

3 May 2022

Geoff Williams
geoff.williams@rotorualc.nz

Tēnā koe Geoff

Community water fluoridation next steps

Thank you for responding to my letter of 15 December 2021 and providing information on your local authority's 'readiness' to fluoridate, and estimated costs and timeframes to install the necessary related infrastructure.

I have now made a preliminary assessment of the Rotorua Central and Rotorua East drinking water supplies against the decision-making requirements set out under Part 5A Section 116E (3) of the Health Act 1956 (the Act). Appendix One outlines the factors and information that I have considered in my preliminary assessment.

In view of this assessment, I am proceeding with the next steps. Before I can consider issuing a direction to fluoridate, I am required under the Act to invite written comment from you, in relation to Rotorua Central and Rotorua East supplies, on:

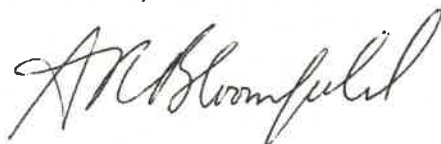
- a) the estimated financial cost of adding fluoride to the drinking water, including any additional costs of ongoing management and monitoring
- b) the date by which your local authority would be able to comply with a direction.

The Act requires that I give you at least 40 working days to respond to my request for written comment. As such, I require that you provide written comment to me by 29 June 2022. Please send your response to fluoride@health.govt.nz. I will consider any written comment received when considering issuing a direction.

I note that your local authority has already provided some of the information (eg, estimated costs) that I am seeking written comment on now. Please confirm or update any information already provided, and where applicable provide additional comment.

As previously advised, there is some funding available to local authorities that commence fluoridation in 2022. Further details on funding will be provided in due course.

Nāku noa, nā



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

Appendix One – Rotorua Lakes Council

Analysis	
Criterion	1. Scientific evidence on the effectiveness of adding fluoride to drinking water in reducing the prevalence and severity of dental decay
Evidence	<p>We have considered the following information:</p> <ul style="list-style-type: none"> • 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 Ministers Chief Science Advisor and Royal Society of New Zealand Te Aparangi • Water fluoridation to prevent tooth decay Cochrane Collaboration (June 2015)
Analysis	<p>The sources of evidence referred to above are reviews that examine significant bodies of research over a long time period on the safety and effectiveness of community water fluoridation at reducing dental decay. The evidence indicates the provision of community water fluoridation at a level of 0.7-1 mg/L significantly reduces the prevalence and severity of dental decay. While the review's outcome is not dependent on any specific study, findings from individual studies cited in the reviews include:</p> <ul style="list-style-type: none"> - data from the 2009 New Zealand Oral Health Survey showed that children and adolescents from un-fluoridated areas had 1.7 times as many decayed, missing or filled teeth (when adjusted for sex, ethnic group and socio-economic status) than those from fluoridated areas - an Australian review undertaken in 2017 found that fluoridation reduces tooth decay in children and adolescents by 26 to 44 percent, and in adults by 27 percent - the UK NHS/York review calculated that in the United Kingdom the "number needed to treat" was six (ie, a median of six people needed to receive community water fluoridation for one additional person to be caries- free). <p>On this basis, the provision of community water fluoridation at a level of 0.7-1 mg/L in Rotorua East and Rotorua Central would significantly reduce the prevalence and severity of dental decay within these areas. Fluoridation at these levels is considered to be safe and effective at reducing decay.</p>
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
Analysis	<p>We have considered the following information:</p> <ul style="list-style-type: none"> • data on Age 5 and Year 8 oral health outcomes from the Community Oral Health Service (Ministry of Health)

