RUAPEHU DISTRICT COUNCIL

Private Bag 1001, Taumarunui 3946, New Zealand
Telephone +64 7 895 8188 ▪ Fax +64 7 895 3256
Email info@ruapehudc.govt.nz
Website www.ruapehudc.govt.nz

28 March 2022

To: Taumata Arowai
Level 2/10
Brandon Street
Wellington Central
Wellington

Subject: **Taumata Arowai Consultation**

Submission from: Ruapehu District Council
Private Bag 1001
TAUMARUNUI 3964

Point of Contact: Warren Furner (Executive Manager Infrastructure, Executive Leadership Team)

Email: Warren.Furner@ruapehudc.govt.nz
Phone: 07 895 8188 ext 251

Sarah Matthews (Executive Manager and Strategy)

Email: Sarah.Matthews@ruapehudc.govt.nz
Phone: 07 895 8188 ext 235

- The Ruapehu District Council (RDC) thanks Taumata Arowai for the opportunity to submit on this very important matter.
- Council does not wish to speak in support of its submission.

1. ABOUT US

The Ruapehu District is a land-locked area covering 6,733km², with a usual resident population of 12,309 (Statistics NZ, Census 2018). The population is projected to increase to 13,328 in the coming years. Ruapehu is one of New Zealand's largest districts by land area, however, has a relatively small and dispersed population base with one of the lowest population densities in the country (0.02 persons per hectare). The Ruapehu District is also a growing tourist destination and enjoys a significant and steadily increasing number of visitors each year.

Communities within the Ruapehu district rely on critical infrastructure and lifeline utilities such as water, wastewater, telecommunication, gas, electricity, road, rail and solid waste management. As the region continues to grow, the physical nature of many of the waterways, structures and flood protection works has altered. This has led to a decline in the state of physical health of the waterways in the region which also provide water for potable supply (Horizons Regional Council, 2019). Ruapehu relies largely on surface water sources for drinking water supply, stock watering, and irrigation.

2. PROPOSED CHANGES – CONSULTATION

Ruapehu District Council (RDC) applauds Taumata Arowai for initiating the necessary work to uplift the standard of water quality and management in New Zealand. We recognised that these changes need to be made to protect the livelihoods of our community and environment, however we have reservations about the financial cost these proposed changes will have on our district. As a small rural district council with a low rating base, we have limited capacity to comply with these new water standards.

Any imposed costs proposed by Taumata Arowai will push us over our debt affordability limit. At the time of writing this submission, the details of the Three Waters reform are still largely unknown and therefore, it is unclear whether the new Three Waters entity will take on Council water debts. RDC wishes to make it clear to Taumata Arowai that our ability to comply with these new water standards is restricted by our finances and in-house capacity and we urge Taumata Arowai to consider providing water service providers with viable options to assist water service providers in meeting these standards.

Council asks that Taumata Arowai consider the Covid-19 effects on supply chain delays and work force availability along with the continued legislation and standards in its compliance assessments. It's acknowledged that indications have been made by Taumata Arowai, these are not legislation requirements with set standards providing certainty that the financial commitment are against the best decision options.

TECHNICAL FEEDBACK

2.1 DRINK WATER STANDARDS

RDC recommends Taumata Arowai to provide water service providers around the country with a 'Best Practice Guide' on the Laboratory Standard method for testing each new Minimum/Maximum Allowable Value (MAV). This would provide us with clear outcomes to target.

Indicator parameters within the pesticide list for MAV are often used to assess it further detailed sampling is required in other consents. Use of indicator parameters could free up laboratory resources.

The MAV and raw water sampling appear as the main focus to assess source water quality as appropriate for Drinking Water Supply. Eg Boron values can be high around Mt Ruapehu. The source water is only Barrier 1, and the raw water source informs the treatment train required to deliver potable drinking water. The MAV assessment after treatment is more important to ensure that water delivered in the reticulation system is within health guidelines to protect Human health when consumed.

Monitoring the treated water process is more important than continually monitoring raw water which varies with river flow, rainfall and catchment activities. Table 14 is dedicated to weekly monitoring raw water but is not reflective of the water being consumed.

Raw water monitoring across all parameters and flows is an environmental function and should be undertaken by Regional Council. It is a Regional Council function to inform on the natural environmental health of the river and if it's safe to swim or drink in a raw form. This provides the raw water catchment characteristics which is published into LAWA National Environmental Standards – Drinking Water. There appears to be a blurring of the Councils functions when there is such intense raw water monitoring being required at Barrier 1. Treatment operators should use this data and additional data relevant to the intake point to help determine the treatment train requirements from the environment. That is where they have control over the water quality characteristics being produced.

