

21 July 2017

Government Inquiry into Havelock North Drinking Water
c/- Department of Internal Affairs
WELLINGTON

havelocknorth.water@dia.govt.nz

RE: Submission on the Havelock North Inquiry Stage 2

1.0 Introduction

- 1.1 Christchurch City Council (the Council) thanks the Department of Internal Affairs for the opportunity to make a submission on the Havelock North Inquiry Stage 2.
- 1.2 Council staff have also been involved in the preparation of the Canterbury Drinking Water Reference Group submission. This submission is not intended to replace or detract from the Reference Group's submission.
- 1.3 The Council owns and operates one large and several small sized groundwater sourced water supplies.
- 1.4 The Council operates the largest secure groundwater water supply in New Zealand which serves approximately 255,000 people (registered as Community CHR001 in the Ministry of Health National Database).
- 1.5 Christchurch is in a unique position with a large untreated water supply and the Council wishes to maintain ownership, management and delivery of water services for its communities.
- 1.6 The Council has strong relationships with Environment Canterbury, Drinking Water Assessors, the Canterbury District Health Board and Ngāi Tahu. The Council plays an active kaitiaki role in protecting its water supply.
- 1.7 Christchurch residents highly value the fact that none of the Council's groundwater supplies currently have a disinfection residual in the network.
- 1.8 This is emphasised by the decision made by Councillors on 23 September 2016 to not chlorinate the public water supply in the Northwest zone where a capital works programme is currently underway to replace 22 shallow, unconfined wells with deep wells.
- 1.9 Any changes to the Drinking Water Standards for New Zealand (DWSNZ) provisions around groundwater security and treatment will have a significant impact on the Council, and therefore the Council expects to be closely involved in any review of the DWSNZ and associated documents.

2.0 Christchurch City Council Submission

	Issue	Scope and Elements of Issue	Christchurch City Council Submission
1	Current safety Havelock North Drinking Water	<ul style="list-style-type: none"> a) As concerns Brookvale bore 3 and its associated treatment plant: since re-opening on 7 March 2017, review its effectiveness, operational history, test results, maintenance and inspection schedule, any problems or concerns with it; b) Status of, and any plans for, Brookvale bore 2; c) HDC's current WSP d) HDC's current Emergency Response Plan (ERP) for Drinking Water e) The status of, and plans for, the Hastings bores supplying Havelock North f) The investigative monitoring regime recommended by the Inquiry on 15 December 2016: results, proposals for continued investigative monitoring, issues arising out of investigative monitoring; g) The experience of the JWG in overseeing current drinking water safety: effectiveness, progress, issues h) What aquifer investigations to date; status of, and plans for further investigating, the aquifers from which the Hastings bores and Brookvale bore 3 draw i) Status of, and plans for, treatment of all water supplied to Havelock North. 	<p>The Council is unable to comment on these issues as it was not involved in the investigation of the event.</p>
2	Drinking water partnerships & collaboration.	<ul style="list-style-type: none"> a) What form(s) of collaboration are most effective and workable b) Review operation and merits of the Hawke's Bay JWG c) What level of representative should participate in JWGs d) Leadership and guidance from Ministries on collaboration e) Should collaboration extend beyond liaison and communications to some aspects of management or supervision; if so, what aspects f) Should there be required specific outputs from a JWG e.g. a plan for a "source protection zone" as mentioned in 10 e and 	<ul style="list-style-type: none"> • The Council strongly supports drinking water partnerships where appropriate and ongoing collaboration initiatives, as demonstrated by Councils existing strong relationships as in 1.6 of the introduction. • The Council has several representatives in the Canterbury Drinking Water Reference Group (CDWRG) which was formed upon request of the Canterbury Mayoral Forum and which has representatives from all Canterbury territorial authorities, the Regional Council (Environment