	<ul style="list-style-type: none"> • 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) • New Zealand Index of Deprivation (NZDep) (Socioeconomic deprivation profile ehinz).
Analysis	<p>Rotorua East and Rotorua Central water supplies are situated within Lakes District Health Board.</p> <p>2020 district health board data for children aged 0-12 in Lakes District Health Board shows:</p> <ul style="list-style-type: none"> - overall, 53 percent of children had experienced tooth decay at age five (compared to national average of 43 percent) - on average, children at age five have 2.53 decayed, missing or filled primary teeth, and at school year 8 have on average 2.46 decayed, missing or filled adult teeth (compared to the national average of 1.98 and 0.73 respectively) - Māori and Pacific children have significantly worse outcomes than other children within Lakes District Health Board. For example, 65 percent of Māori children had experienced decay at age five compared to 37 percent for all other (non-Māori and non-Pacific) children. <p>The 2017-2020 New Zealand Health Survey results for Rotorua Lakes Council show:</p> <ul style="list-style-type: none"> - 51.3 percent of adults (15+) had one or more teeth removed in their lifetime due to decay, an abscess, infection or gum disease (compared to the national average of 46.2 percent) - 9.5 percent of adults (15+) had one or more teeth removed in the past 12 months due to decay, an abscess, infection or gum disease (compared to the national average of seven percent). <p>Within the Rotorua Lakes Council there are significant levels of deprivation. 39 percent of people living in the district are either in decile 9 or 10. There is a significant body of evidence that higher deprivation areas are likely to have poorer oral health outcomes.</p> <p>Overall, a person living in the Rotorua Lakes Council area is very likely to have poorer oral health outcomes compared to the average person in New Zealand. There is a large equity gap between Māori and non-Māori. A significant proportion of Rotorua Lakes Council is deprived and therefore likely to have particularly poor oral health outcomes. Community water fluoridation could help address this issue.</p>
Criterion	2b. the number of people who are reasonably likely to receive drinking water from the local authority supply
Evidence	<p>We have considered the following information:</p> <ul style="list-style-type: none"> • the Public Register of Drinking Water Suppliers

Analysis	Water supply	Population size																
	Rotorua East	10,330																
	Rotorua Central	42,500																
Criterion	2c. the likely financial cost and savings of adding fluoride to the drinking water, including any additional financial costs of ongoing management and monitoring																	
Evidence	<p>We have considered the following information:</p> <ul style="list-style-type: none"> • Review of the Benefits and Costs of Water Fluoridation in New Zealand. Sapere Research Group. May 2015. • Water Fluoridation Engineering Costs. August 2015. 																	
Analysis	<p>Community water fluoridation is recognised as one of the most cost-effective, equitable, and safe measures communities can take to prevent decay and improve oral health. There is evidence estimating that adding fluoride to New Zealand's water treatment plants classified as medium (e, those supplying populations over 5,000), is cost-saving.</p>																	
	<table border="1"> <thead> <tr> <th>Water Supply</th> <th>Population size</th> <th>Estimated cost from Rotorua Lakes Council</th> <th>Cost saving</th> </tr> </thead> <tbody> <tr> <td>Rotorua East</td> <td>10,330</td> <td>\$507,000</td> <td>Considered to be cost-saving</td> </tr> <tr> <td>Rotorua Central</td> <td>42,500</td> <td>\$591,500</td> <td>Considered to be cost-saving</td> </tr> <tr> <td>Total</td> <td>52,830</td> <td>\$1,098,500</td> <td></td> </tr> </tbody> </table>	Water Supply	Population size	Estimated cost from Rotorua Lakes Council	Cost saving	Rotorua East	10,330	\$507,000	Considered to be cost-saving	Rotorua Central	42,500	\$591,500	Considered to be cost-saving	Total	52,830	\$1,098,500		
Water Supply	Population size	Estimated cost from Rotorua Lakes Council	Cost saving															
Rotorua East	10,330	\$507,000	Considered to be cost-saving															
Rotorua Central	42,500	\$591,500	Considered to be cost-saving															
Total	52,830	\$1,098,500																

