".

For aluminium based chemicals, testing for aluminium and [sic] should only be limited to supplies treated with aluminium based chemicals. Suggest replace column 2 with: "Where water treatment uses aluminium based chemicals".

SEW - Comments on the following aspects of Schedule 2:

- Sample numbers for performance assessment (frequency) - the table in Schedule 2 indicates the frequency of sampling for *E. coli* and turbidity to be 1 sample per week for each water sampling locality (or water quality zone). This would lead to 52 samples per year in each locality. It could be argued that such monitoring does not provide adequate verification of the risk management plan and therefore little confirmation that public health is being protected. The ADWG uses population serviced in a zone as the basis for determining sample numbers, particularly for microbiological organisms. At least this is a risk management approach whereas the draft Schedule 2 table only has a numerical target as its basis.
- Standard performance period – a time period for assessing performance of each parameter is only given for *E. coli*. It is suggested that the same apply for the other 8 parameters i.e. "all samples of drinking water collected in any 12 month period".
- Standards - the requirement to monitor for all nine parameters in Schedule 2 regardless of treatment type is considered excessive and is not based on risk. The monitoring of particular parameters, such as the ozone-based chemicals should be related to water treatment type. The wording relating to tests for chemical parameters should indicate that whether they are tested should be determined by the type of water treatment, and a table be provided indicating what chemicals should be tested for given water treatment types.

SEW noted that total additional cost of monitoring for bromate and formaldehyde was \$54,000 per annum at the monthly frequencies. This cost was not included in previous regulatory impact assessments concerning these regulations.

In relation to *E. coli*, the wording in Column 3 should be 'contain no *E. coli* per 100mL' i.e. define the volume analysed.

SWWA – chloroacetic acids and trihalomethanes should be tested only when supplies are disinfected with chlorine based products, bromate and formaldehyde be only tested when supplies are disinfected with ozone and aluminium be only tested when supplies are treated with aluminium based products.

GMMW - In relation to turbidity, suggest that on-line turbidity monitoring be allowed in lieu of the weekly random grab sample, with reporting indicating the minimums and maximums. The detail of this proposal would need to be included in a sample collection protocol, yet to be developed by DHS.

CHW - Other than bromate and formaldehyde, all remaining drinking water quality

standards are supported. Recommend that monitoring be specified to only include treatment technologies that may generate such chemical by-products [as bromate and formaldehyde]. [*Other comments pertaining to monitoring chemicals were provided in relation to regulation 11*].

WES - The table should make clear reference to the fact that it refers to sampling at customer taps.

Request is made to change the wording of headings, e.g. 'Chlorine based chemicals' should read 'Additional testing required for supplies disinfected with chlorine based chemicals' etc

The schedule needs a table detailing the number of samples required to be taken for each parameter based on population supplied by a water sampling locality.

DSE - The *Escherichia coli* standard as specified would appear to create a conflict between compliance with a quality standard and an incident.

Recommended that either zero presence for *Escherichia coli* be adopted in Schedule 2 or the requirement that if a positive *Escherichia coli* 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.

For trihalomethanes, word missing in column 3 standard - ... must [be] less than or ...

GVW - suggest adding the phrase "assessed over a rolling 12 month period, calendar month by calendar month" to relevant entries in column 3 of the Table in Schedule 2.

Suggest inclusion in Regulation 3 as a definition, or enhancement of the text within the Table itself, the phrasing "acid-soluble aluminium is determined after acidifying the sample to pH 1.5-2, followed by filtration through a 0.45 micron membrane filter".

Queried statistical interpretation of data, with an extensive dissertation provided. Suggested that it was most appropriate to:

- ensure that the sampling design is such that it maximises the randomness of the sampling, so that any inferential statistical methods can be validated; and
- for all proposed Standards (except for *E. coli*), use 95% Upper Confidence Limits for the Mean or Median in assessment of the data over a defined time period and a minimum number of samples.

[*note: an alternative option involving measuring central tendency was also provided – details are in the submission*]

The detection limit for bromate analysis is typically 0.02 mg/L, and cannot be improved easily. Suggest remove bromate and formaldehyde as standards.

