

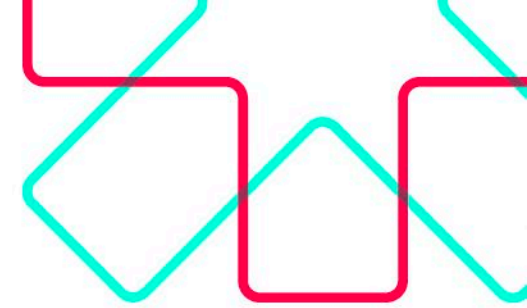
MARTIN  
JENKINS

# INQUIRY INTO THE CESSATION OF WATER FLUORIDATION BY WELLINGTON WATER

Final Report

21 June 2022





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Lynda Carroll  
Chair Wellington Water

21 June 2022

Tēnā koe Lynda

I have completed my inquiry into the cessation of water fluoridation by Wellington Water. As per the terms of reference, the primary focus of the inquiry is on lessons learned and these are set out in my findings. I have also recommended a small number of improvements in addition to those already being made by Wellington Water. I am comfortable that Wellington Water is now on top of the issue.

I would like to commend the way in which the Wellington Water employees who were interviewed engaged in the inquiry. They were all very honest and upfront. Hayley Cassidy, Executive Assistant to the Chief Executive of Wellington Water and Garry Butler, Business Assurance Advisor Wellington Water provided excellent support to the inquiry, and Colin Crampton, the Chief Executive, was always readily available. I would also like to acknowledge the assistance I received from Joanna Collinge, Robyn Ward and Ben Guernier from MartinJenkins.

Ngā mihi



Doug Martin  
Founder, MartinJenkins



# INTRODUCTION

## Context

- 1 Wellington Water was established in 2014 to manage the drinking water, wastewater and stormwater services for Hutt, Porirua, Upper Hutt and Wellington city councils and Greater Wellington Regional Council (GWRC).<sup>1</sup> South Wairarapa District Council joined Wellington Water in 2019.
- 2 The councils retain ownership of their infrastructure assets and contract Wellington Water to manage the three waters network. The six councils are equal shareholders.
- 3 A representative from each council sits on the regional Wellington Water Committee, which provides overall leadership and direction for the company through the Statement of Intent and Letter of Expectations. Wellington Water is governed by a board of independent directors.
- 4 There is no legal requirement to fluoridate, and the decision to fluoridate supplies in Wellington would have been made by the local councils in consultation with their communities. Petone and Korokoro are the only areas within the four cities that receive unfluoridated water (this was reconfirmed following a public survey in 2000). Water supplied to South Wairarapa communities is not fluoridated.
- 5 There are four water treatment plants in Wellington, owned by GWRC, where fluoride is added to water – Te Mārua,

Wainuiomata, Waterloo and Gear Island. These supply fluoridated water to all communities in the four city councils except Petone and Korokoro. The Gear Island Water Treatment Plant is only required for fluoridation because of the way the network is configured to supply unfluoridated water to Petone and Korokoro.

## Background to the inquiry

- 6 On 16 March 2022 Wellington Water publicly announced that fluoride facilities at Te Mārua and Gear Island Water Treatment plants had been turned off in February 2022 because of operational health and safety risks.
- 7 However, the Board of Wellington Water later learned that fluoridation was in fact stopped at Te Mārua in May 2021 and at Gear Island in November 2021.
- 8 As a result, the Board initiated this independent inquiry into the events that resulted in Wellington Water ceasing to fluoridate drinking water at these two plants, and in its management failing to inform the Board, the Wellington Water Committee and shareholding councils, and the public of this accurately and promptly.

<sup>1</sup> These services had previously provided by Capacity Infrastructure Services and GWRC water supply group.



## Terms of reference

- 9 The objectives of the inquiry are to:
- a provide the Board with key insights and learnings about these events; and recommend, where appropriate, actions for governance
  - b recommend, where appropriate, actions that will ensure Wellington Water management learns from these events and performs to a high standard in the future.
- 10 The scope for the inquiry is to:
- a review and, where appropriate, provide recommendations on:
    - the management of Wellington Water’s plants, including asset management, as relevant to the decision to cease fluoridation of drinking water at Te Mārua and Gear Island Water Treatment Plants
    - the information provided to the Board, and the timeliness of that information, both in the lead up to and regarding the decision to cease fluoridation
    - communication with key stakeholders and the public in relation to the decision.
  - b consider the findings of a technical review that management have already commissioned into the operation of the two treatment plants that are the subject of this review.
  - c make comment on any broader systemic matters considered relevant to this review.
- 11 The full terms of reference are provided in Appendix 1.

## Approach to the inquiry

- 12 In accordance with the terms of reference, my primary focus in conducting this review has been to capture insights and identify lessons that can inform activity to turn fluoride back on and strengthen arrangements for the future.
- 13 I carried out the inquiry in two phases, which I have set out below.

### Discovery

- 14 A review of approximately 400 documents. These included:
- a the regulatory framework for fluoridation in New Zealand
  - b key accountability documents and service level agreements between Wellington Water and its shareholding councils
  - c a technical “Review of fluoridation in drinking water” commissioned by Wellington Water in March 2022
  - d Wellington Water Board and Senior Leadership Team (SLT) papers relevant to this inquiry
  - e internal email correspondence and attachments on relevant matters (this made up approximately 80% of the documentation reviewed).
- 15 38 interviews with a range of Wellington Water staff, Wellington Water Board members, Wellington Water Committee members, mana whenua representatives, senior staff and Mayors from the six councils, and representatives from Regional Public Health, the Ministry of Health, and Taumata Arowai.



**Analysis and reporting**

- 16 Analysis in relation to each of the specific points in the Terms of Reference. This included corroborating verbal accounts with documentation where possible.
- 17 Development of key findings and insights, based on evidence and insights. Emerging findings were shared in a workshop with Wellington Water's Board and the Wellington Water Committee in May 2022.

The Chief Executive and Board Chair were provided with a draft of this report to check for factual accuracy.



# FINDINGS

## Fluoridation

This section sets out my key findings in relation to the first part of Objective 5(a) in the terms of reference, to “*Provide the Board with key insights and learnings about these events*” as they relate to the scope of the inquiry provided at clause 14(a):

*(i) the management of Wellington Water plants, including asset management, as relevant to the decision to cease fluoridation of drinking water at Te Mārua and Gear Island Water Treatment Plants*

*(ii) the information provided to the Board, and the timeliness of that information, both in the lead up to and regarding the decision to cease fluoridation*

*(iii) communication with key stakeholders and the public in relation to the decision.*

In forming these findings, and in accordance with clause 14(b) of the terms of reference to “*consider the findings of a technical review*”, I have drawn on the March 2022 report by Raveen Judarum commissioned by Wellington Water.

The “Review of fluoridation in drinking water” (which I will refer to as “the Judarum report”) is a detailed technical review of fluoridation in drinking water provided by Wellington Water from July 2016 to March 2022.

The Judarum report’s findings are consistent with the insights provided in interviews, and information from documents reviewed in the course of this inquiry.

