

12 October 2018

Allan Prangnall  
Department of Internal Affairs  
P O Box 805  
WELLINGTON 6140

Dear Allan

## **Drinking Water Regulatory Reform**

### **Introduction**

This submission is largely for the record since most of what it contains has been covered with you and the team in previous discussions.

During the month of August, Water New Zealand staff conducted 15 workshops at various locations around NZ, socialising options for reform with over 600 members of the Association. We covered the material in this paper. I have previously sent a copy of the slides we used at the workshops for your information. Several people sent us submissions and I will not attempt to summarise these but copy them to you separately.

There was very little pushback on the idea of a new drinking water regulator. It would be fair to characterise the discussions around aggregation as more diverse, since this issue creates uncertainty for Councils. As an Association we have not been able to agree on recommending to you one particular model.

### **What might a new regulator look like?**

Early in 2018 the Government asked officials to consider options for a new regulatory regime for drinking water, requesting a report back on options in August. Water New Zealand has been engaged in discussions with officials on those options. This paper sets out some of Water New Zealand's ideas about a new drinking water regulator.

Contamination of the Havelock North drinking water supply was caused primarily by the failure of Hastings District Council to meet the required standard of care for a water supply and their inability to adequately manage risk. But other factors and organisations contributed to the cause of the event, including the consultants advising the council, the Regional Council, and the District Health Board, which is contracted by the Ministry of Health to provide regulatory services for drinking water.

In many respects the events of August 2016 represent a regulatory failure and may not have occurred if existing regulatory measures had been applied in the way intended by the Health Act. The Government Inquiry into the outbreak, particularly part 2 which looked at the industry wide issues, clearly identified failures in the application of drinking water regulatory measures. This included promotion by the Ministry of Health of a 'softly softly' approach to enforcement and the Drinking Water Assessment service; District Health Boards being under resourced, staff inadequately trained and not sufficiently technically supported.

Water suppliers have raised concerns about water safety plan and drinking water standards compliance assessments being inconsistently applied and have queried the level of technical expertise and even understanding of the standards amongst drinking water assessors.

### **What kind of approach is required for a new regulator?**

There are a number of differing approaches that can be taken to drinking water regulation. One is to take a strict auditing approach, where the regulator simply assesses compliance with standards and regulations, determines whether requirements have been met and reports on them. This approach requires good auditing techniques and procedures but not necessarily an in-depth understanding of water supply. In many respects this is the approach that has been used over the last 15 years.

Our view is that a drinking water regulator needs to command the respect of water suppliers. It needs to be trusted if it is to provide necessary leadership to the industry. To do these things it must be politically independent and without any conflicts of interest. It needs to have an in-depth and up-to-date knowledge of all aspects of water science and drinking water supply technology, including recent international developments. It must also have a central focus on the specific role that it is tasked with.

But it will be required to deal with water suppliers in different ways, depending on their response to regulatory requirements. Most water suppliers will comply with regulatory requirements voluntarily, some will need assistance with understanding and responding to requirements, a small number will need to be directed as to how to comply and enforcement action will need to be taken against a very small number. So a drinking water regulator needs to have a range of approaches and expertise if it is to perform this range of functions.

To this end a highly competent organisation with specific technical and scientific expertise in addition to auditing and assessment skills is required. Such an organisation can provide more than just assessments of compliance and would have the expertise to assist or direct water suppliers in regard to compliance. This level of expertise is also required if prosecutions are intended. But most of all an organisation of this type has the ability and technical expertise to provide leadership to the industry, the ingredient that the Inquiry identified as not only missing from the New Zealand industry, but also essential to the provision of safe water supplies.

### **What might a new drinking water regulator look like and what might it do?**

Assessing compliance with drinking water standards and legislation, including the need to prepare a water safety plan, is of course a key function of a drinking water regulator. But a regulator also needs to have the expertise and willingness to enforce compliance where this is required. This could involve issuing compliance orders or taking prosecutions in exceptional circumstances as occurs for example in the United Kingdom.

But there are other functions that are currently not undertaken in New Zealand (but are in many other countries) that would significantly contribute to the safe operation of drinking water supplies. These include the oversight and auditing of laboratories, undertaking water sampling and licensing or certifying operators, supervisors and managers of water supplies.