Suggest replacing subheading "Chlorine based chemicals" with "By-products from disinfectants containing chlorine and/or bromine" and replacing "Aluminium based chemicals" with "Residual chemicals from the use of aluminium-based coagulants".
[*note: similar comment by VicWater under regulation 11*]

VWIA, GVW - There is no mention of the standards (excepting *E. coli*) needing to be assessed over a specific time frame. For formaldehyde, VicWater recommends that the limit be amended from "0.50" to "0.5", as stated in the ADWG.

VWIA - The quality standard implies an absolute absence of *Escherichia coli*, irrespective of concentration. It is recommended that this should be "per 100 ml".

A high level of uncertainty currently exists in the water industry surrounding the calculation and subsequent calculation of statistical information outline in Table 3. Therefore VicWater strongly believes that further consultation between DHS and the water industry is warranted on the most appropriate statistical approach

Discussion and response to the comment(s):

Monitoring - All proposed standards are to be retained, however commentary (both here and under regulation 11) pertaining to the need to monitor, and the frequency of sampling, where particular treatment or disinfection processes are not used is accepted.

It should be noted that, whilst monitoring requirements may vary due to whether particular water treatment or disinfection processes or chemicals are used, the standards apply for all drinking water (unless exempted under section 20 of the Act).

AMA – Consideration was given to setting 38 standards in earlier drafts of the regulatory framework. However, regulation 10 (c) is intended to cover the parameters other than those listed in Schedule 2.

Escherichia coli – agreed to express as "per 100 mL", however retain as 98% of samples per annum (instead of 100%), in accordance with the "*Australian Drinking Water Guidelines*". The detection of any *Escherichia coli* in drinking water supplied to customers is one of a number of events that are regarded by the Department of Human Services as an incident and is notifiable under section 22 of the Act. The detections must be actioned under the relevant risk management plans and disclosed in the statutory annual reports.

Whilst a weekly sampling frequency is set out in Schedule 2 for *Escherichia coli*, regulation 11 (3) allows this frequency to be varied in accordance with factors such as the population supplied with drinking water in the water sampling locality. Accordingly, sampling based on a sliding scale of frequency that increases with population, as set out in the "*Australian Drinking Water Guidelines*", is possible. Regulation 11 requires that this would be negotiated between the Secretary and the water supplier concerned in a particular manner.

For the **chemicals** proposed as standards in Schedule 2 (that is, trihalomethanes, the three haloacetic acids, bromate, formaldehyde and aluminium) it is proposed to replace the statistical expressions relating to upper confidence limits and percentiles with expression of the standard as milligram per litre values.

This resolves the complications experienced in using the statistical expressions, especially for the parameters where the scheduled sampling frequency was monthly (i.e. only twelve data items per annum). It is proposed to retain the statistical expressions for *E. coli* and turbidity, which are based on weekly sampling.

Formaldehyde – agreed to express as 0.5 mg/L rather than 0.50 mg/L.

Bromate – although 0.02 mg/L may be a present detection limit, the Department understands that this can readily be rectified by laboratories and would be covered by the analytical methodology requirements to be set by the Department.

Haloacetic acids – standards to be retained – details are provided in the previous report “*Industry Draft of the Safe Drinking Water Regulations: Consultation History, Analysis of Submissions and New Cost Estimates*” (DHS, July 2004, page 17).

Aluminium – The standard pertains to aluminium, based on bio-available aluminium, with acid-soluble aluminium being the nearest equivalent analytical test. Acid-soluble methodology definitions would be set under future methodology requirements rather than in Schedule 2.

For the purposes of these regulations, aluminium and turbidity are not regarded as or labelled as aesthetic standards that may be varied under section 19 of the Act.

Turbidity – the suggestion in relation to on-line turbidity monitoring may be investigated in future. The statutory requirements in relation to representation of the drinking water supplied, sampling from various points around the locality and analysis by an analyst employed by a NATA accredited laboratory would need to be satisfied.

Time frame for chemicals – where a time frame is required (that is, where a standard is expressed in terms of a statistic) it is agreed to adopt a twelve month period (i.e. for *Escherichia coli* and turbidity). A time frame is not required for the other standards, which are expressed as a mg/L concentration in the drinking water on a per sample basis.

Sampling frequency heading for column 2 – agreed to delete “at water sampling points” from this heading, to ensure that the sampling frequency in column 2 was to be read as per water sampling locality rather than as per water sampling point.