## Finding 1: Fluoridation for oral health wasn’t a priority for Wellington Water, and this underpins the findings of this inquiry

- 18 There was nothing in the legislative, regulatory or council requirement settings that was driving a strong focus on achieving optimal levels of fluoridation for oral health at Wellington Water.
- 19 This is important context for the decisions and behaviour of Wellington Water, both in the management of Water Treatment Plants in relation to fluoridation, and in the way the decision to stop fluoridation at Te Mārua and Gear Island Water Treatment Plants was communicated.
- 20 This underpinned a lack of urgency in both:
- a resolving ongoing problems with fluoridation of drinking-water at Wellington Water Treatment Plants
  - b communicating those problems and the fact that fluoridation had stopped to the senior leadership team, the Board, the Wellington Water Committee, and the public.

### 1.1: The regulatory settings for fluoridation for oral health are weak

- 21 Fluoride is added to drinking water as a public health measure to prevent and reduce tooth decay. Fluoride strengthens the tooth



surface, interferes with the growth of the bacteria that cause cavities, and helps to repair the early stages of tooth decay.<sup>2</sup>

- 22 There has been no legal requirement to add fluoride to water, and the decision to add fluoride has been at the discretion of the water supplier – usually a local authority in consultation with communities.
- 23 To realise these benefits, the level of fluoride needs to be maintained within an optimal range – 0.7 to 1.0 m/L. If the level of fluoride in drinking-water falls below this, communities will not receive the oral health benefits. However, because too much fluoride can have negative impacts on health, water suppliers need to pay careful attention to the dosage.
- 24 Reflecting these potential negative impacts, and the fact that there is no legal requirement to fluoridate, the regulation of fluoridation of water has been focused only on the safety of drinking-water.
- 25 Water suppliers have a statutory duty to provide safe drinking water, including by complying with minimum quality standards – the Drinking Water Standards New Zealand (DWSNZ 2005, revised 2018).
- 26 For fluoride, this means not exceeding a Maximum Allowable Value (MAV)<sup>3</sup> of 1.5 g/L. There is no legal requirement to monitor or report on fluoride levels commensurate to the recommended range that would prevent and reduce health decay.
- 27 Until recently, the Ministry of Health was responsible for setting standards and monitoring compliance, under the Health Act 1956.

Under the Water Services Act 2021, this responsibility now sits with Taumata Arowai.

- 28 The standards and rules are likely to be updated in July 2022, but there are no proposals to change the MAV or introduce any other requirements for fluoride concentrations.
- 29 In 2014 an industry-led Code of Practice for the Fluoridation of Drinking-Water Supplies in New Zealand was introduced, which includes recommendations for reporting in relation to the levels of fluoride required for oral health benefits. The Code was endorsed by the Ministry of Health but suppliers are not legally required to comply with the Code.
- 30 Wellington Water had not adopted the Code before this inquiry.

**In future, there will be a stronger regulatory focus on fluoridation for oral health**

- 31 The Health (Fluoridation of Drinking Water) Amendment Bill was first introduced in November 2016. The Bill was enacted five years later, in November 2021.
- 32 The Bill amended the Health Act 1956 to empower the Director-General of Health to direct water suppliers to fluoridate drinking water, and to require suppliers currently adding fluoride to continue to do so. It also provides for penalties for failing to comply.
- 33 The Ministry of Health has indicated to Wellington Water that it will change the fluoridation guidelines to a fluoridation standard with specified performance criteria after 1 July 2022.
- 34 The Ministry has also indicated that a direction to require the drinking water for Petone and Korokoro to be fluoridated is likely

<sup>2</sup> <https://www.health.govt.nz/your-health/healthy-living/teeth-and-gums/fluoride>

<sup>3</sup> The MAV of a chemical is the concentration of that chemical that does not result in any significant risk to the health of a 70 kg person over a lifetime of consumption of two litres of the water a day.





within the medium term. This is likely to include an expectation that 95% of the water leaving all water treatment plants must be dosed at the necessary levels.

## 1.2: The council requirements didn't force attention on effective fluoridation

- 35 Wellington Water notes on its website that it adds fluoride to drinking water to reflect GWRC's policy (as the provider of bulk water) of adjusting the fluoride content of the water in line with the Ministry of Health's recommendations.<sup>4</sup>
- 36 However, the management services contract between GWRC and Wellington Water does not mention fluoridation or the need to meet the optimal levels of 0.7 to 1.0 g/L. I have not seen any documentation that sets out any service-level expectations from any of the councils in relation to fluoridation at the optimal levels for oral health benefits.
- 37 Wellington Water does monitor fluoride levels, and this information is available, but it is not reported in any forum other than to show compliance with the Drinking Water Standards New Zealand.
- 38 There are no internal performance indicators that are reported on in relation to optimal levels of fluoridation. It is not something that Wellington Water's SLT or Board received any reporting on.
- 39 Quarterly reporting to GWRC and other councils does not include anything in relation to optimal levels of fluoridation. Fluoride is only mentioned obliquely as it relates to providing safe drinking water.

<sup>4</sup> <https://www.wellingtonwater.co.nz/your-water/drinking-water/how-is-it-treated/whats-in-your-water/fluoride/>

40 Fluoride concentration levels in drinking water are not included in Wellington Water's annual report. Median concentration levels were previously reported in GWRC's annual report, but this practice was not continued when Wellington Water began providing services to GWRC in 2014. There is no documentation or organisational knowledge that explains why this reporting was stopped.

- a However, we cannot assume that the reporting of median concentration levels meant that fluoridation for oral health was a higher priority before 2014.
- b The levels of service and performance measures in GWRC's annual plan were very similar to what they are now, so meeting the service levels before 2014 still did not require effective fluoridation levels.
- c The reporting of median concentration levels in GWRC's annual report appears in a section relating to safety of drinking water and the focus is on not exceeding the MAV.

41 While Wellington Water should arguably have been proactively monitoring and reporting on optimal levels of fluoride, there were no questions or complaints from any of the councils or from the Board of Wellington Water.

## 1.3: A culture of safety, rather than effectiveness, was dominant in relation to fluoride

42 There is, quite rightly, a strong "safe water" culture at Wellington Water. The organisation and its people care about making sure the public can reliably trust that the water that comes out of their taps