In attempting to align Nation Environmental Standards for Drinking Water there is the potential that Regional Council may use MAV values as a test to grant abstraction consents. This is not the intent of MAV values, which are indicators of the risk and treatment required. Currently there is a high risk that surface waters will be seen as inappropriate water sources, without considering that water from bores are tapping into "underground rivers". Mountain Ruapehu influences both surface and subsurface waters regardless of depth.

2.2 DRAFT DRINKING WATER QUALITY ASSURANCE RULES

Please note the bullet point numbers below references the bullet point numbers in the 'DRAFT Drinking Water Quality Assurance Rules' document. The comments below speaks directly to each point as seen in the original document.

4.4 **'Varying Population Size Drinking Water Supplies'**

- "Varying population" does not have a method to assess if the population has changed greater than the base population for a period of more than one day. Monitoring a population movement on a daily or weekly basis is not practical. A better trigger method is required eg "where the average treated water volume of population consumption has increased above a X % for a period greater than XX % excluding industrial and rural water from the previous quarter, then the population will move into the next category eg > 500 people

Monitoring

Ongoing weekly inspections between “October and May”, of an area around a surface water take for the presence of benthic cyanobacterial mats and or planktonic cyanobacteria growth, has no trigger value or methodology. During summer there will always be some present as they are part of the natural ecosystem. Tthe question is what risk does this pose to the health of the people? There could be a simple visual table with photos and a matrix to provide an assessment method. Cyanobacteria is naturally found in surface water bodies. It is the volume that should trigger further investigation.

When the visual assessment triggers sampling by chemical analysis to assess the potential risk. As set out in S1.4. Alternatively, the water take is not inspected weekly or within that week, due to a variety of reasons including health and safety risks, then the raw water is sampled at the plant and sent for chemical analysis during this week/period. Again, it is important to achieve the outcome that the treatment process has removed the contaminate to appropriate health guidelines.

- E.coli and total coliforms in the water standards have not changed to allow the flexibility of adding presence absence testing as an option after treatment. Presence absence testing is instant and can be used to provide some assurance for the human errors that result in data loss e.g. courier failure, laboratory sample loss, etc. Presence/absence testing where the supply is small and resources are constrained could be used to escalate resources for monitoring where risk is evident.

- Total coliforms do not have any associated limits. Does Taumata Arowai see the need to continue will this testing in the legislation?.

9. Community Drinking Water Stations/Water Carrier Supplies

- The data storage of a minute of data and the use of excel spreadsheet limitation also needs to be explored. SCADA storage and retrieval over time has some technical issues as the data volume increases. What software is required to store this information is this to be uniform across platforms? Note the biggest issue with data retrieval in time-based systems is the loss of sequencing. SCADA systems are very flexible and generally built and implemented to the level of management appropriate for the treatment system. A known set standardised system to transition to over time is important if standardized reporting is a goal across New Zealand, eg Daylight Saving Time or New Zealand Standard time.

- Continuous monitoring of parameters is one of the best methods of assessing if the plant process is performing within parameters. Minute data collection lossess due to technology failure should be considered against other parameter measurements being made at the time and the volume of water being effected to build the risk profile. For example chlorination being achieved at the plant is designed to kill bacteria both within the reservoir and the distribution network. So the loss of 1 minute data point on turbidity is not resulting in a compromised treatment system.

- Table 5 (T3) - the UV disinfection rules combined with the colour test are very restrictive and non-compliances occur but the actual outcome is achieved. e.g., UVT

transmittance/intensity method is a theoretical number which is not always met. The colour is not visible to the human eye so it's not for visual aesthetics. No E.coli has been found in the National Park Water Supply which has colour exceedance so the test is not indicative of the risk, that UV treatment is not being achieved, and E.coli is entering the distribution line. RDC would like to see the test method changed to reflect the outcome of No E.coli but allow for natural occurring colour within the water column.

10. **Compliance Rule Modules**

10.3 **Treatment rules**

- The T1 rules relies on gravity flow ability into a tank – this will not be possible in all circumstances.

10.4 **Distribution System Rules**

With regards to the '*A backflow prevention device where there is a high or moderate risk of backflow'*, the building code and the previous drinking water classification were not aligned. This inconsistency in classification needs to be resolved to provide clarity to Drinking Water Supply Planning.