It should be noted that the headings within Schedule 2 (i.e. Microbiological organisms, Chlorine based chemicals, Aluminium Based chemicals, Other parameters etc) are labels only – they subdivide the Schedule into manageable sections but have no regulatory meaning or significance, as they are not referenced from a regulation. Consequently they do not form instructions in relation to monitoring.

Proposed amendment to regulation or drafting instruction:

Retain the basic structure of the Schedule, but amend as follows:

Column 2 heading to read “Relevant sampling frequency for each water sampling locality”.

For *Escherichia coli*, add in column 3 “... contain no *Escherichia coli* per 100 millilitres of drinking water”.

Replace heading "Ozone based chemicals" with "Chemicals derived from disinfection with ozone".

Replace the statistical expressions in column 3 for the following parameters as shown:

Column 1	Column 2	COLUMN 3
Chlorine based chemicals		
Chloroacetic acid	<i>(unchanged)</i>	0.15 milligrams per litre
Dichloroacetic acid	<i>(unchanged)</i>	0.1 milligrams per litre
Trichloroacetic acid	<i>(unchanged)</i>	0.1 milligrams per litre
Trihalomethanes	<i>(unchanged)</i>	0.25 milligrams per litre
Chemicals derived from disinfection with ozone		
Bromate	<i>(unchanged)</i>	0.02 milligrams per litre
Formaldehyde	<i>(unchanged)</i>	0.5 milligrams per litre [note: not 0.50]
Aluminium based chemicals		
Aluminium	<i>(unchanged)</i>	0.2 milligrams per litre (acid-soluble)
Other parameters		
Turbidity	<i>(unchanged)</i>	95% upper confidence limit of the mean of sample data collected in accordance with these Regulations for any twelve month period must be less than or equal to 5.0 Nephelometric Turbidity Units

[note: there are related amendments to regulation 11 re sampling frequency]

5. Further consultation and communication activities

Section 17 (2) of the Act requires the Minister (for Health) to consult the Treasurer and the Minister for Environment and Minister for Water, as Minister administering the *Water Industry Act 1994*, the *Water Act 1989*, the *Parks Victoria Act 1998* and the *Alpine Resorts (Management) Act 1997*.

This consultation relates to the quality standards specified for drinking water in any regulations made for the purposes of section 17 of the Act. It must take place before the regulations are submitted to Governor-in-Council for making.

This consultation has been completed and both the Minister for Environment and Minister for Water and the Treasurer have given their support for the revised regulations.

**APPENDIX 1 – Further Information and Victorian Government
Gazette 207 Notice**

Further information

Further information and links pertaining to drinking water and legislation in Victoria are available from the Department's environmental health web site at:

www.health.vic.gov.au/environment/water/drinking

The *Safe Drinking Water Act 2003* can be downloaded from the Victorian Government Parliamentary web site at: http://dms003.dpc.vic.gov.au/sb/2003_Act/A01263.html.

Printed copies of the Act are also available for purchase from Information Victoria.

Information about the process of developing regulations in Victoria can be found on the web site of the Victorian Competition and Efficiency Commission at: www.vcec.vic.gov.au (scroll down and click on 'Regulation Review'). Copies of the *Interpretation of Legislation Act 1984* and the *Subordinate Legislation Act 1994* are available from the Parliamentary web site (www.dms.dpc.vic.gov.au).

Details of the costings and comments from the previous rounds of consultation can be found in the following reports:

- "Drinking Water Quality Regulatory Framework for Victoria – Regulatory Impact Statement for the Safe Drinking Water Regulations 2004" (Department of Human Services (Victoria), September 2004)
- "Drinking Water Quality Regulatory Framework for Victoria - Industry Draft of the Safe Drinking Water Regulations: Consultation History, Analysis of Submissions and New Cost Estimates" (Department of Human Services (Victoria), July 2004).
- "Drinking Water Quality Regulatory Framework for Victoria – Economic Impact Assessment" (Department of Human Services (Victoria), September 2002)
- "Drinking Water Quality Regulatory Framework for Victoria – Analysis of Submissions" (DHS, DNRE (now DSE), May 2002)

The submissions received from this round of consultation are also included on the web site.