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		<p>f below; should there be a catchment management committee within a JWG to ensure adequate focus on first barrier safety or is that unnecessary</p> <p>g) How should JWGs be accountable. To whom. Role of regulator in JWGs.</p> <p>h) Should collaboration be mandated or prescribed. How?</p> <p>i) What to avoid in collaboration</p> <p>j) How to avoid/address tension between parties' regulatory and non-regulatory functions</p> <p>k) Role of s69U Health Act in this context</p>	<p>Canterbury), Drinking Water Assessors and iwi representation.</p> <ul style="list-style-type: none"> • While the CDWRG is currently a high level group, the Council sees a benefit in ongoing collaboration on an operational and asset management and planning level as well. This would ensure that issues get raised and a collaborative approach is taken to resolve them. • There is also an opportunity to carry out joint research projects on groundwater and drinking water safety related topics, drawing on expertise and resources from various organisations in order to gain a better understanding of issues. • Examples of such projects in the Canterbury context are: <ul style="list-style-type: none"> - Total Coliforms in groundwater and determination of the Coliform source (faecal vs environmental) – a joint project between the Canterbury District Health Board (Drinking Water Assessors), Environmental Science & Research (ESR) and several Canterbury water suppliers. - Age tracer sampling in the Christchurch / West Melton aquifer system – a joint project between Environment Canterbury, Christchurch City Council and (Geological & Nuclear Science (GNS Science). • The requirement for joint working groups could be a prerequisite to demonstrate 'taking all practicable steps' to protect the water supply.
3	Drinking-water safety and compliance levels in New Zealand	<p>a) This issue to be considered as context for following issues</p> <p>b) Compliance and safety levels applicable to bacteriological and protozoa safety to be included</p> <p>c) What evidence is there of trends of improvement or deterioration</p>	<ul style="list-style-type: none"> • These questions could be answered by carrying out a nationwide benchmarking exercise on drinking water safety and compliance levels, with a follow up desktop study looking at overseas case studies.

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		d) How do types and frequencies of contamination compare with similar countries e) What information is available on causes of waterborne illnesses	
	High Level issues		
4	Should the “secure” category in DWSNZ 4.5 and definitions remain	a) Is the concept of “secure” water supply (which does not need to be treated) acceptable. What difficulties or deficiencies exist in the current basic concept of a secure supply. b) What difficulties or deficiencies exist in the criteria for security currently in DWSNZ 4.5. c) If divorced from the question of treating water, is there still a legitimate role for classifying water as “secure” d) Is there a role for the “secure” rating in respect of smaller supplies which may not treat to the same level as large or medium supplies e) If the classification as “secure” remains acceptable, should the criteria for security be changed or added to; can they be substantially simplified f) If the classification is to remain, who is to confer secure status and also downgrade status when needed g) Does water age testing have a useful role in classifying bore water; if so, what. Are there risks of over-reliance on water aging?	<ul style="list-style-type: none"> • The Council supports the retention of “secure” supplies. The Council has good processes and technical expertise to properly manage the continued secure status of its groundwater bores. • The existing definitions, rules and guidelines governing ‘secure groundwater’ may leave room for interpretation at the discretion of the DWA. The ‘secure’ rating is also reflecting a single point in time and therefore needs to be fully recognised that the water systems are potentially very dynamic. • As no single method provides a definite answer to whether or not groundwater is secure, a multi-criteria analysis approach is required to address this. • We believe that in regions where the groundwater system is well understood, well researched and investigated on an ongoing basis, there is a legitimate role for classifying water as ‘secure’⁽¹⁾. The real challenge lies in defining ‘secure’ groundwater in various contexts as groundwater and the associated water supply systems differ greatly across NZ and it is therefore difficult to determine a set of criteria which covers all the different scenarios. • We would like to be involved in any ongoing discussions of this chapter of the DWSNZ as we are able to contribute Christchurch’s knowledge and insights as a water supplier operating a significantly sized groundwater supply. We have good systems and emergency response plans and

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			<p>already test more than the minimum required by the DWSNZ.</p> <ul style="list-style-type: none"> • Water age testing is useful, however, it is only one tool and therefore should not be the sole deciding factor as it is a result representing a single point in time which takes several months of analytical work before the result becomes available. We support DO (dissolve oxygen) as an efficient real-time in-line measure. • ⁽¹⁾ The Council encourages the development of programmes of work both at local government and central government level that assist with a better understanding of groundwater sources and their management.
5	Should all drinking water be treated	<ul style="list-style-type: none"> a) What are the arguments in favour of mandatory treatment all drinking water b) What arguments against, including the wishes of communities c) How should treatment be mandated? (Health Act, DWSNZ, other) d) Should the need to treat water be determined on grounds other than the existing “secure” classification; If so, on what grounds e) If the default position is that drinking water should be treated, what exceptions or carve-outs (if any) should exist; Should any mandating of treatment apply to supplies of only certain types or sizes f) Should all network supplies include a residual disinfectant to provide a barrier against contamination post source/treatment. 	<ul style="list-style-type: none"> • Advantages of mandatory treatment include a consistent barrier to drinking water safety and across NZ, better benchmarking and information sharing opportunities. • Disadvantages of mandatory treatment include very high capital costs for supplies which are currently untreated, the potential that communities are dissatisfied as they would prefer an untreated water supply, and the risk that other risk management techniques are being neglected due to the feeling that the treatment and additional disinfection barriers take care of all risks. • The need for treatment should be based on several factors including groundwater system and situation (secure groundwater or a new category); the water supplier’s ‘track record’ of being a responsible water supplier; the risk management processes in place to keep water safe, the level of interaction with other organisations; the water supplier’s proactiveness with respect to protecting the groundwater system; the consumer’s wants and needs; and more.