A regulator could also have some oversight of education, training and the continuing professional development of those working in the water industry to ensure that their knowledge remains relevant and up to date.

Water New Zealand would like to see a regulator that retains a high level of technical expertise. For example, it would retain exceptional expertise in water microbiology, water chemistry, water

treatment and process engineering, geohydrology, and other discipline areas. It would need to have drinking water assessment expertise at a range of levels, including principal, senior, standard assessor and trainee.

We suggest there is a need for somewhere between three and five offices across New Zealand with perhaps a total staff of about 40 people, the number of required full time staff that was advised to the Inquiry.

Water New Zealand proposes a service that would have a significant reliance on web-based IT systems to assess and report on compliance. This would necessitate the organisation having a considerable IT functionality, more so than has historically been or is currently the case. The potential benefits of a comprehensive IT compliance assessment and reporting system are significant to reducing workload and making information available to water suppliers and the public.

This approach would ensure the organisation had a strong technical base, but also a strong practical understanding of the realities of demonstrating compliance. While that technical expertise would be the basis of the organisation, it might also employ, possibly under contract, on an as-required basis, expertise in law enforcement and policy development. There would of course also be administrative functions that would need to be performed.

The regulator would also need human resources and general IT expertise. It would also need a governance structure. These needs raise the question of where in organisational terms such a regulator should be located.

### **In what organisation should a new regulator be located?**

There has been some suggestion that a new regulator should be a stand-alone organisation that reports directly to a Minister. That would be our preference. However, such an organisation would need to provide all of the required support services, including human resources. It would be more time consuming and costly to set up.

Water New Zealand can see the benefit of locating a new national drinking water regulator into an existing organisation, simply because it means the regulator could be set up quickly and more easily. It also makes sense to locate a drinking water regulator into an organisation that already has a scientific and regulatory culture, employs scientific discipline specialists and undertakes a national regulatory role.

Water New Zealand agrees with the Inquiry that such an organisation should not be the Ministry of Health, in part because the Ministry of Health is essentially a policy organisation rather than an operational organisation, but also because the current approach, which has the Ministry developing drinking water policy and contracting regulatory functions to District Health Boards, has not worked. A continuation of this approach would not be acceptable to the water industry.

Two acts of government are relevant to this question, the State Sector Act and the Crown Entities Act. One of the determining factors regarding where a drinking water regulator would be placed is the relationship that the organisation would have to Ministers of the Crown. Differing arrangements allow the Minister to direct an organisation, or an organisation can be required to give effect to Government policy or be required to show regard for Government policy. Other arrangements can have a board which is responsible to the Minister for the performance and functions of the organisation.

A third option might be to have the regulator as an 'Officer of Parliament' as the Auditor General or Parliamentary Commissioner for the Environment are.

It is not yet clear in what organisation a drinking water regulator would best be located, and more work is required by officials on this matter but Water New Zealand considers that, whatever the arrangement, political influence must be minimised. Decisions on technical, procedural or prosecutorial matters must be able to be made by the organisation without influence. This would require a high level of independence.

Some options include using a model based on the arrangements for the Civil Aviation Authority. Other options include a placing the drinking water regulator in the Ministry for Primary Industries, an organisation which undertakes a lot of regulatory activities, or including it into the Environmental Protection Agency. A lot of further work needs to be undertaken on this before decisions can be made.

### **Who should set drinking water standards?**

The current approach to drinking water regulation includes the setting of drinking water standards and placing duties on water suppliers, particularly the duty to manage risks in water supplies through the preparation of a Water Safety Plan.

New Zealand needs a more nimble approach to setting drinking water standards. One of the most significant regulatory failures associated with the Havelock North event was that the drinking water standards were not fit for purpose. This is demonstrated by the fact that, in spite of the considerable illness caused by the event, the Havelock North supply still complied with the drinking water standards for the year in which the event occurred. The Inquiry found the secure bore water category in the standards to be unsafe and unsound. This, and the failure to make any changes to the drinking water standards for 10 years, indicates a significant problem exists in the way standards have been set.

There has been a suggestion that the organisation that sets drinking water standards should be separate from the organisation that enforces those standards. This approach promotes the idea that a drinking water regulator should only be an auditor of compliance with standards and legislative requirements. The current arrangement is a version of this approach but has not worked.

