133 Molesworth Street
PO Box 5013
Wellington 6140
New Zealand
T+64 4 496 2000

27 July 2022

Jim Stabback
Chief Executive
Auckland Council
Jim.Stabback@aucklandcouncil.govt.nz

Tēnā koe Mr Stabback

Decision in relation to fluoridation direction

Thank you for responding to my letter of 3 May 2022. I have considered the information you have provided, alongside further information I am required to consider under section 116E of the Health Act 1956 (the Act). I have also received and considered advice from the Director of Public Health.

Informed by the matters I am required to consider, I have decided to exercise my statutory powers under section 116E of the Act to direct you to fluoridate the Onehunga and Waiuku drinking water supplies in your region.

In accordance with section 116I of the Act, you are required to ensure that by 30 June 2024 you are fluoridating at the optimal levels (between 0.7ppm to 1ppm, parts per million) at the Onehunga supply, and by 30 June 2026 at the Waiuku supply. Contravening these requirements, or permitting these requirements to be contravened, constitutes an offence under section 116J of the Act.

Fluoridation of the Onehunga and Waiuku drinking water supplies is an important step in improving the oral health of your community, and it is my intention that Manatū Hauora (the Ministry of Health) will work constructively with you to implement these important changes.

In reaching my decision to issue this direction to you, I considered the scientific evidence on the effectiveness of adding fluoride to drinking water in reducing the prevalence and severity of dental decay. I am satisfied that community water fluoridation is a safe and effective public health measure that significantly reduces the prevalence and severity of dental decay. In reaching this conclusion, I considered: *Water fluoridation to prevent tooth decay* (Cochrane Collaboration 2015), *Health effects of water fluoridation: A review of the scientific evidence* (PMCSA and Royal Society Te Apārangi 2014) and *Fluoridation: An update on evidence* (PMCSA 2021).

In reaching my decision, I also considered whether the benefits of adding fluoride to the drinking water outweigh the financial costs, taking into account: the state or likely state of the oral health of your community served by the Onehunga and Waiuku supplies; the number of people who are reasonably likely to receive drinking water from these supplies; and the likely financial cost and savings of adding fluoride to the drinking water

of these supplies, including any additional financial costs of ongoing management and monitoring.

I am satisfied that the benefits of introducing community water fluoridation across the Onehunga and Waiuku drinking water supplies outweigh the financial costs of doing so. In reaching this conclusion, I gave weight to the following:

- the Onehunga and Waiuku communities would each receive significant benefit, through improvement to the state of its oral health, because fluoridation of each water supply would significantly reduce the prevalence and severity of dental decay in its community

- approximately 25,507 and 8,697 people are reasonably likely to receive drinking water from the Onehunga and Waiuku supplies, respectively

- the likely financial cost and savings of adding fluoride to drinking water for the Onehunga and Waiuku supplies, including any additional financial costs of ongoing management and monitoring.

My decision-making process included inviting written comment from Auckland Council, and having regard to the comments I received. Below I summarise and respond to the comments I received:

- the estimated capital cost of introducing fluoridation for the Waiuku drinking water supply is $1,500,000. The estimated ongoing management and monitoring costs are $75,000 per annum

- the estimated capital cost of introducing fluoridation for the Onehunga drinking water supply is $125,000. The estimated ongoing management and monitoring costs are $33,000 per annum

- the date by which Auckland Council would be able to comply with a direction for the Waiuku supply is 30 June 2026. This would align with the wider water treatment plant upgrades for Waiuku planned to be complete by 30 June 2026

- the date by which Auckland Council would be able to comply with a direction for the Onehunga supply is 30 June 2024.

As part of considering whether to issue a direction to fluoridate, I considered the cost estimates you provided for each supply. I also accept each date you specified by which you could comply with a direction for each supply. These dates are reflected in the compliance dates stated earlier in this letter.

Appendix 1 presents a more extensive summary of the information that informed my decision-making, including the advice I received and considered from the Director of Public Health.

Funding

Manatū Hauora is making capital works funding available for local authorities that have been issued a direction to fluoridate, and that begin work to fluoridate drinking water

supplies by the end of 2022. It will shortly provide detailed information about the application process for this funding to cover fluoridation-related capital costs.

Communicating this 'direction to fluoridate' decision

Manatū Hauora is responsible for communicating this decision at a national level. Please note too, that as required under section 116E(5) of the Act, all direction letters will be published on the Manatū Hauora website in due course.

Next steps

An official from Manatū Hauora will contact your team in the coming weeks to discuss any needs you might have for further clarity or additional information. Manatū Hauora recognises that this is a busy time for local authorities and wishes to work with you to make the process as straightforward as possible for your team.