Subject: Action Required: Community Water Fluoridation

From: Eric Cawte

Sent: Monday, 4 July 2022 11:21 am

To: Vi.Vu@health.govt.nz; Fluoride <Fluoride@health.govt.nz>

Cc: Craig Tiriana <Craig.Tiriana@rotorualc.nz>; Geoff Williams <Geoff.Williams@rotorualc.nz>; Stavros Michael <Stavros.Michael@rotorualc.nz>; Regan Fraser <Regan.Fraser@rotorualc.nz>; Greg Manzano <Greg.Manzano@rotorualc.nz>; Steve Harwood <Steve.Harwood@rotorualc.nz>

Subject: FW: Action Required: Community Water Fluoridation

Kia ora Vi,

Further to your email to Geoff Williams, please find below the table you supplied, populated with estimated capital and annual operating costs related to implementing fluoridation of the listed water supplies. I apologise for the delay in sending this reply. These estimates are still very preliminary and considering that the proposed compliance date is between 12 and 18 months away, I have incorporated current and projected cost escalations based on a contract award date around March 2023. As you will probably be aware, Capital Goods and Consumer Price indices have increased significantly recently, and we are seeing actual construction and operational prices well in excess of the published indices. The actual costs will be very dependent on international materials and local labour costs which continue to rise.

You have asked for details for only Rotorua Central and Eastern supplies. It may be that you are considering funding for only these two which would mean that approximately 11,500 people will not receive fluoridated water. It is understandable that you wish to target funding to economies of scale, but I would respectfully request that at least Ngongotaha and its population of 5000 be included for consideration. The area of Ngongotaha has always been considered to be within the Rotorua "Urban" area and receives the same stated water supplies levels of service as the remainder of the urban area. There is a 300mm diameter pipeline linking the Rotorua Central and Ngongotaha networks which provides the opportunity for them to supplement each other, and RLC has recently reached agreement with mana whenua for the commissioning and operation of this pipeline. The Ngongotaha area also contains communities of relatively high deprivation which would benefit from this targeted health intervention. I have included the relevant data for Ngongotaha in the table for your information.

Please don't hesitate to contact me if you require any further information.

Nga mihi,

Eric Cawte.

Supply name	Estimated cost to add fluoride	Operating costs	Proposed compliance date
Rotorua Central	722,000	47,000	12 to 18 months
Rotorua East	618,000	25,000	12 to 18 months
Ngongotaha	333,000	23,000	12 to 18 months

From: Geoff Williams <Geoff.Williams@rotorualc.nz>
Sent: Sunday, 3 July 2022 6:18 PM
To: Stavros Michael <Stavros.Michael@rotorualc.nz>; Eric Cawte <Eric.Cawte@rotorualc.nz>
Subject: FW: Action Required: Community Water Fluoridation

fyi

From: Vi Vu <Vi.Vu@health.govt.nz> **On Behalf Of** Fluoride
Sent: Thursday, 30 June 2022 3:23 pm
To: Geoff Williams <Geoff.Williams@rotorualc.nz>
Subject: RE: Action Required: Community Water Fluoridation

Kia ora Geoff,

Thank you for your response.

We are just seeking some clarification on the estimated costs. Can you please ask your team to provide a breakdown in costs by supply? For example:

Supply name	Estimated cost to add fluoride	Operating costs	Proposed compliance date
Rotorua Central			12 to 18 months
Rotorua East			12 to 18 months

Ngā mihi,

Oral Health team

From: Geoff Williams <Geoff.Williams@rotorualc.nz>
Sent: Thursday, 30 June 2022 2:40 pm
To: Fluoride <Fluoride@health.govt.nz>
Subject: RE: Action Required: Community Water Fluoridation

Kia ora Oral Health Team

Further to your emails and in response to your questions;

- 1: it would cost approximately \$3.5million to add fluoride and an estimate again of about \$50k annual operating costs.
- 2: It's anticipated it would take between 12 and 18 months to be able to comply.