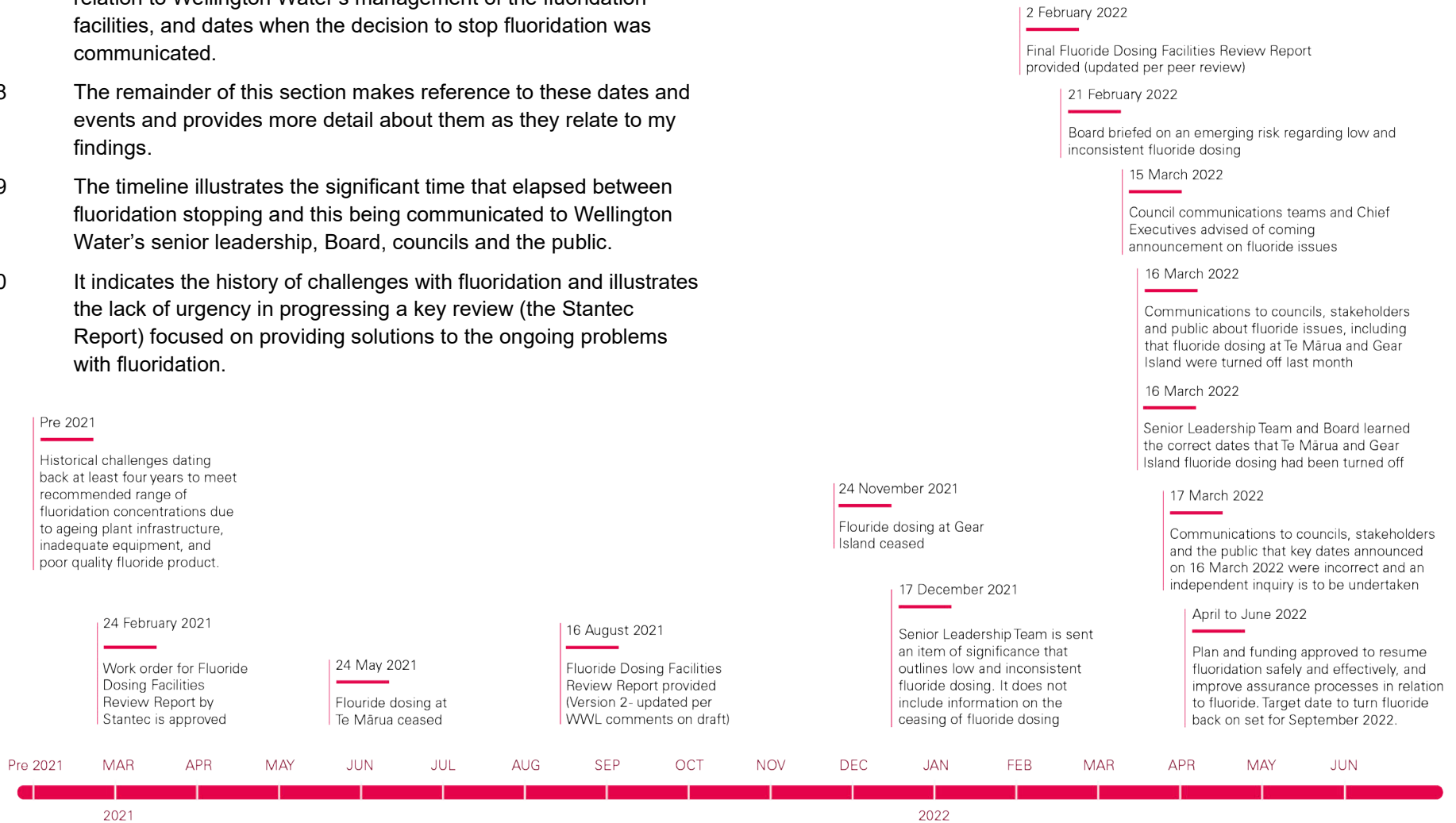
is safe to drink. There has also been appropriate attention to the health and safety of operators in relation to the hazards that fluoridation processes create.

- 43 At an operational level, Wellington Water's staff have put a lot of effort into trying to provide effective fluoridation of water. Various problems with equipment and product (described later) have required staff to modify plant and processes in order to try to fluoridate Wellington's drinking water safely and effectively, with mixed success.
- 44 However, a lack of both visibility and prioritisation at senior management and governance levels has created what one interviewee called "corporate invisibility", and meant that efforts to ensure effective fluoridation have languished.
- 45 This has led to an accepted way of operating where attention was paid to not exceeding safe levels of fluoride, but low prioritisation given to investment and effort to dose consistently at optimal levels.
- 46 Over time, this has led to a lack of appreciation internally of the importance that shareholders and the public place on effectively fluoridated water.



## Timeline of key events

- 47 This timeline is included here as a summary of the key events in relation to Wellington Water’s management of the fluoridation facilities, and dates when the decision to stop fluoridation was communicated.
- 48 The remainder of this section makes reference to these dates and events and provides more detail about them as they relate to my findings.
- 49 The timeline illustrates the significant time that elapsed between fluoridation stopping and this being communicated to Wellington Water’s senior leadership, Board, councils and the public.
- 50 It indicates the history of challenges with fluoridation and illustrates the lack of urgency in progressing a key review (the Stantec Report) focused on providing solutions to the ongoing problems with fluoridation.



## Finding 2: Drinking water has been safe, but not optimally fluoridated

- 51 The report by Raveen Judarum, “Review of fluoridation in drinking water”, concludes that during the period covered by the review there was never an unsafe level of fluoride in the drinking water supplied to Wellington consumers, despite a number of exceedance events within the water treatments plants.
- 52 Judarum notes that the Ministry of Health confirmed that water supplied to Wellington, Hutt, Lower Hutt and Porirua City Councils met the DWSNZ standards for the years 2017 to 2020 and the service-level agreement requirements set by GWRC:
- “The fluoride levels did not exceed the GWRC and the DWSNZ chemical compliance of Priority 2a for fluoride.”*
- 53 Judarum further notes that between June 2018 and June 2021 there was one instance at Te Mārua and four instances at Gear Island when water within the treatment plant exceeded the MAV. In each instance staff at the treatment plants responded appropriately to ensure that over-fluoridated drinking water did not reach consumers.
- 54 However, his report shows that across all the water treatment plants fluoride concentrations were frequently below the optimal level for oral health.
- 55 Since July 2016, on average, the optimal range of fluoridation was met about 50% of the time at Waterloo, 30% of the time at Wainuiomata (although this has improved since July 2021), and less than 20% of the time at Te Mārua and Gear Island.

## Finding 3: Fluoridation was stopped in order to ensure the safety of drinking water and operators, with no plan to turn it back on

- 56 Fluoridation was turned off at both Te Mārua and Gear Island Water Treatment Plants, with no plan to turn it back on again, because of specific technical problems.
- 57 While it wasn’t unusual for fluoride to be turned off for a short time for operational reasons, the key difference in these instances was the decision not to turn it back on until there was a plan to do so safely.
- 58 I found it difficult to obtain the information below setting out the events that led up to these decisions. There were no formal investigations at the time, and no single system of record keeping. Wellington Water staff have had to piece this information together from a range of sources.

### Te Mārua Water Treatment Plant

- 59 Fluoridation at Te Mārua was turned off on 25 May 2021 because of an optimal dosing exceedance event at the water treatment plant. This followed an earlier exceedance on 20 April 2021; operators had then ensured that water with excess fluoride did not reach consumers. Fluoride had been turned off after this earlier event and switched on again on 10 May 2021.
- 60 After the exceedance on 25 May, operators decided an investigation was needed to identify the reason for two exceedance events in short succession. An internal communication of 25 May 2021 noted that fluoride dosing would “stay off until a plan is determined that will reduce the current



dosing risks (not addressing these risks could result in a fluoride dose above the DWSNZ MAV)".