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			<ul style="list-style-type: none"> • Domestic water treatment systems are becoming more readily available which should be explored as an acceptable solution for small water supplies or communities that prefer not to treat the water. • In relation to f) residual disinfectant is currently the most practicable and reliable way that a supplier and consumers can be assured that 'all practicable steps' are being taken to ensure potable water is delivered to the consumer. • However, the Council does not wish to chlorinate Christchurch's water supply, except as an emergency response. The Council understands that this is a higher risk approach than chlorinating, but mitigates this risk through more frequent testing and rapid response to any E. coli that is detected. • Extensive community consultation would be required before moving to a fully chlorinated water supply. • Excellent water supply management, governance and adequate resourcing are also very critical to the supply of safe water.
6	Treatments of drinking water	<ul style="list-style-type: none"> a) Is there a need to change or review the DWSNZ regulation and prescription of treatments; should the DWS address the minimum type and level of treatment required for various sources b) Is there adequate provision for reviewing the treatment provisions in the DWSNZ periodically. See 19 c below. c) (If not required by regulation) who should make the decision whether to treat or not, and what treatment to apply d) Should there be further regulation of treatment plants or methods; Should expert engineering certification be required e) Should treatment plant performance be regulated; should specified records be kept 	<ul style="list-style-type: none"> • The DWSNZ should continue to provide a toolbox approach for adequate treatment types and levels of treatment. • However, in recognising that no system fits all situations, the DWSNZ should contain a provision for DWAs (or another regulatory authority) to consider alternative solutions and accept them if it is felt that the alternative solution will provide safe drinking water. • There is a need to carry out a regular review of the DWSNZ acceptable treatment types and method, due to ongoing technological advances.

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			<ul style="list-style-type: none"> • The Council supports the concept of a specialist water regulator.
7	Should there be a dedicated drinking water supply entity or entities	<ul style="list-style-type: none"> a) What options exist for the management and delivery of drinking water; benefits of existing models. b) Arguments in favour of, or against, a dedicated supply entity; is there a role for such an entity in the case of a single supplier or only on a joint basis for several suppliers. c) What role could or should such an entity have; what ambit of activities should it have. d) What governance and structure should it have. e) What accountability would such an entity have; to whom f) Consider success or otherwise of examples of dedicated supply entities including Watercare and Wellington Water and, if useful, overseas entities (Scottish water). g) [NB excluded from this issue are the structural arrangements for local government] 	<ul style="list-style-type: none"> • Council wishes to maintain ownership, management and delivery of its water services. • Council is well placed to provide a safe water supply to its customers, as evidenced by no outbreaks of water-borne illness including during the earthquakes when there was extensive damage to the water supply network. This is because the Council has good systems, processes, emergency response plans and technical staff.
	Operational		
8	NES Regulations	<ul style="list-style-type: none"> a) Does the nature and extent of regional councils' responsibility for drinking water need to be reviewed/extended b) If so, are the NES Regulations the appropriate vehicle for achieving that c) Issues arising out of the application of the NES in practice; have the NES Regulations served their intended purpose d) What should be the scope and effect of the NES Regulations; are they too narrowly cast e) Is the current trigger for engagement of NES protections (activity likely to affect water in specified ways) workable and appropriate; should it be replaced, or complimented by a spatial criterion such as the stipulation of a "source protection zone" [see 10 f below re delineation of "catchment"] 	<ul style="list-style-type: none"> • Would be helpful if the Regional Council had an equal role in protecting drinking water sources as TLA's do under the Health Act to the 'all practicable steps' standard. • Cooperation between parties is essential moving forward and in practice this happens well in some regions. • As stated above, it is important that the issues need to be clearly defined and then the appropriate solutions found. This approach may lead to a NES but it may also head to legislation, regulation or a water ombudsman/commissioner or the like. • Council would encourage a more connected up system of legislation, regulation etc. for the governance of drinking water.