Ngā mihi,

Geoff

Geoff Williams Toihautū | Chief Executive

Waea: 07 351 8320 | ~~Waea-pūkoro: 0212424064~~

Īmera: geoff.williams@rotorualc.nz | Ipurangi: rotorualakescouncil.nz

Taunga: 1061 Haupapa St, Private Bag 3029, Rotorua Mail Centre, Rotorua 3046, New Zealand



From: Vi Vu <Vi.Vu@health.govt.nz> **On Behalf Of** Fluoride
Sent: Thursday, 30 June 2022 11:37 am
To: Geoff Williams <Geoff.Williams@rotorualc.nz>
Subject: FW: Action Required: Community Water Fluoridation
Importance: High

Kia ora Geoff,

On 3 May, the Director-General of Health wrote to you regarding community water fluoridation next steps for the Rotorua Central and Rotorua East supplies in your area. The Director-General of Health asked you to provide the following information on the Rotorua Central and Rotorua East supplies by 29 June 2022:

- a) the estimated financial cost of adding fluoride to the drinking water, including any additional costs of ongoing management and monitoring
- b) the date by which your local authority would be able to comply with a direction to fluoridate.

We have yet to receive a response from you. Please provide a response by tomorrow Friday 1 July. If a response is not received by this date, the Director-General of Health may not be able to consider your comment during their decision-making process.

Ngā mihi nui,

Oral Health team

From: Vi Vu <Vi.Vu@health.govt.nz> **On Behalf Of** Fluoride
Sent: Monday, 13 June 2022 2:57 pm
To: geoff.williams@rotorualc.nz
Subject: FW: Action Required: Community Water Fluoridation
Importance: High

Kia ora Geoff,

This is a friendly reminder that you are invited to provide written comment by **29 June 2022** regarding the Rotorua Central and Rotorua East supplies on:

1. the estimated financial cost of adding fluoride to the drinking water, including any additional costs of ongoing management and monitoring
2. the date by which your local authority would be able to comply with a direction.

Please provide your response to fluoride@health.govt.nz

Any other drinking water supplies your local authority controls that are not included in this first set of potential directions, may be considered for a direction by the end of 2022. As noted in a letter to you on 15 December, the Director-General of Health is mindful of the current service delivery pressures across the water services and broader local government sector. In light of this, if the Director-General of Health issues further directions for your other water supplies, some of these may have compliance dates set for after July 2024 when the new water service entities are established as part of the Three Waters reforms.

Ngā mihi nui,
Oral Health team

From: Vi Vu <Vi.Vu@health.govt.nz> **On Behalf Of** Fluoride
Sent: Tuesday, 3 May 2022 12:02 pm
To: geoff.williams@rotorualc.nz
Subject: Action Required: Community Water Fluoridation
Importance: High

Kia ora Geoff,

Please see attached a letter from the Director-General of Health on community water fluoridation. The Director-General of Health has requested further information from your local authority. Please provide your response to fluoride@health.govt.nz by 29 June 2022.

If you have any questions, you can respond directly to this email.

Ngā mihi,
Oral health team
Ministry of Health

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27 July 2022

Geoff Williams
Chief Executive
Rotorua Lakes Council
geoff.williams@rotorualc.nz

Tēnā koe Mr Williams

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 Rotorua Central and Rotorua East drinking water supplies in your region.

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

Fluoridation of the Rotorua Central and Rotorua East drinking water supplies is an important step in improving the oral health of your communities, 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 communities served by the Rotorua Central and Rotorua East 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 the supplies, including any additional financial costs of ongoing management and monitoring.

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

- The Rotorua Central and Rotorua East communities would each receive significant benefit, through improvement to the state of its oral health, because fluoridation of the water supply would significantly reduce the prevalence and severity of dental decay in its community
- Approximately 42,500 and 10,330 people are reasonably likely to receive drinking water from the Rotorua Central and Rotorua East supplies, respectively
- the likely financial cost and savings of adding fluoride to drinking water for the Rotorua Central and Rotorua East supplies including any additional financial costs of ongoing management and monitoring.

My decision-making process included inviting written comment from Rotorua Lakes 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 Rotorua Central supply is \$722,000. The estimated ongoing management and monitoring costs are \$47,000 per annum
- the estimated capital cost of introducing fluoridation for the Rotorua East supply is \$618,000. The estimated ongoing management and monitoring costs are \$25,000 per annum
- the timeframe by which Rotorua Lakes Council would be able to comply with a direction is 12-18 months for both the Rotorua Central and Rotorua East drinking water supplies.