- 61 A subsequent operational investigation found that a tear in the baffle curtain was creating a risk that over-fluoridated water would reach consumers. The baffle curtain slows down the rate and flow of water and gives operators time to respond to "out of spec" water, ensuring that excess fluoride levels do not reach consumers. I understand that a damaged baffle curtain reduces the time to respond from about 1.5 hours to about half an hour.
- 62 Attempts to investigate further were hampered by COVID-19 lockdowns, and a drone operation had to be delayed from 19 August 2021 until 10 October 2021. The drone report identified a significant rip.
- 63 Fixing the baffle curtain was considered a major undertaking requiring technical and planning expertise. The repair was planned for the following winter because of resourcing constraints due to COVID-19 lockdowns and the need to maintain water supply during the summer (when there is higher demand).

### **Gear Island Water Treatment Plant**

- 64 Fluoridation at Gear Island was turned off on 24 November 2021 because of concerns about the condition of the tanks the liquid fluoride product (hydrofluorosilic acid, HFA) was stored in and the condition of the building housing those tanks.
- 65 The storage tanks used at Gear Island are beyond their recommended lifetime and were being used in accordance with a compliance plan approved by WorkSafe in 2016 which expired in November 2021.
- 66 WorkSafe had approved a conditional five-year dispensation to operate under that compliance plan with the expectation that the

Health (Fluoridation in Drinking Water) Amendment Bill would soon be passed. The anticipated law change would likely require Petone and Korokoro to fluoridate water, at which point the Gear Island Water Treatment could be decommissioned, and the estimated \$5 million to upgrade the tanks would not be needed. As outlined above, the amendment bill took five years to progress: it was enacted only in November 2021.

- 67 Despite WorkSafe approving a further compliance plan in October 2021 through to 2026, Wellington Water was concerned about the ongoing use of the storage tanks. An engineer's assessment in June 2021 recommended an analysis of external tank material which occurred in November 2021. This indicated it was not safe for operators to continue to use the tanks.
- 68 Independently, the ceiling in the room that housed the tanks was deteriorating, with portions of a reinforcing bar exposed. An inspection and any repair to the ceiling wasn't considered safe with "live" chemicals beneath.
- 69 On the basis of the June 2021 assessment and the issues with the ceiling, Wellington Water decided to run down the product and drain the tanks by August 2021. That would allow the condition of the tanks to be assessed and any necessary repairs to the ceiling to be carried out safely.
- 70 Restrictions placed by COVID-19 alert levels delayed the start of the draining process until 12 October 2021 and draining was completed on 24 November 2021.
- 71 The improvements needed to the tanks and building would be a major piece of work requiring significant planning, design and project management. This has now become part of the broader fluoridation remediation being carried out by Wellington Water (see page 20).



## Finding 4: There were long-standing challenges to providing fluoridation safely

- 72 There have been historical challenges to achieving the recommended range of fluoridation concentrations.
- 73 I was told about a range of issues, including poor fluoride powder quality, incorrect dosing pumps, manual powder bag handling, small mixing tanks, and ageing infrastructure.
- 74 There is no standby fluoridation equipment at any of the plants (as there are for some other chemicals that are added to water, for example, chlorine). This means that fluoridation dosing has been turned off and on frequently for operational reasons or while problems were addressed, especially at Te Mārua and Gear Island.
- 75 Even when the dosing was operating, it was accepted practice to err on the side of under-dosing to ensure there was no risk of exceeding the MAV.
- 76 Two issues highlighted to me as particularly relevant to the problems at Te Mārua and Gear Island were the quality of the powder fluoridation product and the state of the fluoridation assets.

### 4.1: Poor-quality fluoridation product posed a challenge to effective fluoridation at Te Mārua

- 77 Wellington Water uses two fluoridation products: at Te Mārua, Wainuiomata, and Waterloo, the plant is designed to use a powder product, sodium fluorosilicate; at Gear Island, a liquid product, HFA, is used.
- 78 There has been an international shortage of good-quality sodium fluorosilicate product. One operator explained that “good quality

powder flows like sugar, and bad quality powder flows like flour”. Poor-quality product does not readily mix with the water and can build up as sludge in the dosing equipment system. This creates a risk that the residue will mix with new doses of fluoride and cause a fluoride exceedance.

- 79 In addition, the packaging of poor-quality powder would often break and fibres would get caught in the dosing system, stopping it from running. Before it could be turned on again, the system had to be cleaned and flushed. It was not unusual for operators to be called out in the middle of the night to do this.
- 80 At Waterloo water treatment plant, the inadequate storage facilities meant the powder became damp, and even harder to mix.
- 81 Higher-quality powder fluoridation product is now more readily available and is being used at the Waterloo and Wainuiomata water treatment plants, and this has resulted in improvements.

### 4.2: The state of the assets at Gear Island was an ongoing problem

- 82 The Gear Island fluoridation equipment is designed to use HFA, so the challenges around product quality had no impact at this treatment plant.
- 83 I was told the design and maintenance of the fluoridation assets were the primary reason that fluoridation was challenging at Gear Island.
- 84 The issues with the storage tanks and the state of the building itself have been described in paragraphs 64 to 71.



## Finding 5: There was good awareness of these issues within the organisation at operational levels, and attempts to address them, albeit slowly

- 85 Between 2018 and 2020 action was taken at an operational level to address these challenges. This included discussions with fluoridation product suppliers; buying and installing new equipment and fluoridisers; comprehensive internal assessments; and the commissioning of independent advice such as a 2018 Connect Water assessment of the fluoridation tanks at Gear Island, and a 2020 review by Beca of fluoridation powder storage and dosing at Waterloo.
- 86 Action was also undertaken to address systemic issues. A project called “Fluoride dosing systems reliability” was included in the 2021 Long Term Plan to undertake detailed investigation, option assessment and concept design to change the fluoridation dosing facilities at Te Mārua, Waterloo, and Wainuiomata from powder to the liquid HFA already used at Gear Island. Funding was also requested in out-years for the estimated cost of subsequent construction, but it was determined that this should come out of the treatment plants’ renewals budget if possible.
- 87 On 24 February 2021 Stantec was commissioned to carry out an investigation. They provided their draft report “GWRC Fluoride Facilities Review” on 12 July 2021, and a final report on 16 August 2021. There were however differences of opinion between Wellington Water and Stantec on aspects of the report, and Lutra was commissioned to peer-review the Stantec report on 4 November 2021. The final peer reviewed Stantec report was submitted to Wellington Water on 2 February 2022.

- 88 On 25 August 2021 an internal request was made for funding from the GWRC Annual Plan to be provided in 2022/23 to replace the fluoridation plants at all the water treatment plants as they were suffering from frequent faults, and the modifications being made by the operations teams were becoming less successful at maintaining the consistency of the treated water fluoride concentration to supply. This was based on Wellington Water’s understanding of requirements at the time, and has since been superseded by a further application for funding approved by GWRC on 26 May 2022.