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		<p>f) What changes, if any, should be made to regulations 7/8</p> <p>g) What changes, if any, should be made to regulation 10</p> <p>h) What changes, if any, should be made to regulation 12</p> <p>i) Should the definition of “upstream” be amended</p> <p>j) Should the definition of “abstraction point” be amended</p> <p>k) Should the NES regulations apply to an application by a drinking water supplier for a water permit if so, what changes are needed to make this clear.</p> <p>l) Is there sufficient awareness of the NES Regulations by regional and district councils; if not what steps by MfE or others should be taken</p> <p>m) What changes, if any, should be made to the current draft NES User’s Guide (CB75); should any of its contents be codified in the regulations</p> <p>n) Role of collaboration/consultation/monitoring in relation to NES Regulations; do these need to be regulated. Relationship between s69U Health Act and regional councils’ responsibilities</p>	
9	<p>Consenting by Regional Council.</p> <p><i>NB this issue will overlap with the NES Regs issue 8 above</i></p>	<p>a) What changes in approach, if any, should be made to a regional council’s assessment of a drinking water supplier’s application for a water permit</p> <p>b) What changes, if any, should be made to regional councils’ approach to imposing conditions on such permits</p> <p>c) In relation to permit conditions, what compliance monitoring approach should regional councils be required to undertake or provide for</p> <p>d) Should Regional Councils consider the potential for increased risks for drinking water when granting resource consents for controlled activities</p> <p>e) Should Regional Councils notify the DHB and DWAs of all resource consent applications with the potential to impact upon drinking water sources</p>	<ul style="list-style-type: none"> • In our experience the Regional Council (ECan) appears to put more focus on groundwater quantity related issues than on groundwater quality issues. We are keen to work with ECan to be more proactive in addressing quality issues, particularly the protection of ground water quality. • With respect to groundwater take consents, discharge consents that may affect groundwater and associated information requests, there appears to be inconsistencies in terms of what information the Regional Council requests from applicants. The Regional Council needs to ensure that all applicants are treated equitably and that applications for community water take priority over other water take applications.

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			<ul style="list-style-type: none"> • Regional Councils should also give priority to community supplies when it comes to allocation quantity in supply zones. • Regional and District Councils should be jointly accountable for providing safe drinking water.
10	Regional Councils' approach to first barrier protection for drinking water - other than under NES Regulations	<ul style="list-style-type: none"> a) Should first barrier protection be accorded greater recognition and endorsement b) Should regional councils have responsibilities for drinking water in addition to those in the NES Regulations c) Should the current indirect or co-incident responsibility under the RMA be made more direct in respect of drinking water (this will overlap with the NES Regs issues, but may not be limited to the NES Regs regime) d) Should regional councils' responsibility for the protection of drinking water sources extend to collaboration and consultation with other relevant parties in the drinking water supply system e) Should the regulatory regime provide for a catchment protection plan and, if so, how should such a plan be prepared and administered f) In relation to the responsibilities of all agencies for catchment protection, how should "catchment" be delineated or defined g) Should any changes be made to regional councils' knowledge and management of potentially risky bores and other risk activities in the catchment area h) Is it sufficient that regional councils' knowledge and management is carried out through their SOE monitoring or is more specific action required i) Are any changes desirable in relation to the involvement of, and responsibility by, the Ministry for the Environment in respect of drinking water 	<ul style="list-style-type: none"> • Regional Councils should collaborate and consult with other relevant parties in the drinking water supply system so that decisions affecting drinking water sources are not made in isolation. The newly established drinking water reference group is aware of this. • It is important that accountabilities are clear between all parties. • All barriers are important. • Regional councils need to clearly, identify and protect key recharge zones including the appropriate regulation of land activities. • Regional councils also need to allocate water on quality appropriateness i.e. irrigation water does not necessarily need to be from secure sources. • Catchment and recharge zone management are paramount as is the appropriate control around the installation of other bores which enter the groundwater. • Risky bores in secure water catchment/recharge zones need to be proactively managed as a priority. • The Council has a high expectation that Regional Councils undertake their responsibilities seriously, and are sufficiently resourced, with respect to monitoring private bores to protect the public water supply.