10.10 **D3.6-Backflow Protection Rules**

- 'Access to water network, where it is reasonable necessary to access the network for the operation of the drinking water supply'. This statement excludes the reticulation drinking water being used for other purposes other than fireflow or other emergency via a standpipe. Eg washing of footpaths, hanging baskets etc. are not permitted. Council infrastructure maintenance has been set around the availability of reticulation water for other purposes such as hygiene of the streets and wellbeing through beautification. Long-term goals may be to use alternative options, but this will take years. Planning for greenspace development does provide for some of these opportunities moving forward.

10.10.2 **Facilities Operation, Maintenance and Disinfection Rules**

- These regulations will impose future costs on the management of our water systems. Operational costs significantly affect community health and wellbeing as affordability is one of the greatest struggles of small populations with high devevation indexes. There is still no certaintain that the debit will be moved to a separate entity.

2.3 KEY CRITERIA FOR THE USE OF THE DRINKING WATER ACCEPTABLE SOLUTIONS FOR ROOF WATER SUPPLIES

- Council have had some difficulties with private supplies not wishing to join available networks which provided a higher standard of treatment but not "perceived wholesome values". Is there guidance on how this compliance is resolved?

- The aesthetic values appear to be set below the treatment standards. This is particularly prevalent for chlorine and will drive unnecessary angst within the community. While the rules state that this should not over-ride drinking water health its simpley an agument that Councils do not need to debate if values are set in line with treatment values.

- The definition of source water as rainwater appears inconsistent with NES-DW which appears to exclude rainwater.

- Clarification of the drinking water use criteria: "…share the same roof water source" could be interpreted to mean a single roof. But the actual source is rainwater which may be captured off multiple roofs into storage tanks before treatment. Increasing roof area capture will be important during dry climatic conditions. More clarity as to how to interprenate this rule may be useful.

2.4 DISCUSSION DOCUMENT- DRINKING WATER NETWORK ENVIRONMENTAL PERFORMANCE

- How is the performance management of drinking water coverage quantified? (page 12)

- Water New Zealand's National Performance Review measures do not totally align with the DIA KPI measures. Please note, DIA measures are also legislatively imposed on Councils. Will DIA measures be repealed when Taumata Arowai measurements commence or will Water Supplies be again moving down the tranch of reporting to different Government Masters.

- **Fault attendance and resolution**-Will the criteria for fault attendance be changed or maintained against the current criteria administered by DIA. Will Taumata Arowai take over the auditing of this criterial?

- Drinking water treatment byproduct- currently we discharge backflow into a backflow pond onsite. The sludge is pumped into the wastewater treatment system and the surface water can be decanted to the receiving environment under resource consent. We would like to know, is this still an acceptable solution?

- The concept that safe drinking water is available to all is contradictory when networks operated by universities, hospitals and other large institutions are excluded on the basis that they are not operated by a government department. These institutions have the same risk of exposing a significant population. Water borne outbreaks have largely been linked to private and educational institutions. Given Hospitals are first responders to any health emergency it would be assumed that they would have the highest response requirements. As education institutions feed the mind and body they should also be meeting drinking water standards.

- **Asset Conditions**-What criteria will be used to assess asset conditions? If metadata is to be made universal a significant lead in time will be required.

- **Water Pressure**- At the present time, there is no requirement to provide a standard water pressure to customers, if Taumata Arowai was to introduce a standard, RDC will struggle with meeting those standards because our water systems are gravity fed. What's the new criteria for water pressure, and what is it based on?

- **Efficient consumer use of water**- This is difficult to quantify because we do not have a metered network and we also provide farms with portable water for such activity as milking sheds and stock drinking. Rural Water Supply tanks are filled overnight in our trickle feed supplies and using night monitoring assessments to measure water loss do not provide sensible data.

- **Alternate water use**- Water is supplied to commercial, industrial and rural users, there are no restrictions on how they use water or what the water should be used for. This is a change that will need to be managed and consideration needs to be given to the implementation of the change against the economic climate.

- **Energy efficiency**- what is Taumata Arowai basing this on, in terms of what they mean by 'energy efficiency', is there a standard in place or will there be a standard in place

3. CONCLUSION

To conclude, Council shares Taumata Arowai's commitment to ensure all communities have access to safe drinking water. However, our ability to meet these new water regulations is restricted by our capacity and financial resources. We recommend that Taumata Arowai provide options that can assist us in meeting these new water standards.

Council would also like to put forward the idea for Taumata Arowai to work alongside the Ministry of Environment with regards to protecting drinking water sources to avoid confusion. Also to look at the Key Performance Indicators set by DIA and the need for these measures.