Some in industry argue that the DWSNZ do not really set 'standards'. The 'standards' are the numerical numbers to meet. These are zero for bacteria, protozoa and viruses, and the MAVs for chemicals and radiological. They are all WHO derived numbers. What NZDWS does is sets out the ways of demonstrating that a water supplier has confidence it is consistently meeting these standards.

On balance, Water New Zealand considers that drinking water standards should be set by the regulatory organisation. If a water regulator maintains a high level of technical expertise across a range of disciplines, as proposed, it will have the expertise required to understand and prepare drinking water standards, albeit with input from international experts. It will also have practical experience in assessing compliance and directing water suppliers with regard to compliance. It will know what works, what doesn't and because it will remain up-to-date with international research and trends, it will know what updates and changes are needed to standards.

The risk with this arrangement is that the regulator might adjust or compromise the standards to make its job easier. However if another organisation has the task of setting standards, it will need to duplicate the expertise already held by the regulator and will not have the practical experience necessary to produce standards that are workable. There is also a risk that the two organisations will have differing ideas of what should or should not be included in the standards.

Water New Zealand considers that the risks of having the regulator set standards could be managed more easily than the disadvantages of having a separate organisation setting the standards.

### **The alternative approach of co-regulation**

Water New Zealand is aware of a co-regulatory model that has been proposed by Local Government New Zealand (LGNZ). The model suggests that a principles-based approach to setting drinking water standards is not appropriate and that the Havelock North Inquiry findings support this position. This is not correct. A principles-based approach to setting drinking water standards is recommended by the WHO, is used worldwide (USA, Canada) and is for example the basis of the Australian Drinking Water Guidelines.

The LGNZ paper *Water 2050: Governance A better framework for drinking water regulation* advances the principle that *when the costs and benefits of a regulatory outcome are contained locally, then local decision makers should have control over the regulatory policy*. The difficulty with this statement is that it assumes that the benefits of a drinking water supply are contained locally. This is not the case. All communities have visitors. Some communities in tourist destinations have an economic base that is dependent on large numbers of visitors. The benefits in these circumstances (including economically) accrue across the nation. It would seem unreasonable to have local decision makers overly influencing standards for drinking water when the implications of those decisions would be national.

The main premise of the co-regulatory approach is that those who are affected by the cost of standards should have a co-regulatory role in setting those standards. By implication this suggests that communities that would struggle to meet the standards should be allowed to determine a lesser standard (at a lesser cost) for themselves. This idea has been advanced each time the DWSNZ has been reviewed and has been rejected by successive reviews.

The approach assumes that small rural communities (and small rural TAs) have the knowledge and expertise to understand the depth of scientific information that underpins the preparation of drinking water standards. The setting of drinking water standards is highly technical and requires an extensive depth of scientific knowledge and an appreciation of recent understandings and developments in the rapidly changing drinking water industry. This is evidenced by the extent of expertise assembled to prepare DWSNZ in 1995, 2000, 2005 and 2008 and the reference documents used to prepare those standards.

The proposed co-regulatory approach could also be subject the pressures of the three year local body electoral cycle and the possibility that DW standards could be changed subject to TA political makeups and preferences.

Our view is that all functions of drinking water regulation, policy, standards setting and enforcement should be clearly separated from the organisations that would be the subject of that regulation. Worldwide in affluent countries, this separation is standard. This is because any risk of regulatory capture of officials, by those who are regulated, needs to be removed.

### **The alternative approach of providing demonstrably safe drinking water**

Another approach that has been suggested is that water suppliers need to provide water that is *demonstrably safe* rather than comply with a range of measures in a comprehensive standard. This approach is appealing because it appears to place the burden of proof (that water is safe to drink) onto the water supplier.

In fact, it does the opposite because it requires a drinking water regulator to assess the water suppliers' claims of demonstrably safe water. The burden of proof shifts to the regulator which

must prove or disprove the water suppliers' claims. This places a considerable resource burden onto the regulator.

The demonstrably safe approach is not consistent with the health-based targets approach promoted by the World Health Organisation, adopted in Australia, the United Kingdom, the European Union and other developed countries and agreed to by the New Zealand Ministry of Health at World Health Organisation drinking water meetings.