## Finding 6: There were organisational challenges to raising and addressing issues

### 6.1: The lack of prioritisation of fluoridation meant that action to address the challenges did not proceed with any urgency

- 89 As I have observed above, attempts to address the challenges in fluoridation moved slowly. In particular, work to finalise the Stantec report drifted and lost impetus. Interviewees reported that there were a large number of investigations and initiatives underway at one time, but there was no system for prioritising those activities, and critical controls on water quality were the prime concern.
- 90 In part, this was due to fluoridation not being prioritised, as set out in my first finding above (see page 4). I was told that the drinking-water regulator (Regional Public Health at that time) did have information about the under-dosing of fluoride by Wellington Water, but didn’t raise it as a concern. There was no requirement for them to do this in relation to the DWSNZ; however, this can only have served to reinforce the perception that achieving optimal levels of





fluoride for oral health wasn't a priority for anyone, and that turning fluoride on and off need not trigger any alarms.

## 6.2: Problems with asset management contributed to fluoride being turned off

- 91 Currently the organisation is operating with three core asset management systems for its network, wastewater treatment and water treatment assets, that are not integrated. There is also asset information which lies outside of these systems.
- 92 This is a legacy of bringing together the assets and systems of the different councils in 2014 and makes it difficult to undertake evidence-based assessments and risk-based prioritisation across all the assets Wellington Water manage.
- 93 While Wellington Water has made a number of improvements to its asset management systems and approach, I have been told that funding has been a constraint to the full integration and upgrade of these systems.
- 94 In relation to fluoridation specifically, I heard that the asset management system Wellington Water uses for its water treatment plants is not fit for purpose.
- 95 Wellington Water moved to the current system, Maximo, when GWRC decommissioned the aging SAP system that had previously been used for their water treatment plants.
- 96 While Wellington Water's version of Maximo supports the maintenance and operations functions of asset management, it is not configured to manage all stages of the asset lifecycle. One interviewee described it to me as *"a work management system rather than an asset management system, so there is no end-to-*

*end process. There is no one place to go to understand what is happening"*.

- 97 This would appear to be compounded by the absence of documented business processes and systems. I was told there used to be a risk-based process for triaging and prioritising operational matters but that this was no longer operating.
- 98 Another challenge to the effective management of the fluoride assets was that they were not categorised as critical assets. The organisation, rightly, prioritises effort toward very high criticality assets (defined as those that would have a significant impact on customers of the environment if they failed) so this would have been another barrier to a good understanding and effective management of fluoride assets.
- 99 As an example of the impact of these challenges to lifecycle asset planning and management for fluoride assets, Connect Water's assessment of fluoride tanks at Gear Island in 2018 recommended that a plan should be developed to remove tanks for service by 2021, but no plan was made in response to this advice. In a May 2022 paper to GWRC, Wellington Water accepted that *"This was a foreseeable event, and we acknowledge that we should have planned for a backup system to ensure we could have continued fluoridation at Gear Island."*
- 100 Illustrating the broader challenges with asset management, the company has lost its ISO 9001 quality management system certification, and several years ago scored only an average 1.5 out of 3 in an external assessment of their asset management system against ISO 55000 standard for quality management and assurance. Knowledgeable interviewees told me that this would still be a fair assessment now and that, while Wellington Water has made some improvements since that time, funding has again been





a constraint to addressing all areas of improvement identified by the maturity assessment.

### 6.3: There is a question whether the internal audit function is resourced appropriately

- 101 Risks were raised with Wellington Water's SLT in October 2019, when Risk and Assurance submitted a quarterly risk report noting the poor performance of some key supply contracts, and a lack of cohesion in how contracts were managed.
- 102 However, this report did not specifically refer to fluoride. I heard that the audit function is *"quite lean in places and could easily be doubled in size"*. It is only resourced to provide strategic-level audits, and this means that operational risks such as those relating to fluoridation are not being picked up by this team.

### 6.4: Culture played a part

- 103 Interviewees from across the organisation talked about a reactive culture and a learned helplessness, saying they gradually accepted that investments to address systemic issues would not be approved. Others talked about how people "hold risk", either because they don't understand it's a risk or don't know how to escalate it.
- 104 A separation between the operator and maintenance teams led to siloed and disconnected ways of working, compounding the issues. This has improved since changes to the organisational structure were made.
- 105 Others described the culture as relational, rather than operating against a background of structure and standards:

*"The culture is decision by committee rather than the notion that order, process and structure are important for safe drinking water, which requires assigned roles with responsibilities, supported by checklists, procedures and business processes."*

### Finding 7: The Board didn't have the technical expertise to realise that they needed to be asking questions about fluoride in relation to oral health

- 106 The Wellington Water constitution requires that Directors who are appointed must have the skills, knowledge, or experience to:
- a guide the Company, given the nature and scope of its activities; and
  - b contribute to the achievement of the objectives of the Company.
- 107 Relevant to this inquiry, the shareholders' Board Skills Matrix specifically requires at least one Director with practical and preferably leadership experience in Water Services. There is currently no Director on the Board with this knowledge or experience.
- 108 The Board did not receive reporting on optimal fluoride levels and, with this deficit in its collective experience, it did not have the expertise to identify the gap and the issue wasn't visible to them.



## Finding 8: Escalation and communication of the decision to stop fluoridation took too long

- 109 My findings here relate primarily to the delay in communicating the decision not to turn fluoridation back on at Te Mārua, as fluoridation was stopped much later at Gear Island.
- 110 Overall, I found the delay in escalating and communicating the decision to stop and not resume fluoridation was underpinned by the general lack of appreciation of the importance of effective fluoridation to stakeholders (set out at the beginning of this section) and the subsequent level of risk to the organisation presented by not delivering this service.
- 111 I believe that clearer accountabilities and processes for escalating the issue would have avoided the delays in managing and communicating the response.
- 112 Clearer accountability and a more effective quality assurance process would also have prevented inaccurate information being provided to the Board, the councils, and the public.

### 8.1: There was a lack of clear ownership and escalation criteria, and that meant the response was not prioritised and progressed with enough urgency

- 113 After fluoridation was stopped at Te Mārua in May 2021 there was a lack of urgency to progress the work required to resume fluoridation.
- 114 The requirements concerning internal communications after an exceedance event are very clear and were followed. However, the same clarity did not exist for the subsequent response when it was decided that fluoridation should not resume in the short term.

- 115 The operational team did not want to resume fluoridation until they could be assured this could be done safely, but it wasn't clear who would take the lead on developing the plan to make that happen.
- 116 A lot of people were copied into emails on the issue – from senior management levels to operational levels – without any clear requests or commissioning of work.
- 117 On the basis of the email record and my discussions with staff, I observed that although a lot of people knew something needed to be done, people were assuming that someone else was taking responsibility for leading the response.
- 118 This is not to say there were not people within the organisation working on the issue. However, it wasn't prioritised in a way that would have given it the level of attention needed to drive it forward.
- 119 Alongside a lack of clear ownership, there were no escalation criteria for notifying the senior leadership team that might have brought this issue to their attention more quickly.
- 120 There is an established pathway for escalating issues within the organisation of raising an "item of significance" to the leadership team. However, the lack of appreciation of the level of risk that non-delivery of optimal fluoridation presented to the organisation meant no criteria had been put in place to indicate when this pathway should be used for under-dosing of fluoride.
- 121 While the [REDACTED] was aware of the fluoridation issues and dosing being stopped, the SLT [REDACTED] did not become aware of problems with fluoridation until it was raised as an "item of significance" in an email sent on 17 December 2021.
- 122 The item SLT received in December 2021 made them aware of problems with low and inconsistent dosing, but not that fluoridation



had already been stopped at Te Mārua and Gear Island at this point.