For background and technical information regarding drinking water issues in Australia, the reader may wish to consult the most recent version of the "Australian Drinking Water Guidelines" (National Health and Medical Research Council, Canberra, 2004 update). This can be downloaded from the National Health and Medical Research Council web site:

www.nhmrc.gov.au/publications/synopses/eh19syn.htm

A copy of the Victorian Government Gazette special gazette number 207 announcing the Safe Drinking Water Regulations consultation period is shown overleaf.



Victoria Government Gazette

No. S 207 Friday 24 September 2004
By Authority, Victorian Government Printer

Subordinate Legislation Act 1994

PROPOSED SAFE DRINKING WATER REGULATIONS 2004

Preparation of Regulatory Impact Statement

Notice is given in accordance with Section 11 of the **Subordinate Legislation Act 1994** that a Regulatory Impact Statement has been prepared in connection with the proposed Safe Drinking Water Regulations 2004.

The objectives of the proposed regulations are to give effect to the **Safe Drinking Water Act 2003**, by specifying standards for the quality of drinking water supplied to customers of water suppliers, by specifying the major elements to be incorporated in risk management plans, by specifying criteria for accreditation of analysts and for approval of auditors, and by specifying information disclosure requirements in relation to annual reports for drinking water quality.

Among other things, the Regulatory Impact Statement assesses the costs and benefits of the proposed regulations and other feasible alternative means of achieving the same objectives. It concludes that the benefits of the proposed regulations are likely to outweigh the expected costs.

Copies of the Regulatory Impact Statement, which include the proposed regulations, may be obtained from Mr Brian Labza of the Department of Human Services on (03) 9637 4088, by email request from brian.labza@dhs.vic.gov.au or downloaded from the Department's environmental health website at: www.health.vic.gov.au/environment/water/drinking. Supplementary material will also be available on the website during the consultation period.

Written submissions are invited from any interested industry, stakeholder or community group and from the public in relation to any matter relevant to the proposed regulations.

Submissions must be received by 5 pm on Monday 25 October 2004. Submissions should be marked "Safe Drinking Water Regulations 2004 – Submission" and addressed to: Mr Brian Labza, Public Health Group, Department of Human Services, G.P.O. Box 1670N, Melbourne, Vic. 3001, or by email to: brian.labza@dhs.vic.gov.au.

All comments and submissions received will be treated as public documents.

Hon BRONWYN PIKE MP
Minister for Health

SPECIAL

APPENDIX 2 – List of Submissions

Submission Number	Code	Author	Title	Organisation	Format and date	Page count
1	CWW	Mr Matthew Giesemann	General Manager Engineering	City West Water Limited	Email and letter of 6 Oct 2004	1
2	CWW	Mr Georges Ruta	Water Quality Scientist	City West Water Limited	Email and letter of 6 Oct 2004	2
3	SGW	Mr Brian Ashworth	Manager Operations	South Gippsland Region Water Authority	Letter of 12 Oct 2004	2
4	GMRW	Mr Pat Feehan	Manager Environment and Natural Resources	Goulburn-Murray Rural Water Authority	Letter of 12 Oct 2004 (see also item 24)	2
5	NCCM A	Mr Gavin Hanlon	Chief Executive Officer	North Central Catchment Management Authority	Letter of 14 Oct 2004	1
6	YVW	Mr Sam Austin	General Manager Asset Services	Yarra Valley Water Limited	Email of letter of 15 Oct 2004	10
7	NATA	Mr Rob Oke	Victorian Manager	National Association of Testing Authorities	Email of 20 Oct 2004	2
8	MWC	Mr Peter Scott	General Manager Research and Technology	Melbourne Water Corporation	Email and letter of 21 Oct 2004	5
9	SWW	Mr David Blythe	Environmental Scientist	South West Water Authority	Letter of 21 Oct 2004 (unsigned)	1
10	SRW	Dr Martin Kent	Chief Executive	Southern Rural Water	Letter of 21 Oct 2004	2
11	EGW	Mr Les Mathieson	Chief Executive Officer	East Gippsland Region Water Authority	Letter of 21 Oct 2004	2
12	DJP	Mr David J Power	Principal Engineer, Water Supply and Sanitation	David Power Consultants Pty Ltd	Email and letter of 23 Oct 2004	4
13	WSL	Mr Dean Comrie	Manager Laboratory Services	WSL Consultants Pty Ltd	Email of 25 Oct 2004	1
14	AMA	Dr Paul Woodhouse	Director Policy and Medical Practice	Australian Medical Association (Victoria)	Email and letter of 25 Oct 2004	2
15	SEW	Mr Dennis Cavagna	Managing Director	South East Water Limited	Email and letter of 25 Oct 2004	4
16	PARK	Mr Gerard O'Neill	General Manager, Metropolitan Parks & Bays	Parks Victoria	Email and letter of 22 Oct 2004	2
17	GMMW	Mr Stephen Jewell	General Manager Urban Operations	Grampians Wimmera Mallee Water	Email and letter of 25 Oct 2004	3