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		j) Should there be greater guidance and/or education of regional councils in respect of their role in drinking water	
11	DW Suppliers	a) Should there be a system of licensing water suppliers i.e. a system more rigorous and effective than the current ss69 J, and K Health Act (registration) b) should any licensing system extend to individuals acting in key roles c) What levels of resource and support should a supplier have; is there a critical size d) What training, qualifications, certification and competence should water supply personnel have; what recurrent training and ongoing competence review e) What risk-assessment expertise is needed f) Is there a need to define more clearly roles and responsibilities within a supplier g) Should there be a mandatory QA function (possibly independent QA) h) Are local government water suppliers sufficiently accountable; are the LGA provisions in ss 67-81, 82-87, 93-99 effective and sufficient in the context of drinking water i) How should suppliers retain important safety information in their institutional memories; how should consultants' knowledge be transferred to suppliers. j) What is the role of external advice and assistance to suppliers; should the competence and expertise of external advisors be regulated.	<ul style="list-style-type: none"> • The DWSNZ already require wellhead security assessments to be undertaken by competent and experienced individuals; this concept could be expanded to other areas, however, guidelines around qualification requirements are needed. • IPENZ registration with additional competence based criteria could be an option. • There are adequate training and qualifications available through the ITO (e.g. National Certificate in Water). The issue is affordability and availability of trained personnel. Succession planning also an issue. • Good quality management frameworks that align with ISO 9001 deal with e, f and g, and should be a priority. Water is an essential food product and should have the highest level of QA. • h) The Council currently has adequate regular reporting to its Councillors and community • i) Important information relating to water supplies are required to be maintained under the Public Information Act – perhaps the creation of an office of Digital Archivist would help – with data available to researches, public and consultants. • j) External advisors should always provide high quality and trusted advice. Many firms do not locate their key people in regional locations. However we do not support regulation of this requirement but do support it being industry driven.

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12	DWAs	<ul style="list-style-type: none"> a) What issues, if any, exist in relation to DWAs' employment by and role within a DHB; should DWAs be managed and constituted outside the DHB b) What size and structure of DWA organisation should there be; should there be "agency" DWAs as per 69ZK c) Should the present informal amalgamated units (e.g. CNIDWAU) be formalised/extended d) What national oversight and co-ordination exists; what should there be e) Is there a need for greater consistency in DWA work across NZ f) Does the Ministry of Health maintain effective and adequate links with DWAs g) What training, certification and expertise should DWAs have h) Is the requirement in s69ZK(2)(b) for accreditation effective and beneficial; what matters should be within the scope of accreditation; can accreditation be used more fully or to better effect. i) To whom should DWAs be accountable j) Are any changes needed to section 69ZL Health Act k) What resources should DWAs have; are DWAs appropriately supported in the exercise of their statutory duties l) Should DWAs have greater or different enforcement powers m) Is there need for any change in the approach of DWAs to DWSNZ compliance assessment n) Should the DWA practices in relation to WSPs and ERPs be changed o) Does the National Drinking Water Assessors Technical Manual (CB54) need revision p) Is any change needed to the enforcement by DWAs of s69ZD obligations (records) 	<ul style="list-style-type: none"> • We are unable to comment on the finer details but in our experience there appear to be significant differences in how DWAs assess risks and day to day compliance. More consistency is required. • It is also clear that there are an insufficient number of full time DWAs to undertake everything that is expected of them. Recruitment from off-shore could be a solution, as could incorporating their functions into a National Water Commission. • Backflow protection is not required to be included in the annual compliance survey as it is already covered in the Water Safety Plan; there is no need to account for it twice.

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		<p>q) Should trained professionals from international jurisdictions be able to be recruited as DWAs to address DWA under supply;</p> <p>r) Should demonstrating compliance with s69ZZZ (protection against backflow) be included in the annual assessment of compliance with DWSNZ</p>	
13	<p>Roles of agencies in relation to drinking water</p> <p><i>[NB DWA and Regional Council roles dealt with separately above]</i></p>	<p>a) Should there be a single drinking water regulator</p> <p>b) Is there a problem with fragmentation of responsibility between agencies for drinking water</p> <p>c) Are the resources applied by DHBs to drinking water adequate</p> <p>d) Are the resources applied by MOH to drinking water adequate</p> <p>e) Is there a need for clarification and/or guidance in relation to the roles and responsibilities of various agencies</p>	<ul style="list-style-type: none"> • The Council supports, in principle, a single National Drinking Water regulator similar to OFWAT in the UK, Essential Services Commission (Victoria Australia), or the Scottish Water Commission, if the identified issues indicate benefits from such an approach. However, the Council is concerned that a national regulator may require treatment of all water supplies without community consultation. • As already stated, the issues need to be clearly defined and then solutions developed. In saying this it needs to be recognised that water supplies are fundamental to the protection of public health. • When a Council is a drinking water provider, the Council is externally audited and is accountable to its community. • There may be an opportunity for an environmental ombudsman.
14	WSP	<p>a) What changes, if any, are needed to the identification and assessment of risks in WSPs</p> <p>b) Should a WSP be part of a supplier's corporate risk management process and also recognised at senior management and governance levels</p> <p>c) Are changes needed to the process of updating and renewing WSPs</p> <p>d) Is any change needed in the extent to which suppliers devolve WSP responsibilities to consultants</p>	<ul style="list-style-type: none"> • Water Safety Plans need to be part of the water supplier's corporate risk management framework but need to be kept separate as detailed technical input is required. • Council has KPI's for the creation and regular update of WSPs for all Council owned and operated supplies. • Meeting the requirements of a water safety plan should be a performance measure regularly reported to governance each quarter, to ensure they are utilised as 'live' documents. They form part of a utility's Business Plan