123 Ultimately, the lack of ownership and escalation to the SLT meant that the response was not prioritised and progressed urgently enough.

124 It was not until February 2022, eight months after fluoridation was stopped at Te Mārua, that the Director Regulatory Services, concerned that progress was not being made, formed a project team (the Fluoride Improvement Project) with the appropriate resources and governance to reflect the importance of resuming fluoridation.

125 This is the primary reason for the delay in communication with the Board, the councils, and the public.

## **8.2: The Board were briefed on problems with fluoridation soon after SLT became aware of them**

126 The item of significance was sent to SLT immediately before the Christmas holiday period, and the Fluoride Improvement Project was established shortly after key staff members returned from leave.

127 Based on the information in that item of significance, the problem with low and inconsistent dosing of fluoride was added to the “Emerging Risk” section of the report to the Audit and Risk Committee for its meeting on 21 February 2022. (The Audit and Risk Committee comprises all Board members.)

128 The Committee received a verbal briefing on the issue, in that meeting, after one Director noticed it on the Emerging Risk register and asked for further information.

129 Because SLT were still not aware that fluoride dosing had stopped much earlier, the briefing did not include accurate information about when dosing had stopped at Te Mārua and Gear Island.

## **8.3: Processes were not in place to guide communications with councils and the public**

130 There was no established process or practice for informing councils that fluoride had been turned off. As described already, fluoride was regularly turned on and off for operational reasons but there was nothing to guide the communications approach in a situation where there was no planned date for resuming fluoridation.

131 Internal emails show that it was suggested in October 2021 that the councils be informed. However, there was a reluctance to do this until there was a firm plan in place for turning fluoridation back on.

132 Again, because of a lack of clear ownership and focus on the response, the issue of informing the councils languished until it came to the attention of the SLT.

## **8.4: The inaccuracies in the original communications were the result of mistaken assumptions and inadequate quality assurance of communications**

133 When Wellington Water originally communicated with its shareholders and the public that fluoridation had stopped at Te Mārua and Gear Island, it incorrectly said that fluoridation had stopped in February 2022. As already noted, fluoridation had in fact stopped in May 2021 at Te Mārua and in November 2021 at Gear Island.



- 134 This mistake and subsequent correction heightened the attention on Wellington Water's performance in relation to fluoridation, and it opened the organisation to criticism that it was trying to conceal the extent of the problem with non-fluoridation.
- 135 The project team formed in February 2022 to address fluoridation problems included some people in the organisation who had not been involved up to that point and had no prior knowledge of the history of the problems with fluoridation. The team were using the item of significance from 17 December 2021 as a starting point for their work, which did not include any information about when fluoridation had stopped at Te Mārua and Gear Island.
- 136 The inclusion of the incorrect date of February 2022 in communications appears to have been the result of people internally "talking past each other" because of a lack of shared understanding of the situation.
- 137 Specifically, this happened when a new member of the team was informed that Wellington Water had turned off fluoridation when it received the Stantec report. The new member took this to mean when the final report was received in February 2022, but in fact it was when the first draft was received in July 2021.
- 138 The reference to fluoridation being turned off in February 2022 was noticed by at least one non-technical member of the internal project team as a possible error, but that person assumed that fluoride had been turned back on in the interim and the error was not raised.
- 139 When the final draft communications containing the February 2022 date were signed off by the SLT, one SLT member noticed this as a probable error, but assumed that the operational team had been consulted and so once again the issue was not raised.
- 140 The error was only picked up after the press release was published on 16 March 2022, and this is when the SLT and Board found out that fluoride dosing had in fact been turned off at Te Mārua in May 2021 and Gear Island in November 2021.
- 141 The error in the reported dates was the result of incomplete information being provided to SLT in December 2021, mistaken assumptions, and inadequate quality assurance of communications.
- 142 With more effective processes this could have been avoided. However, I am confident there was no deliberate attempt to hide the length of time that fluoride had been turned off at the two plants.



## Broader issues

This section sets out my key findings in relation to the first part of Objective 5(a) in the terms of reference, to “*Provide the Board with key insights and learnings about these events*” as they relate to the scope of the inquiry provided at clause 14(c):

*make comment on any broader systemic matters that he considers relevant to this review.*

These findings reflect recurring themes in interviews with people who are knowledgeable about Wellington Water’s context and performance, but have not been independently verified. They are relevant to the issues with fluoridation but also apply more generally to the operation of the organisation.

### Finding 9: The complexity of the Wellington Water model makes service delivery challenging

- 143 As described on page 1, Wellington Water is owned by and delivers services on behalf of six councils in the greater Wellington area.
- 144 Each council decides the level of service it will provide, the policies it will adopt, and the investments it will make (after considering advice from Wellington Water) through their long-term plans, in consultation with its communities.
- 145 Wellington Water is then tasked with achieving the results it is funded to achieve, through both maintaining council assets and developing them for future needs.

- 146 The need to advise each council individually consumes a lot of time and resources, and having different requirements for each council makes service delivery more complex.
- 147 There may be an opportunity for councils to take a more joined-up approach to the planning and contracting of services from Wellington Water, in order to reduce this complexity and maximise the benefits of having one organisation delivering services for multiple shareholders.

### Finding 10: The prospect of reform appears to be challenging for Wellington Water’s performance

- 148 I heard in a number of interviews that Wellington Water is finding it challenging to maintain its performance in the current environment, in light of the planned three waters reforms. I heard this from both internal and external interviewees.
- 149 These challenges are particularly stark in relation to the improvement of asset management.
- 150 While the organisation is continuing to invest in improvements of its current systems, I was told that the National Transition Unit (NTU) has indicated that a new asset management platform will be built for the new water services entities.
- 151 This means that significant investment in consolidating Wellington Water’s asset management information using its current systems no longer makes sense and makes it more challenging to meaningfully improve asset information and management in the next two years.
- 152 Council officials told me they were committed to supporting Wellington Water to maintain its performance through this



transition period, including by providing specialist capability or capacity if needed.

- 153 I understand that Wellington Water has recently established a Transition Steering Group and Transition Working Group to lead a transition plan for the organisation.
- 154 With involvement of councils and appropriately funded, this should provide the right level of focus on and support for maintenance of service delivery and management of key organisational functions while the reform programme proceeds.

### **Finding 11: There may be a capacity issue for the Board**

- 155 I heard from more than one source that the current complement of six Directors may not be sufficient for the Board to provide the level of scrutiny and assurance required both for the issues that have emerged through this inquiry and for the significant transformation process ahead.
- 156 In particular, I heard that the Board is not large enough to operate the number of sub-committees they believe are required.
- 157 There are currently three sub-committees – Audit and Risk, Major Projects, and a recently established Fluoride Committee. While the Major Projects Committee could become focussed on asset management, there may be value in a fourth committee that focuses on people, culture, and health and safety. This committee would provide scrutiny over matters observed in the course of this inquiry, and provide governance assurance over the transition that is likely to be ahead.
- 158 Any growth in the number of sub-committees would exacerbate the capacity constraints of the current Board.