As part of considering whether to issue a direction to fluoridate, I considered the cost estimates you provided for each supply. I also accept the timeframe you specified by which you could comply with a direction for the Rotorua Central and Rotorua East drinking water supplies. This is reflected in the compliance date 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

A handwritten signature in black ink, appearing to read 'Ashley Bloomfield', written in a cursive style.

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

Appendix 1:

Rotorua Lakes Council: Rotorua Central and Rotorua East 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	<p>The Ministry has considered the following information:</p> <ul style="list-style-type: none"> • 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) <p>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.</p>
Analysis	<p>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.</p> <p>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 Rotorua Central and Rotorua East 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.</p>
Director of Public Health advice	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 Rotorua Central and Rotorua East 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	<p>The Ministry has considered the following information:</p> <ul style="list-style-type: none"> • 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) <p>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.</p>
Analysis	<p>Rotorua East and Rotorua Central water supplies are situated within the previous Lakes District Health Board area.</p> <p>2020 data for children aged 0-12 in Lakes District Health Board shows:</p> <ul style="list-style-type: none"> - overall, 53 percent of children had experienced tooth decay at age five - on average, children at age five have 2.53 decayed, missing or filled primary teeth, and at school year 8 have on average 2.46 decayed, missing or filled adult teeth - Māori and Pacific children have significantly worse outcomes than other children within Lakes District Health Board. For example, 65 percent of Māori children had experienced decay at age five compared to 37 percent for all other (non-Māori and non-Pacific) children. <p>The 2017-2020 New Zealand Health Survey results for Rotorua Lakes Council show:</p> <ul style="list-style-type: none"> - 51.3 percent of adults (15+) had one or more teeth removed in their lifetime due to decay, an abscess, infection or gum disease - 9.5 percent of adults (15+) had one or more teeth removed in the past 12 months due to decay, an abscess, infection or gum disease <p>From the data summarised above, it is reasonable to conclude that there are significant levels of dental decay in the communities serviced by the Rotorua Central and Rotorua East water supplies. There is strong evidence by CWF reduces dental decay. There are therefore also significant opportunities for oral health improvement for the communities served by the Rotorua Central and Rotorua East water supplies. The evidence indicates that fluoridation of the Rotorua Central and Rotorua East water supplies would make significant improvements to oral health outcomes for the communities it serves.</p>

	<p>Within the Rotorua area, there are significant levels of deprivation. In the 10-level score in which decile 1 has the least deprivation, there are areas in Rotorua that are in deciles 8 – 10. There is a significant body of evidence that levels of tooth decay are highest among the most deprived socioeconomic groups.</p>						
<p>Director of Public Health advice</p>	<p>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 Rotorua Central and Rotorua East water supplies. In summary, my assessment is as follows. The Rotorua Central and Rotorua East 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.</p>						
<p>Criterion</p>	<p>2b. the number of people who are reasonably likely to receive drinking water from the local authority supply</p>						
<p>Evidence</p>	<p>The Ministry has considered the following information:</p> <ul style="list-style-type: none"> • the Public Register of Drinking Water Suppliers 						
<p>Analysis</p>	<table border="1"> <thead> <tr> <th data-bbox="782 1030 829 1848">Water supply</th> <th data-bbox="782 224 829 1030">Population size</th> </tr> </thead> <tbody> <tr> <td data-bbox="829 1030 869 1848">Rotorua East</td> <td data-bbox="829 224 869 1030">10,330</td> </tr> <tr> <td data-bbox="869 1030 901 1848">Rotorua Central</td> <td data-bbox="869 224 901 1030">42,500</td> </tr> </tbody> </table>	Water supply	Population size	Rotorua East	10,330	Rotorua Central	42,500
Water supply	Population size						
Rotorua East	10,330						
Rotorua Central	42,500						
<p>Criterion</p>	<p>2c. the likely financial cost and savings of adding fluoride to the drinking water, including any additional financial costs of ongoing management and monitoring</p>						
<p>Evidence</p>	<p>The Ministry has considered the following information:</p> <ul style="list-style-type: none"> • Review of the Benefits and Costs of Water Fluoridation in New Zealand. Sapere Research Group. May 2015. • Water Fluoridation Engineering Costs. August 2015. • Rotorua Lakes Council’s estimated costs, including ongoing management and monitoring costs (for more detail on Rotorua Lakes Council’s comments see table below). 						
<p>Analysis</p>	<p>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:</p> <ul style="list-style-type: none"> - 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 Rotorua Central and Rotorua East supplies each fit into the category of supplies servicing over 5000 people (see further detail in Criterion 2b).