Nākū noa, nā

Dr Ashley Bloomfield
Te Tumu Whakarae mō te Hauora
Director-General of Health

Cc: Jon Lamonte, Chief Executive, Watercare
Cc: Rebecca van Son, Head of Strategy, Watercare

Appendix 1:

Auckland Council: Waiuku and Onehunga water supplies

Analysis	
Criterion	**1. Scientific evidence on the effectiveness of adding fluoride to drinking water in reducing the prevalence and severity of dental decay**
Evidence	The Ministry has considered the following information: • Fluoridation: an evidence update | Office of the Prime Minister's Chief Science Advisor (June 2021) • Health effects of water fluoridation: A review of the scientific evidence (August 2014) Office of the Prime Minister's Chief Science Advisor and Royal Society of New Zealand Te Apārangi • Water fluoridation to prevent tooth decay | Cochrane Collaboration (June 2015) Fluoridation: An update on evidence (PMCSA 2021) examines new evidence on water fluoridation published since the Royal Society Te Apārangi report in 2014. The Cochrane Collaboration's water fluoridation to prevent tooth decay (2015) is a high-quality scientific meta-analysis of a large number of high-quality research studies conducted over a long period worldwide.
Analysis	The sources of evidence referred to above are reviews that examine substantial bodies of research generated over periods of time on the safety of community water fluoridation (CWF) and its effectiveness at reducing dental decay. Considered together, these reports provide an up-to-date and high-quality scientific assessment of the state of the scientific evidence on the health effects of CWF. They find that the provision of CWF at a level of 0.7-1 mg/L is safe and significantly reduces the prevalence and severity of dental decay. The summary analysis of evidence stated above justifies the conclusion that provision of CWF at a level of 0.7-1 mg/L in the Waiuku and Onehunga water supplies would be safe and effective at significantly reducing the prevalence and severity of dental decay in the populations serviced by each of these water supplies.
Advice of Director of Public Health	Informed by the findings of the reviews noted in 'Criterion 1 Evidence' above on CWF, my assessment is that there is strong evidence that CWF is a safe and effective way to improve oral health outcomes, by reducing and preventing dental decay. I also consider that this strong evidence applies to the communities served by the Waiuku and Onehunga water supplies.
Criterion	**2. whether the benefits of adding fluoride to drinking water outweigh the financial costs, taking into account:**

Criterion	**2a. the state or likely state of the oral health of a population group or community where the local authority supply is situated**
Evidence	The Ministry has considered the following information: • data on Age 5 and Year 8 oral health outcomes from the Community Oral Health Service (Ministry of Health) • data from the New Zealand Health Survey: Oral Health (New Zealand Health Survey | Ministry of Health NZ) • Oral Health Survey Report (Our Oral Health: Key findings of the 2009 New Zealand Oral Health Survey | Ministry of Health NZ) • 2013 New Zealand Index of Deprivation (NZDep) (Socioeconomic deprivation profile | ehinz) This is the most relevant up-to-date data available. It should be noted that oral health outcome data can take a long time to change substantially.

Analysis	**Waiuku Water Supply:** The Waiuku water supply is situated within the previous Counties Manukau District Health Board area. 2020 data for children aged 0-12 in Counties Manukau District Health Board show: - overall, 62 percent of children had experienced tooth decay at age five - on average, children at age five have 3.20 decayed, missing or filled primary teeth, and at school year 8 have on average 0.55 decayed, missing or filled adult teeth - Māori and Pacific children have significantly worse outcomes than other children within Counties Manukau District Health Board. For example, 72 percent of Māori children had experienced decay at age five compared to 47 percent for all other (non-Māori and non-Pacific) children. The 2017-2020 New Zealand Health Survey results for Counties Manukau District Health Board show: - 43.1 percent of adults (15+) had one or more teeth removed in their lifetime due to decay, an abscess, infection or gum disease - 7.2 percent of adults (15+) had one or more teeth removed in the last 12 months due to decay, an abscess, infection or gum disease. From the data summarised above, it is reasonable to conclude that there are significant levels of dental decay in the communities serviced by the Waiuku water supply. There is strong evidence that CWF reduces dental decay. There are therefore also significant opportunities for oral health improvement for the communities served by the Waiuku water supply. The evidence indicates that fluoridation of the Waiuku water supply would make significant improvements to oral health outcomes for the communities it serves. Within the Waiuku area, there are significant levels of deprivation. In the 10-level score in which decile 1 has the least deprivation, Waiuku West and Waiuku East are in decile 7, and South Waiuku is in decile 4. There is a significant body of evidence that levels of tooth decay are highest among the most deprived socioeconomic groups.

	Onehunga Water Supply. The Onehunga water supply is situated within the previous Auckland District Health Board area. 2020 data for children aged 0-12 in Auckland District Health Board show: - overall, 54 percent of children had experienced tooth decay at age five - on average, children at age five have 2.72 decayed, missing or filled primary teeth, and at school year 8 have on average 0.50 decayed, missing or filled adult teeth - Māori and Pacific children have significantly worse outcomes than other children within Auckland District Health Board. For example, 67 percent of Māori children had experienced decay at age five compared to 43 percent for all other (non-Māori and non-Pacific) children. The 2017-2020 New Zealand Health Survey results for Auckland District Health Board show: - 36.9 percent of adults (15+) had one or more teeth removed in their lifetime due to decay, an abscess, infection or gum disease - 5.3 percent of adults (15+) had one or more teeth removed in the last 12 months due to decay, an abscess, infection or gum disease. From the data summarised above, it is reasonable to conclude that there are significant levels of tooth decay in the communities serviced by the Onehunga water supply. There is strong evidence that CWF reduces dental decay. There are therefore also significant opportunities for oral health improvement for the communities served by the Onehunga water supply. The evidence indicates that fluoridation of the Onehunga supply would make significant improvements to oral health outcomes for the communities it serves. Within the Onehunga area, there are significant levels of deprivation. In the 10-level score in which decile 1 has the least deprivation, Onehunga ranges from decile 4 to decile 8. There is a significant body of evidence that levels of tooth decay are highest among the most deprived socioeconomic groups.