# RECOMMENDED IMPROVEMENTS

**I am assured that Wellington Water has firm plans in place to resume fluoridation safely and effectively, and to improve its assurance processes in relation to fluoride**

**Investment in new equipment has been approved, with a target date for resuming fluoridation in September 2022**

- 159 Wellington Water has both short- and long-term plans to ensure that water is fluoridated safely and effectively.
- 160 In the short term (Stage 1), it will focus on ensuring that fluoride dosing at all four water treatment plants is happening to “the best level of service they can achieve”.
- 161 This includes restoring fluoride dosing of drinking water at Te Mārua and Gear Island Water Treatment Plants, by:
- a installing a new stand-alone facility at Te Mārua and continuing investigations into the current facility to see if this can be safely switched back on while the new facility is being built
  - b installing a new stand-alone facility at Gear Island.
- 162 The short-term plan also includes upgrading and renewing facilities and systems at the Wainuiomata and Waterloo Water Treatment Plants, to ensure they are fluoridating effectively.

- 163 Wellington Water has already identified the preferred provider to design and supply the new facilities at Te Mārua and Gear Island. It has established a project structure that combines staff and management from Wellington Water and its delivery partners into a single delivery model with management oversight, reporting, and governance.
- 164 Funding for these short-term activities was recently approved by the GWRC, and Wellington Water has set a target to turn the fluoride back on in September 2022 (subject to any unexpected delays in international supply lines). It reports that it is working hard to beat this target.
- 165 Wellington Water’s long-term plan for fluoridation (Stage 2) focusses on ensuring that the entire fluoridation system, including all the metropolitan Water Treatment Plants, is capable of effective fluoridation that meets new Ministry of Health standards that are likely to come into effect from 1 July 2022.
- 166 Wellington Water has indicated to the GWRC that it is currently working on a strategic business case for Stage 2, which it will present in the next financial year.

**Wellington Water is strengthening its assurance processes in relation to fluoridation**

- 167 A new assurance framework has been introduced to ensure Wellington Water is safely and effectively fluoridating drinking water for those communities that require this. This framework makes changes at both operational and strategic levels.





- 168 At the operational level, Wellington Water has:
- a formally adopted the Water New Zealand Code of Practice – Fluoridation of Drinking-Water Supplies in New Zealand
  - b set a fluoride operating target in accordance with the Code of Practice
  - c reviewed the status of fluoride plants on the asset lists and re-classified them as “very high” critical assets
  - d begun to more clearly integrate fluoridation into its Drinking Water Safety Plans, including the continual auditing of fluoride plants
  - e begun engaging with Taumata Arowai and the Ministry of Health to ensure that fluoride is captured in reviews of regulatory reporting requirements
  - f created a notification framework within Wellington Water clarifying that the Chief Executive must be notified of specific events (including, for example, fluoride outages). This will ensure that political and governance issues are addressed when operational incidents happen.
- 169 Wellington Water is planning an audit of fluoridation activities against the Code of Practice, to ensure it is aware of its current level of compliance with the industry standard and to plan for changes if any gaps emerge.
- 170 At the strategic level, Wellington Water has:
- a included the Duty of Care under the Water Services Act 2021 alongside Health and Safety on the Board’s risk appetite to ensure that its fluoridation activities are subordinated to that duty
  - b amended key strategic documents (through a due governance process) to include the requirement to fluoridate in addition to providing safe and healthy water – these include the Statement of Intent, Annual Report, and quarterly reporting to councils.
- 171 Wellington Water is currently discussing with the GWRC whether it is feasible to explicitly include the requirement to fluoridate drinking water in the service level agreement between the two organisations.
- 172 Taken together, the changes made under this new assurance framework should address the current gap in performance measurement and reporting that led to this “blind spot” in relation to fluoridation.
- 173 The new framework will ensure that Wellington Water operates in accordance with best practice and has a good understanding of the state of its fluoridation assets.
- 174 It provides a clear process and criteria for escalating issues with fluoridation, to support appropriate oversight by senior managers and governors.
- 175 The framework ensures a level of reporting that allows the Board to discharge its duties and allows councils and the public to understand whether Wellington Water is effectively fluoridating drinking water.

**Wellington Water is now releasing information more proactively**

- 176 Wellington Water has created a new page on its website that describes its fluoridation activities.





- 177 The page includes information on its fluoride performance, with the average dose at each water treatment plant for April 2022 available at the time of writing.
- 178 The page also has weekly updates on progress to reinstate fluoridation at Te Mārua and Gear Island and work on improving fluoridation at the Waterloo and Wainuiomata plants.

## I recommend a small number of further actions to strengthen performance in relation to fluoridation

### Recommendation 1: Maintain a relentless focus on effective fluoridation in both the short and long term

- 179 As I have noted, I am assured that firm plans are in place to resume fluoridation and strengthen the assurance processes that will help Wellington Water avoid a similar problem in the future.
- 180 There needs to be a relentless focus not only on implementing the short-term solutions that will allow fluoridation to resume as quickly as possible, but also on the longer-term solutions that will ensure Wellington Water can continue to effectively fluoridate water into the future.
- 181 I have seen the governance structures proposed for the Fluoride Improvement Project and, assuming good reporting and information flows, the Board should have a good line of sight on the progress of the work and be able to hold management to account for the project.
- 182 This could be strengthened by specifying how councils and the public are included in the wider project arrangements and

communications in a way that will allow them to hold Wellington Water to account.

- 183 I recommend that Wellington Water develop a comprehensive communication plan that includes how key stakeholders and the public will be kept informed about the project (building on initiatives already introduced), if this is not already in place.

### Recommendation 2: Make sure the Board has the right collective experience and knowledge to govern effectively

- 184 The Board had a gap in its knowledge and experience of water services, and this limited its ability to know what questions it should be asking in relation to fluoride.
- 185 Steps are already being taken to address this, and I am aware that a process to appoint a new Director with a water services background is currently being finalised.
- 186 I have not completed a full evaluation of the current Directors' attributes against those collectively required by the Board Skills Matrix, but I understand it may be beneficial to strengthen its collective competency in relation to asset planning and management for engineering and infrastructure assets.
- 187 I recommend that the Wellington Water Committee assess the degree to which the Board's current composition meets all of the collective attributes required under the Board Skills Matrix to ensure it is well-placed to govern effectively.



### **Recommendation 3: Provide greater clarity of roles, responsibilities, and processes for managing fluoridation issues within Wellington Water**

- 188 The new assurance framework goes a long way to addressing those problems, discussed in this report, that meant resolving and communicating the issues with fluoridation were not given the right priority.
- 189 The new notification framework means the Chief Executive will be supported in their responsibility for managing political and governance issues that emerge from operational incidents.
- 190 However, there also needs to be clarity at the operational level about how these incidents will be managed, and by whom.
- 191 I recommend that Wellington Water develop detailed operational guidelines for managing and responding to fluoridation issues, in order to provide clarity about which roles are responsible for doing what and about the escalation and reporting pathways that support good management and governance of any required response.