The estimated costs provided by Rotorua Lakes 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 Rotorua East supply servicing 10,330 people, Rotorua Lakes Council estimated \$618,000 for capital costs, and \$25,000 per annum for management and monitoring costs. For the Rotorua Central supply servicing 42,500 people, Rotorua Lakes Council estimated \$722,000 for capital costs, and \$47,000 per annum for management and monitoring costs.

Water Supply	Population size	Rotorua Lakes Council estimate of capital cost	Rotorua Lakes Council estimate of management and monitoring costs (per annum)
Rotorua East	10,330	\$618,000	\$25,000
Rotorua Central	42,500	\$722,000	\$47,000
Total	52,830	\$1,340,000	\$72,000

Summary of the information received from Rotorua Lakes Council

As required by section 116G, Rotorua Lakes 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. Rotorua Lakes Council responded within the required timeframe. A copy of Rotorua Lakes Council's formal response is attached to this Report as Appendix One.

For Rotorua Lakes 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.

Rotorua East and Rotorua Central Water Supply

Rotorua Lakes Council stated that the timeframe by which it would be able to comply with a direction for the Rotorua East and Rotorua Central supply is 12
-18 months.

6 September 2022

File Ref: 87-01-011

Doc No: RDC-1308209

Civic Centre
1061 Haupapa Street
Private Bag 3029
Rotorua Mail Centre
Rotorua 3046
New Zealand

Manatu Hauora/Ministry of Health
P O Box 5013
WELLINGTON 6140

Attention: Justine Mecchia – Principal Advisor

Kia ora Justine

Process for Funding of Fluoridation Capital Works

Thank you for the latest communication regarding the decision and direction given to Rotorua Lakes Council to add fluoride to the Rotorua Central and Rotorua East water supplies.

The information supplied presents some potential serious problems for Rotorua Lakes Council. As you will be aware, as both a Territorial Local Authority and a water supplier, Rotorua Lakes Council has responsibilities relating to Te Tiriti o Waitangi and the principle of Te Mana O Te Wai. You may also be aware of Rotorua Lakes Council's special partnership with Te Arawa that underpins all of our activities and services including three waters.

Of our 14 water sources and treatment plant sites, seven are situated on land that is in Rotorua Lakes Council ownership, and seven are vested in other entities, with our activities there being protected by District Plan designations, easements and memoranda of understanding or similar agreements.

A number of the sites were acquired many years ago via the Public Works Act, with the terms of those acquisitions in many cases now being recognised as unfair to the original Maori owners. In the Acknowledgements of Treaty breach recorded in the Deed of Settlement between Ngāti Rangiwewehi and the Crown, the Crown said *"The Crown further acknowledges that the taking of the land at Taniwha Springs and the subsequent abstraction of water had a severe impact on Ngāti Rangiwewehi and is strongly felt by Ngāti Rangiwewehi to be the greatest grievance they bear against the Crown."*

Consistent with that Acknowledgement, with the principles of Te Tiriti, and in keeping with our own partnership agreement with Te Arawa, we have recently returned ownership of the land at Taniwha Springs (including the source and treatment plant for the Ngongotahā water supply) back to Ngāti Rangiwewehi. We are also in the process of returning to Ngāti Kea-Tuara the site of the Rotorua Central supply. It is likely that we will be doing the same with the sources and treatment sites for the Rotorua East supply in the not too distant future.