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		e) Are changes needed to the enforceability of WSP promises or obligations, and the assessment of implementation of WSPs f) What sanctions or consequences should follow a failure to implement a WSP g) What changes, if any, should be made to the WSP Guidelines document or the use of it h) Should a ERP be part of a WSP i) Are any changes needed to CB158, 159 DWA Manual; should WSPs be prepared according to a template or should they be entirely bespoke j) Are any changes needed to sections 69Z-ZC Health Act	<p>which should also address emergency response planning and business continuity planning.</p>
15	Monitoring & Testing	a) Are any changes needed in the DWSNZ provisions governing monitoring and testing b) Are any changes needed to the reporting and use of test results c) Do the WINZ database and systems for recording test results need change; are changes needed to access to test result data d) Where should the regulation of sampling fit within the drinking water regime. Are further rules required to regulate sampling e) Should the same rules and supervision apply regardless of whether sampling is carried out by laboratory staff or water supplier staff, or others f) What training, certification, oversight and expertise should samplers have g) Are any changes needed in the sampling process h) Are any changes needed in relation to tankers/water carriers i) Should a grading system be reinstated; if so, what features should it have. Was the abandonment of a grading system justified	<ul style="list-style-type: none"> • Council feels that the functionalities offered by the new WINZ system are a step backward compared to the current WINZ system. For instance the creation and scheduling of large drinking water monitoring and testing schedules is almost impossible in the new WINZ. • The new WINZ system is also not very user friendly for exporting drinking water quality data which is an essential task that every water supplier carries out for their water consumers. • The Council has its own IANZ accredited laboratory which undertakes monitoring of the Council's water supplies and this works well. • Council is unsure why water supply grading is mentioned in this section as grading is not only based on monitoring and testing results but on a wide range of parameters. • k) Yes, the Council supports all of these suggestions.

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		<p>j) Is the use of FAC as a monitoring tool adequately recognised in the regulatory regime and is it adequately put into practice by HDC</p> <p>k) Should the national drinking water information system be enhanced so that:</p> <p>(i) information about historical incidents is visible and accessible;</p> <p>(ii) it can link to disease information systems to identify illness rates for particular water supplies; and</p> <p>(iii) it supports early detection of changes to supplier's risk profiles?</p>	
16	Laboratories	<p>a) Should there be greater regulation of laboratories within, instead of separate from, the drinking water regime</p> <p>b) Should laboratories be part of the drinking-water partnerships & collaboration, or are they necessarily a separate element by nature of their function and role</p> <p>c) Are any changes needed to accreditation, training, certification, registers or other aspects of the regime applicable to water testing laboratories</p> <p>d) What level of expertise is needed by water testing laboratories</p> <p>e) Should there be a requirement for larger and better resourced laboratories to service water suppliers, or certain sized water suppliers; is there a case for a Government-run laboratory or is private sector supply better; should laboratories be independent of the water supplier(s)</p> <p>f) What changes are needed to the supervision and auditing of water testing laboratories. Is there adequate internal QA function for laboratories</p>	<ul style="list-style-type: none"> • Council believes that the IANZ accreditation process provides suitable assurance that a laboratory acts as an independent third party even if associated with the water supplier's organisation. • Ongoing training of the sampling and testing staff is required, particularly around water sampling processes and the recording of any unusual observations. • If the laboratory also collects the samples then it is particularly important that the sampling staff is familiar with the water supply and has a robust understanding of the treatment processes so that any unusual readings and observations are immediately reported to the water supplier. • f) Laboratories should be IANZ accredited, as is the case for the Council's laboratory. • g) To the water supplier and Health board and DWA.