### **Recommendation 4: Improve the standard of asset management**

- 192 Good asset management is critical to the performance of any infrastructure company.
- 193 As I have noted, the standard of asset management that Wellington Water uses for its water treatment plants appears to have declined since GWRC decommissioned the SAP system. This has been a key contributor to the problems with fluoridation and it also creates other challenges across the business.
- 194 The continued improvement of the asset management systems and practices is important, even with the prospect of reform. There

should be a focus on Wellington Water's asset information and systems being 'in the best shape possible' for transition. The relevant ISO standards may provide a framework for this.

- 195 I recommend that Wellington Water develops a realistic plan to improve its asset management systems and approaches for the next two years. It is likely that a business case for funding from shareholders to support the implementation of that plan will be required.

### **Recommendation 5: Continue to strengthen the regulatory function**

- 196 Significant progress has been made under the Director of Regulatory Services to ensure that regulatory responsibilities and commitments to Councils and the public are being complied with. These improvements in oversight and assurance to the Board and stakeholders should continue to be strengthened.
- 197 As I have noted, the Wellington Water risk and assurance function within regulatory services is currently resourced for strategic auditing only, and does not have the capacity to audit operational risks.
- 198 I recommend that management review the capacity of the risk and assurance function and determine whether more resources are needed in order to provide assurance to the Board, its shareholder councils, and the public in relation to operational risks.



# SUMMARY OF FINDINGS AND RECOMMENDATIONS

Key findings	
<b>Fluoridation</b>	
1	Fluoridation for oral health wasn't a priority for Wellington Water, and this underpins the findings of this inquiry
	<i>1.1. The regulatory settings for fluoridation for oral health are weak</i>
	<i>1.2 The council requirements didn't force attention on effective fluoridation</i>
	<i>1.3 A culture of safety, rather than effectiveness, was dominant in relation to fluoride</i>
2	Drinking water has been safe, but not optimally fluoridated
3	Fluoridation was stopped in order to ensure the safety of drinking water and operators, with no plan to turn it back on
4	There were long-standing challenges to providing fluoridation safely
	<i>4.1: Poor-quality fluoridation product posed a challenge to effective fluoridation at Te Mārua</i>
	<i>4.2: The state of the assets at Gear Island was an ongoing problem</i>
5	There was good awareness of these issues within the organisation at operational levels, and attempts to address them, albeit slowly
6	There were organisational challenges to raising and addressing issues
	<i>6.1 The lack of prioritisation of fluoridation meant that action to address the challenges did not proceed with any urgency</i>
	<i>6.2 Problems with asset management contributed to fluoride being turned off</i>

Key findings	
	<i>6.3 There is a question whether the internal audit function is resourced appropriately</i>
	<i>6.4 Culture played a part</i>
7	The Board didn't have the technical expertise to realise that they needed to be asking questions about fluoride in relation to oral health
8	Escalation and communication of the decision to stop fluoridation took too long
	<i>8.1 There was a lack of clear ownership and escalation criteria, and that meant the response was not prioritised and progressed with enough urgency</i>
	<i>8.2 The Board were briefed on problems with fluoridation soon after SLT became aware of them</i>
	<i>8.3 Processes were not in place to guide communications with councils and the public</i>
	<i>8.4 The inaccuracies in the original communications were the result of mistaken assumptions and inadequate quality assurance of communications</i>
Broader issues	
9	The complexity of the Wellington Water model makes service delivery challenging
10	The prospect of reform appears to be challenging for Wellington Water's performance
11	There may be a capacity issue for the Board



## Recommended improvements

- 1 Maintain a relentless focus on effective fluoridation in both the short and long term
- 2 Make sure the Board has the right collective experience and knowledge to govern effectively
- 3 Provide greater clarity of roles, responsibilities, and processes for managing fluoridation issues within Wellington Water
- 4 Improve the standard of asset management
- 5 Review the capacity for internal auditing



# APPENDIX 1: TERMS OF REFERENCE

- 1 Wellington Water Limited is an infrastructure asset management company that manages the drinking water, wastewater and stormwater services of six councils in the Wellington Region of New Zealand.
- 2 On March 16, 2022 Wellington Water publicly announced that fluoride facilities at Te Mārua and Gear Island Water Treatment plants had been turned off in February 2022 due to operational health and safety risks.
- 3 However, the Board of Wellington Water (the Board) subsequently learned that fluoridation was in fact stopped at the Te Mārua Water Treatment Plant in May 2021 and at the Gear Island Water Treatment Plant in November 2021.
- 4 As a result, the Board has initiated an independent inquiry into the events that resulted in Wellington Water ceasing fluoridation of drinking water at these two plants and the failure of management to inform the Board, Water Committee and the public of this in an accurate and timely manner.

## Objectives

- 5 The objectives of the inquiry are to:
  - a provide the Board with key insights and learnings about these events; and recommend, where appropriate, actions for governance
  - b recommend, where appropriate, actions that will ensure Wellington Water management learns from these events and performs to a high standard in the future.
- 6 Without limiting the scope of the findings and the recommendations, recommendations should include guidance on best management and

governance practice if any deficiency emerges in the course of the review.

## Governance and approach

- 7 The Board has appointed Doug Martin of MartinJenkins to undertake an independent review on behalf of the Board of Wellington Water.
- 8 Mr Martin will have access to and support from the Chief Executive and staff of Wellington Water. He will be provided with all relevant documentation, and interviews with relevant staff and stakeholders when requested.
- 9 Mr Martin will hold a workshop presenting his draft findings to the Board, Chair and Deputy Chair of the Water Committee.
- 10 Mr Martin is authorised to request and obtain any further documentation from management as he considers necessary for the purposes of this review.
- 11 A draft review report will be made available for comment by individuals impacted by the report.
- 12 Mr Martin will be cognisant of the guidance contained in the *Communications in the pre-election period* from LGNZ and Taituarā.
- 13 The final inquiry report will be presented to the Board of Wellington Water.

## Scope

- 14 In the course of the inquiry Mr Martin will:
  - a review and, where appropriate, provide recommendations on:



- i the management of Wellington Water’s plants, including asset management, as relevant to the decision to cease fluoridation of drinking water at Te Mārua and Gear Island Water Treatment Plants
  - ii the information provided to the Board, and the timeliness of that information, both in the lead up to and regarding the decision to cease fluoridation
  - iii communication with key stakeholders and the public in relation to the decision.
- b consider the findings of a technical review that management have already commissioned into the operation of the two treatment plants that are the subject of this review.
- c make comment on any broader systemic matters that he considers relevant to this review.

**Engagement with council Shareholders, Iwi Mana Whenua and Key stakeholders**

- 15 Mr Martin should engage with Wellington Water shareholding councils, Iwi Mana Whenua representatives on the Water Committee, Taumata Arowai and the Ministry of Health regarding communications by Wellington Water on this incident.

**Timeframe and reporting**

- 16 Mr Martin will report to the Board as follows:
  - a in a workshop on key issues and insights during May 2022
  - b in a final report by 31 May 2022.
- 17 Mr Martin will be available to attend the Water Committee meeting where the Board present the final report.