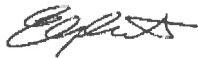
The advice you have supplied that "any infrastructure within land not owned by the relevant water supplier" is an example of "works or activities which are unlikely to be eligible for funding" raises doubts that Rotorua Lakes Council will be able to comply with the DG Health's direction. As you may imagine, Rotorua Lakes Council has no funding in its current long term plan for any unbudgeted capital works.

Wherever Rotorua Lakes Council relinquishes ownership of land on which critical infrastructure is located, we only do so where our ability to continue providing those services is protected by appropriate legal mechanisms including easements. In this way, our assets and services are protected in exactly the same manner as they would be if Rotorua Lakes Council owned the land. I would be surprised if there were no other water suppliers who were in a similar situation.

I would appreciate it if you would consider if in such situations the criteria for eligibility for funding can be reviewed, and consideration given to removing the non-ownership of land from the list of exclusions. The criteria would have the unintended consequence of making it unnecessarily difficult to return land to mana whenua iwi, and unfairly penalises Councils that have taken action to uphold the principles of te Tiriti and to uphold the Crown's Treaty settlement commitments.

Please do not hesitate to contact me if you require any further information or discussion.

Yours faithfully



Eric Cawte
Manager, Infrastructure Networks Performance

From: Eric Cawte
Sent: Wednesday, 7 September 2022 10:23 am
To: 'Justine Mecchia'
Cc: Stavros Michael; Regan Fraser; Steve Harwood; Gina Rangi;
fluoridationadmin@allenandclarke.co.nz
Subject: RE: Fluoride Funding Criteria

Kia ora Justine,

Thank you very much for your prompt response and reassurance which is appreciated.

We will ensure we provide appropriate details of our land arrangements as part of our funding applications.

Nga mihi, Eric.

From: Justine Mecchia <Justine.Mecchia@health.govt.nz>
Sent: Tuesday, 6 September 2022 5:51 PM
To: Eric Cawte <Eric.Cawte@rotorualc.nz>
Cc: Stavros Michael <Stavros.Michael@rotorualc.nz>; Regan Fraser <Regan.Fraser@rotorualc.nz>; Steve Harwood <Steve.Harwood@rotorualc.nz>; Gina Rangi <Gina.Rangi@rotorualc.nz>; fluoridationadmin@allenandclarke.co.nz
Subject: RE: Fluoride Funding Criteria

Kia ora Eric,

Thank you very much for your email, and the letter raising your concern with the land ownership criteria outlined in the funding guidance.

The arrangements you describe are not something we would consider to be a problem for your funding application, and recognise your obligations to Te Tiriti o Waitangi and your local partnership with Te Arawa.

Thank you for raising this issue.

Ngā mihi ,
Justine

Justine Mecchia (she/her)
Principal Advisor (Contractor)
Public Health Agency
+64 21 247 2242
justine.mecchia@health.govt.nz



I work part time, my usual hours of work are Mon, Tues & Thurs 9.00am - 2.45pm; Wed 9.00 – 4.00pm.

From: Eric Cawte <Eric.Cawte@rotorualc.nz>
Sent: Tuesday, 6 September 2022 9:38 am
To: Justine Mecchia <Justine.Mecchia@health.govt.nz>
Cc: Stavros Michael <Stavros.Michael@rotorualc.nz>; Regan Fraser <Regan.Fraser@rotorualc.nz>; Steve Harwood <Steve.Harwood@rotorualc.nz>; Gina Rangi <Gina.Rangi@rotorualc.nz>
Subject: Fluoride Funding Criteria

Kia ora Justine,
Thanks for your recent communication regarding the funding process for fluoridation. Attached is a letter outlining a concern Rotorua Lakes Council has with one of the criteria. If you are not the appropriate person to consider this, can you please pass on to that person.
Let me know if you require any further information for consideration.
Nga mihi,
Eric.