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		g) In the event of a positive result, what reporting obligation should laboratories have h) Is any change needed to the current system for approving laboratories to carry out individual tests i) What should the process be in the event of laboratory "issues", such as cross-contamination or errors in testing processes	
	Sundry		
17	Protozoa risk	a) Are changes needed in relation to education about protozoa risks to drinking water b) Are current DWSNZ rules for protozoa deficient c) If so, what is needed in relation to implementation of better protozoa procedures and risk assessment d) How frequently should there be reviews of protozoa provisions. See 19 c below. e) Roles of MOH and MfE in relation to protozoa risks	<ul style="list-style-type: none"> • Education around Protozoa should be improved and testing rules in the DWSNZ improved and simplified. • The Council has a programme of undertaking condition assessments of its reservoirs and repairing as required to prevent contamination. This should be standard practice for all water suppliers.
18	Boreworks & casings	a) What deficiencies exist in the current system relating to boreworks and casings (NZS4411, DWS, WSP, Guideline, RC RRMP) b) Is a single source of specification preferable; is a code of practice needed c) Should there be a mandatory inspection regime, accountability d) Should below-ground bore heads be allowed e) Is an Asset Management Plan adequate to deal with aging reticulation assets	<ul style="list-style-type: none"> • While each water supplier will have their own standards, the Council considers that a Code of Practice would be useful, as would be forums where ideas can be exchanged and issues discussed. • Guidelines for the inspection of bores and casings would be beneficial. • Council feel that robust whole of life asset management planning supported by adequate financial provision should be sufficient to deal with the issue of aging infrastructure. • Council has a programme of replacing below ground boreheads with above ground boreheads as part of its renewal programme. • Council supports a standard specification for boreheads.
	Regulatory		

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19	Health Act	<p>a) Does the regulatory framework need to be strengthened to increase accountability for drinking water safety to the Government and the community; or is the present level of regulation sufficient</p> <p>b) What is the proper relationship between the respective components of the drinking water regime - is there a need to review some of the aspects that overlap, to ensure certain obligations are not omitted</p> <p>c) Is the statutory regime for changing any DWSNZ provisions acceptable (s69P- need to consult 3 years before any change to DWSNZ; s69R further 2-year delay unless urgent)</p> <p>d) Should there be different or further sanctions for failures to comply with any of the provisions of Part 2A Health Act; are ss69N and 69ZZH effective/useful? Should the offence provisions in s69ZZR-ZZX be reviewed</p> <p>e) Should compliance with DWSNZ be discretionary or optional</p> <p>f) Should s69U Health Act (duty to protect source) be changed</p> <p>g) Should the s69V Health Act regime (“all practicable steps”) be changed; see also s69S. Should the section 69H Health Act definition of “all practicable steps” be changed</p> <p>h) Should s69ZF Health Act be changed such that remedial steps are mandatory</p> <p>i) Whose responsibility is it to monitor and enforce the s69V obligations on a water supplier</p> <p>j) Health Act does not specifically require an ERP- should it</p> <p>k) Is there a role for a Water Auditor – part of water commission role.</p>	<ul style="list-style-type: none"> • Council supports a consolidated regulatory and reporting framework as stated previously, e.g. further issues regulated through a new water commission. • The drinking water regime needs to be appropriate to the important role that drinking water provides within society. The regime need to be complimentary to all of the other controls that are needed to address the identified issues.
20	DWSNZ	<p>a) Are the DWSNZ comprehensible to users; can they be simplified or clarified</p> <p>b) Adequacy of remedial actions: Greater sampling, speedier chlorination, longer chlorination; more than 3 clear results in contamination protocol; (cross refer s69ZF Health Act)</p>	<ul style="list-style-type: none"> • DWSNZ is complex and difficult to understand. It should be simplified into plain English with supporting explanatory notes on more technical matters.