The Health-based targets approach recommended by the WHO, and upon which four New Zealand drinking water standards have been based since 1995, sets health-based maximum acceptable values for a range of drinking water determinands. They then set out how a water supplier should demonstrate that water they supply will not exceed those maximum acceptable values. The burden of proof rests solely with the water supplier. The function of the regulator is then to determine whether or not monitoring shows that the water supplier has demonstrated that the health-based targets have, or have not, been met. There is no need for discussion as to whether the water is demonstrably safe or not because if it complies with the standard, then it is considered to be so.

Water New Zealand does not support a change from the health-based targets approach to a *demonstrably safe* approach.

### **Should a drinking water regulator also be a wastewater regulator?**

Some critical issues remain unresolved with regard to wastewater discharges in New Zealand. These include inconsistent consent conditions in wastewater discharges, unconsented wastewater discharges and reluctance amongst Regional Councils to prosecute consent holders when they fail to meet consent conditions. There is also very little knowledge or regulation of wastewater overflows to stormwater systems and waterways. There are a number of reasons for this including the number of separate entities regulating wastewater discharges and 'regulatory capture' where those that are regulated have undue influence on the regulator. These issues affect the quality of water in New Zealand's waterways.

Water New Zealand proposes that a new wastewater regulator would have the function of issuing licences for all discharges from wastewater plants, including discharges to water, to air and to land. It would also provide considerable expertise and leadership to the industry. We know this approach is inconsistent with the current RMA functions of Regional Councils and that it may slow down the process of establish a quality regulator for water.

Similar to a drinking water regulator, it would need to command the respect of waste water service providers, be trusted and provide necessary leadership to the industry. It would need to be politically independent and without any conflicts of interest. It would need to have an in-depth and up-to-date knowledge of all aspects of wastewater treatment technology and science including recent international developments. It must also have a central focus on the specific role of regulating the collection and treatment of wastewater and protection waterways.

The proposed approach would be similar to that used for drinking water. The regulator would set a minimum standard for the quality of all wastewater discharges and outline how a wastewater operator would demonstrate compliance with that minimum standard, numbers of samples, etc. The minimum standard may include minimum discharge levels for *E. coli*, nitrate, phosphorus and suspended solids amongst other things.

Additionally, duties would be placed on wastewater operators, particularly the duty to manage the risk of discharges to the environment which exceeded the minimum standards. Wastewater plant owners would be required to prepare an Environmental Risk Management Plan, similar to a Water Safety Plan, which would identify risks to the operation of the wastewater system that

could result in unacceptable discharges. The plan would identify how the risks would be managed and include a contingency plan and an improvement plan, and a list of improvements that are required to manage the identified risks. Additionally a wastewater regulator could gather information on wastewater overflows and set standards for these. Regulations could permit stormwater overflows in extreme weather events, for example during a one in five year storm event as occurs in Melbourne. Gathering more information and reporting on stormwater overflows would be a start to reducing these discharges.

Perhaps the proposed Drinking Water Act should actually be a Water Services Act and also legislate for the proposed duties on wastewater operators.

### **How could a national wastewater regulator be set up?**

Water New Zealand considers that there is a need for a national regulator for wastewater and that a national drinking water regulator could easily be expanded to be a national two waters regulator. The same approach could be taken, with much of the expertise, for example water microbiology or water chemistry being retained by the organisation. The function of drinking water assessor could, with additional training, be expanded to that of water quality assessor and cover both water and wastewater assessment. The need to increase staff numbers to provide a national wastewater regulatory service would be minimal because effective regulatory IT support tools, expansion of the regulatory roles and use of expertise already employed by the regulator would provide considerable efficiencies.

There has been some suggestion that such a regulator should be a three waters regulator and include stormwater. Water New Zealand does not discount this idea, but considers that there are some differences and complexities with stormwater that require further consideration. At the present time, setting up a regulator for two waters will be difficult enough and if/when this is completed, inclusion of stormwater could be considered.

We understand that regulating wastewater discharges cuts across regional council functions and makes reform more difficult – since the RMA is an effects-based statute.

Perhaps the solution is to agree to establish a new drinking water regulator but signal that further work is required to examine the need for wastewater regulation.

### **What about economic or financial regulation?**

Economic and financial regulation is an important part of the drinking water regulatory regime in other countries including the United Kingdom. In New Zealand there is currently a lack of transparency regarding how water and wastewater services are funded by local authorities, how much revenue is gathered, from where, and how it is spent. There is some concern that local authorities subsidise water and wastewater services with other forms of revenue or that they spend water and wastewater revenue on other council functions. It is not clear that all councils are setting aside sufficient funding for water renewals and future demands.