<table>
<tr><td>Advice of Director of Public Health</td><td>Informed by the evidence and data sources listed above at ‘Criterion 1 Evidence’ and ‘Criterion 2a Evidence’, I have reviewed the state of oral health of the populations served by the Waiuku and Onehunga water supplies. In summary, my assessment is as follows. The Waiuku and Onehunga populations each presently have significant levels of preventable dental decay. The evidence that CWF improves oral health outcomes by reducing dental decay is applicable to each of these two populations. So too is the evidence that these benefits tend to be greater for populations that experience higher levels of tooth decay, such as Māori and Pacific communities. Fluoridation of the water supply that serves each of these communities would consequently improve oral health outcomes for each, and is likely also to reduce health inequities.</td></tr>
<tr><td>Criterion</td><td>2b. the number of people who are reasonably likely to receive drinking water from the local authority supply</td></tr>
<tr><td>Evidence</td><td>The Ministry has considered the following information:
the Public Register of Drinking Water Suppliers</td></tr>
<tr><td>Analysis</td><td><table><tr><th>Water supply</th><th>Population size</th></tr><tr><td>Waiuku</td><td>8697</td></tr><tr><td>Onehunga</td><td>25507</td></tr></table></td></tr>
<tr><td>Criterion</td><td>2c. the likely financial cost and savings of adding fluoride to the drinking water, including any additional financial costs of ongoing management and monitoring</td></tr>
<tr><td>Evidence</td><td>The Ministry has considered the following information:
Review of the Benefits and Costs of Water Fluoridation in New Zealand. Sapere Research Group. May 2015.
Water Fluoridation Engineering Costs. August 2015.
Auckland Council’s estimated costs, including ongoing management and monitoring costs (for more detail on Auckland Council’s comments see table below).</td></tr>
<tr><td>Analysis</td><td>The 2015 Sapere Report estimated that adding fluoride to New Zealand’s water treatment plants classified as medium sized and above (ie, those supplying populations of over 5000) is cost-saving, and for smaller supplies (ie, those supplying populations of over 500) is likely to be cost-saving. The Sapere report also noted:</td></tr>
</table>

- an estimated total net discounted saving over 20 years for smaller supplies and above to be $1,401 million, made up of a cost of fluoridation of $177 million and cost offsets of $1,578 million from reduced dental decay
- "We estimate the 20-year discounted net saving of water fluoridation to be $334 per person, made up of $42 for the cost of fluoridation and $376 savings in reduced dental care"

The Onehunga and Waiuku supplies each fit into the category of supplies servicing over 5000 people (see further detail in Criterion 2b).

The estimated costs provided by Auckland Council are presented in the table below. These estimates vary from the cost estimates Sapere 2015 used in reaching its conclusion that fluoridation is cost-saving for supplies servicing over 5000 people. For water supplies servicing over 10,000 people, Sapere 2015 estimated $347,004 for capital costs, and $8742 per annum for management and monitoring costs; while for the Onehunga supply servicing 25,507 people, Auckland Council estimated $125,000 for capital costs, and $33,000 per annum for management and monitoring costs. For water supplies servicing 5001 - 10,000 people, Sapere 2015 estimated $61,034 for capital costs and $8742 per annum for management and monitoring costs; while for the Waiuku supply servicing 8697 people, Auckland Council estimated $1,500,000 for capital costs and $75,000 per annum for management and monitoring costs.

Water Supply	**Population size**	**Auckland Council estimate of capital cost**	**Auckland Council estimate of management and monitoring costs (per annum)**
Waiuku	8697	$1,500,000	$75,000
Onehunga	25,507	$125,000	$33,000
Total	**34,204**	**$1,625,000**	**$108,000**

Summary of the information received from Auckland Council
As required by section 116G, Auckland Council was invited to give written comments on the estimated financial costs of adding fluoride to the drinking water, including any additional costs of ongoing management and monitoring; and the date by which each local authority would be able to comply with a direction. Auckland Council responded within the required timeframe. A copy of Auckland Council's formal response is attached to this Report as Appendix One. For Auckland Council's estimated financial costs of adding fluoride to the drinking water, including any additional costs of ongoing management and monitoring, please see Criterion 2c above. **Waiuku Water Supply** Auckland Council stated that the date by which it would be able to comply with a direction for the Waiuku supply is 30 June 2026. **Onehunga Water Supply** Auckland Council stated that the date by which it would be able to comply with a direction for the Onehunga supply is 30 June 2024.