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		<ul style="list-style-type: none"> c) Does section 5.16 (UV treatment) need to be reviewed d) Does 5.2(a) table entry re protozoa need review e) DWSNZ do not specifically require a ERP- should they f) Should requirement for annual report to DWA on borehead issues be in DWSNZ (rather than in Guidelines 3.2.5.5 g) Should DWSNZ have stricter rules about drinking water bores; Minimum depths; More stringent aquifer stability requirements. h) Are the turbidity provisions at 5.7 and 4.3.2.1 and elsewhere appropriate; is change needed i) Given its prevalence in documented outbreaks around the world, should heavy rainfall be accorded better status and prominence in the DWSNZ (or elsewhere) j) Should the DWSNZ address the risks from animal contamination more fully k) Should the DWSNZ include requirements from qualification, training, ongoing competence reviews for water supply operators 	
21	DW Guidelines	<ul style="list-style-type: none"> a) Review concept of a Guideline in addition to the DWSNZ. b) Could the two be combined c) What deficiencies exist in relation to existing Guidelines 	<ul style="list-style-type: none"> • The Council feels that the DW Guidelines are too detailed in some areas and too vague in other areas. • The Guidelines need to remain separate as they need to be able to be updated on a regular basis as technologies and best practice change.
	Outbreak Management Issues		
22	ERPs (Emergency Response Plan) (a.k.a Contingency Plans)	<ul style="list-style-type: none"> a) What regulation should there be for ERPs, both their existence and content b) Size and scope: how comprehensive should ERPs be; should they be relatively short and concise documents? c) Should drinking water ERPs be multi-agency plans 	<ul style="list-style-type: none"> • The Council has emergency response plans as part of its water safety plans. • Any entity that supplies or distributes water to the inhabitants of a city, district, or other place is considered to be a lifeline utility. Section 60 of the CDEM Act 2002 sets out the duties for lifeline utilities, which includes

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		<p>d) In addition to a ERP, is there a role for a MOU between agencies, or some of them in relation to emergency response; covering such issues as communications, decision-making (an MOU being more directive and enforceable than a ERP)</p> <p>e) Should training, including multi-agency joint training, be specifically required</p> <p>f) Should periodic reviews and updates of ERPs be required</p> <p>g) What further guidance is needed, if any, on the issuance of boil water notices: who, when what consultation</p>	<p>undertaking planning activities to ensure that the supplier is able to function to the fullest extent possible.</p> <ul style="list-style-type: none"> • All water suppliers should have an emergency response plan in place as part of their core function. This should take a multi-agency approach including DWA, Health boards and key stakeholders. An effective communications plan should be a requirement at the ERP. • The Council would suggest that plans should be audited to show they were effective and if need be this should include multi agency agreements, such as the Drinking Water Reference Group that has been set up in Christchurch.
23	Communications	<p>a) What changes are needed to communication practices in relation to a drinking water emergency.</p> <p>b) Should a messaging system be used.</p>	<ul style="list-style-type: none"> • Water suppliers need to utilise more communication technologies and social media to ensure that the consumers can be contacted in a contamination event. • Council feels that it should be mandatory for a water supplier to have an effective consumer database that allows the consumers to be contacted either by text message or email. The database needs to be detailed enough to enable the consumers to be filtered by water supply and distribution zone. • There is no current requirement for water customers to provide mobile contact numbers. Having mobile contact numbers would greatly assist targeted communications to affected residents through e-text technologies.
24	Other outbreak management issues	<p>a) What practices should be adopted in relation to use of schools, GPs or others, as early warnings of an outbreak</p> <p>b) Should the Ministry of Education have a role?</p> <p>c) Should greater emphasis be placed on drinking water emergencies and the drinking water aspects of other civil defence emergencies? Should drinking water be recognised</p>	<ul style="list-style-type: none"> • It would be helpful if the Council was alerted to waterborne diseases recorded by GPs. • Water suppliers should be obliged to create and maintain databases and contact lists for consumers, vulnerable consumers (diabetes patients, retirement homes, childcare

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		in civil defence emergency responses as an essential lifeline (as opposed to infrastructure to be managed	facilities, schools etc.) that allow for prompt and easy communication in the event of a contamination.

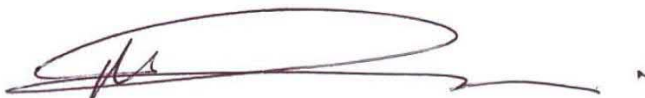
3.0 Concluding Remarks

- 3.1 With Council being New Zealand's largest secure ground water supplier affected by any changes to chapter 4.5 of the DWSNZ we would expect to be involved in any review of this chapter as we are able to contribute Christchurch's knowledge, experience and improvement opportunities to the discussions. We believe we have shown strong leadership and have robust systems and processes in place, including emergency response plans, that would be helpful for others.
- 3.2 If you require clarification of the points raised in this submission, or additional information, please contact David Adamson, General Manager City Services, by phone 03 941 8149 or by email at david.adamson@ccc.govt.nz.
- 3.3 We would like to be heard in support of our submission.

Yours faithfully



Cr Pauline Cotter
Chairperson – Infrastructure Transport & Environment Committee



Cr Mike Davidson
Deputy Chairperson – Infrastructure Transport & Environment Committee



Carolyn Gallagher
Acting General Manager City Services
pp
David Adamson
General Manager – City Services