This could be solved by using the current LGA TAFM Act, which requires annual disclosure of a number of metrics set by the DIA. Little useful data is currently reported as Water New Zealand's own performance benchmarking shows. A proper disclosure regime would solve most of these problems.

Some clarity in these matters would be useful and an economic/financial regulator could have a role in assessing them, particularly if reform of water and wastewater services changes the structure of entities, reducing the number to perhaps between four and six entities that would be large natural monopolies.

But it is the view of Water New Zealand that these matters are currently of lesser importance than water quality regulation and establishing an economic/financial regulator is likely to slow the establishment of a new water/wastewater regulator. While it warrants consideration at a future date, Water New Zealand considers that it would be best to keep an economic/financial regulator separated from a quality regulator to avoid potential or perceived conflicts of interest.

In summary, the events that occurred at Havelock North in August 2016, amongst other things represented a considerable regulatory failure. Water New Zealand considers that the present circumstances provide a rare opportunity to reform drinking water regulation in New Zealand, reform that is essential to prevent a repeat of those events. Retaining the status quo is not considered an option.

### **Aggregation of Water Suppliers**

Of the many issues being considered by Government, this is perhaps the most difficult to address. It goes to the heart of the debate about localism versus a more centralised approach to water management. We see that our role at Water New Zealand is to ensure officials are aware of the advantages and disadvantages of the various options for reform in this area. Deciding on the actual number of entities, or indeed any change at all, is the role of central government.

What is clear from the work done to date by officials is that there are a number of drivers for change. These have already been well described by officials at public meetings, conferences and in briefing papers to the Government. They will not be in detail covered again here. Suffice to say they relate to issues of governance, funding and affordability, asset management practices, recruitment and retention of staff by local authorities, and lack of central government oversight – to name but a few.

At a practical level there are many issues facing the three waters sector with a number of councils seemingly not fully aware of their implications. Fifty years ago the three waters sector was typically a civil engineering role. Technology has advanced with complex treatment, monitoring, modelling, compliance and sophisticated asset managing processes. Many councils appear not to have adapted to these changes and are now struggling to cope.

The specialist expertise now required to operate and maintain a three waters system can no longer be achieved by a few individuals with generalist skills. In-depth knowledge is required of the various systems being used and the implications if they are not working. Having access to people with this knowledge who can give timely advice on corrective actions is critical to maintaining an essential public health service for drinking water; environmental and public health implications for wastewater and a health and safety issue for stormwater.

With new technology and access to information comes a more knowledgeable customer with higher expectations for levels of service. Councils need to leverage technology in order to have an efficient operation and be able to provide the higher levels of service demanded by their rate payers.

New Zealand does not have many individuals with these skills and trying to attract and retain people with these skills in most entities is a challenge. Attracting people to the three waters has been a global challenge for a number of decades and although a critical service to communities - it is not typically seen as an attractive industry to work in.

The other big issue is the one of deferred investment. It is agreed we need to spend more money – how much is up for debate, but we also know that economies of scale - both in procurement and subsequent operations, are very significant.



Part of the issue with recruiting is the lack of opportunity for career development within a small council; typically these are small teams made up of either those that have been there a life time and are likely to retire there or people that are there for a few years and then move out of the region to another council, creating a loss of institutional knowledge.

### **Options for change**

There has been a great deal said and communicated to the water sector in New Zealand over the past 15-20 years about possible options for reform of water service delivery. Given that all the options have been well canvassed, this paper briefly summarises four options.

The evidence internationally is that scale matters. Bigger utilities generally deliver better service at a lower price to consumers than smaller ones, but only once a certain scale has been achieved.

Under any scenario other than the status quo there are options around asset ownership. The assets, debt and staff associated with three waters administration at a TLA could transfer to the new entity, or they could be retained by the TLA's – though that is clearly a matter for government to decide.

### **Status quo**

Clearly doing nothing, or very little, is an option when considering alternative methods of service delivery. Under this scenario a new regulator (if one is established) would simply enforce the new drinking water regulations (and/or wastewater regulations) among councils as they do now.