18	GVW	Mr Allen J Gale	Director Technical Services	Goulburn Valley Region Water Authority	Email and letter of 25 Oct 2004	19
19	NEW	Ms Tamsin Rutsch	Water Quality Officer	North East Region Water Authority	Letter of 22 Oct 2004	2
20	VWIA	Mr Mark Harvey	Chief Executive Officer	Victorian Water Industry Association	Email and letter of 25 Oct 2004	7
21	CHW	Mr Peter Kitney	Water Manager	Central Highlands Region Water Authority	Email and letter of 25 Oct 2004	2
22	WES	Ms Liz Hanco	--	Water Ecoscience Pty Ltd	Email of 26 Oct 2004	2
23	BW	Mr Carl Bicknell	Executive Manager Water Systems	Barwon Region Water Authority	Email and letter of 25 Oct 2004	3
24	GMRW	Mr Pat Feehan	Manager Environment and Natural Resources	Goulburn-Murray Rural Water Authority	Supplementary letter of 22 Oct 2004 (see also item 4)	2
25	DSE	Mr Greg Wilson	Deputy Secretary Water Sector Group	Department of Sustainability and Environment	Email and letter of 20 Oct 2004	11
26	MDU	Ms Agnes Tan	Head, Primary Investigation Group	Microbiological Diagnostic Unit Public Health Laboratory	Email of 31 Oct 2004	3

Bodies that were invited to comment but did not send in a submission

Central Gippsland Region Water Authority ¹
Coliban Region Water Authority
Glenelg Region Water Authority
Lower Murray Urban and Rural Water Authority
Portland Coast Region Water Authority
Western Region Water Authority
Westernport Region Water Authority
First Mildura Irrigation Trust

Department of Treasury and Finance (Victoria)
Department of Premier and Cabinet (Victoria)
Regional Development Victoria
Essential Services Commission (Victoria)

IDEXX Laboratories
Australian Laboratory Services Pty Ltd
EML Consulting Services Pty Ltd
Water Ecoscience Barwon
Central Highlands Water Laboratory
SGS Environmental Services
Amdel Ltd (Gribbles)

Falls Creek Management Board
Lake Mountain Management Board
Mount Buller Mount Stirling Management Board
Mount Baw Baw Management Board
Mount Hotham Management Board

Victorian Catchment Management Council
Corangamite Catchment Management Authority
East Gippsland Catchment Management Authority
Glenelg - Hopkins Catchment Management Authority
Goulburn - Broken Catchment Management Authority
Mallee Catchment Management Authority
North East Catchment Management Authority
West Gippsland Catchment Management Authority
Wimmera Catchment Management Authority

¹ The Victorian Water Industry Association provided a submission on behalf of Victorian water authorities and water companies operating under the *Water Act* 1989 and the *Water Industry Act* 1994. This includes the businesses listed here.

CFA
State Library of Victoria
Association of Rural Water Authorities
Water Services Association of Australia
Productivity Commission
Energy and Water Ombudsman (Victoria)
Municipal Association of Victoria
Victorian Local Governance Association
Victorian Farmers Federation
Property Council of Australia (Victoria)
EPA Victoria
GHD Pty Ltd
PB Associates Australia
Sinclair Knight Merz
Victorian Health Promotion Foundation
Australian Dental Association (Victoria)
Monash Medical School
Co-operative Research Centre for Water Quality and Treatment
Consumer Law Centre Victoria
Master Builders Association of Victoria
Plumbing Industry Commission

NSW Health
Queensland Health
Department of Human Services (South Australia)
Department of Health (Western Australia)
Department of Health & Human Services (Tasmania)
Northern Territory Health Services
ACT Department of Health and Community Care
Department of Health and Ageing (Commonwealth)
Office of National Health and Medical Research Council
Sydney Catchment Authority NSW