The advantages of this approach are seen as:

- minimises disruption to existing council staffing and operations
- speaks to localism and the desire to retain control over local assets at the community level
- allows local solutions to be implemented
- politically easier for Central government.

The disadvantages of this approach are:

- issues with governance remain
- issues with affordability and funding remain
- there will still be capacity and capability issues around staffing – recruitment and retention
- there will still be variable asset management approaches
- there will still be differing levels of compliance with standards
- inability to cross subsidise from wealthy to poorer communities
- no improvement in levels of service for customers
- the issue of reform will keep being raised as the issues facing local Government get worse.

### **Regional approach**

This option would see water services delivery aggregated up to a regional level, perhaps based on the existing regional council boundaries.

The advantages of this approach are seen as:

- some improvement over the current regime in terms of scale
- improved ability to recruit and retain staff
- improved funding and affordability
- improved governance is a possibility – though councillors are still elected
- it isn't as disruptive to existing council staffing and operations as options with fewer entities
- it retains a degree of localism – albeit at a regional level
- it allows regional solutions to be implemented

- perhaps a better integration around catchment management issues
- there remains some public doubt as to past performance of Regional Councils in freshwater management.

The disadvantages of this approach are:

- governance remains with elected officials
- there may be insufficient scale in some regions to address affordability and funding - inability to cross subsidise from wealthy to poorer communities
- there would still be issues with the capacity and capability of staff – recruitment and retention issues remain for some regions
- there would still be variable asset management approaches
- there would still be differing levels of compliance with standards – uneven benefits geographically

### **3- 5 Entities – Minister map 2**

This scenario would create entities larger than any current entity in New Zealand. While the exact number of entities is again a matter for debate, this model is designed to ensure that the entities created have sufficient scale to make a difference. The boundaries and number of entities are up for debate. In May 2018 the Minister of Local Government showed a map with five entities at the Water Summit. It is assumed these would be Crown Owned Entities or similar and have Boards appointed to manage them – in a similar manner to Watercare and Wellington Water.

The advantages of such an approach:

- they would provide the scale necessary
- they would have much greater ability to recruit and retain staff
- they would presumably have Boards of directors who would provide independent professional governance
- if the assets were transferred they would be able to cross subsidise across existing TLA boundaries
- they would provide a demonstrably better service at lower cost to the majority of consumers
- would transfer existing TLA debt to new entity allowing councils to focus on issues that matter more to TLA's
- there would be distinct improvements in asset management
- there would be far better disclosure and visibility by central government as to the risks faced by the sector.

The disadvantage of this model:

- substantive loss of direct control at a local level
- would transfer assets from TLA's to larger entities – may be a stranded overheads issue for some TLA's
- significant impacts on existing staffing
- difficult to sell politically
- perhaps uneven benefits geographically depending whether the units are large enough.

### **The one entity water model**

This approach envisages creating one utility for the entire country. Talking to Scottish Water, Tasmanian Water and the various UK regulators who have gone through a reform process, they have all recommended making the big change up front. This model would involve one publicly owned company owning and managing the assets. It would presumably take over the debt as well.

The advantages of this approach:

- an independent Board of governance
- absence of political interference
- recruitment and retention of the best staff with all the necessary skills
- much greater compliance with the drinking water standards
- customer focused and better levels of service
- universal charging with lower average cost to consumers
- ability to cross subsidise from wealthy communities to poorer ones.

The disadvantages:

- complete loss of direct local control
- high likelihood of stranded overheads with TLA's
- significant staff disruptions
- politically hard to get across the line.

### **Summary view on aggregation**

As an Association it has been difficult to reach agreement to recommend one particular option.

In summary, all Water New Zealand can say is that the evidence from overseas suggests that larger entities offer distinct advantages in terms of levels of service and cost to consumers over the status quo. It provides greater transparency over asset management from central government. Overseas experience also suggests that the quicker the transition is made from one system to another, the better.

### **Mandatory treatment of public water supplies**

This issue was contentious at many of the industry meetings we ran, despite the fact that we didn't raise the matter. Our position is that we support final recommendations 20 and 21 of the Stage 2 report of the Havelock North Drinking Water Inquiry.

We are available to answer further questions if you require. Thank you for the opportunity to be involved in this important work.

Yours sincerely



John Pfahlert  
Chief Executive