Eric Cawte *Manager – Infrastructure Networks Performance*
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A: 1061 Haupapa St, Private Bag 3029, Rotorua Mail Centre, Rotorua 3046, New Zealand



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3 November 2022

Geoff Williams
Chief Executive
Rotorua Lakes District Council
geoff.williams@rotorualc.nz

Tēnā koe Mr Williams

Community water fluoridation - notification of active consideration

Thank you for your work to date with Manatū Hauora (the Ministry of Health) on matters concerning community water fluoridation.

As you will be aware, in July 2022, you received a direction to fluoridate some of the drinking water supplies in your local authority area. I understand that Manatū Hauora officials have been working to assist you to comply with these directions and have invited you to apply for funding for capital works to implement fluoridation.

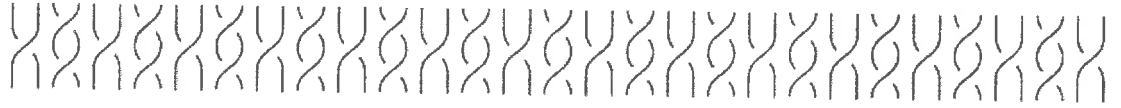
I am now writing to a second set of 27 local authorities advising each that I am actively considering whether to issue a direction to fluoridate some or all of its drinking water supplies. This second set includes some of the local authorities that received a direction in July. I have chosen to prioritise consideration of these 27 local authorities based on the needs and size of the populations served by their water supplies.

The Rotorua Lakes District Council is one of the local authorities I am now actively considering for a further potential direction to fluoridate. I will consider separately each of the following drinking water supplies in your area: Ngongotaha, Hamurana/Kaharoa, Reporoa, Mamaku, Rotoiti, and Rotoma.

Regarding each water supply listed above, before I can decide whether to issue a direction to fluoridate I am required under section 116G(2) of the Health Act (the Act) to invite written comment from you in relation to the above drinking water supplies on:

- a) the estimated financial cost of adding fluoride to the drinking water, including any additional costs of ongoing management and monitoring
- b) the date by which your local authority would be able to comply with a direction to fluoridate.

I note that you have already provided some information on the matters on which I am now seeking written comment. That information is summarised in the attached table. Please note that the table expresses the information you provided about timeframes in terms of the



number of months it would take to implement community water fluoridation if a direction were given and funding available. Please confirm or update the attached table and, where applicable, provide additional comment.

The Act requires that I give you at least 40 working days to respond to my request for written comment. To take into account the summer holiday period, I am giving you an additional 20 working days to respond. Please provide written comment to me **by 2 February 2023**. Please send your response to fluoride@health.govt.nz.

When deciding whether to issue any direction to fluoridate, I will also consider the scientific evidence on the effectiveness of fluoridation and, for each drinking water supply, whether the benefits of fluoridation outweigh the financial cost, taking into account the oral health status, population size, and estimated costs of fluoridation.

I continue to be mindful of current service delivery pressures across the water services and broader local government sectors. In light of this, if I do issue directions regarding your drinking water supplies, these will have compliance dates set for after July 2024 when the new water service entities are due to be established.

An official from Manatū Hauora will contact your team during the active consideration period to discuss any questions you may have. 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.

Nāku noa, nā



Dr Diana Sarfati
Te Tumu Whakarae mō te Hauora
Director-General of Health

8 February 2023

File Ref: 87-01-011

Doc No: RDC-1358920

Dr Diana Sarfati
Te Tumu Whakarae mō te Hauora
Director-General of Health
P O Box 5013
WELLINGTON 6140

Kia ora Dr Sarfati

Community Water Fluoridation – Notification of Active Consideration

Thank you for your letter of 3 November 2022 inviting us to provide comment in relation to the financial capital and operating costs of adding fluoride to the nominated supplies, and the date by which we would be able to comply with a direction to do so.

As requested, I have updated the table you supplied below, and will add some other commentary. My apologies that this is later than the date you requested it.

I note that the updated estimates of the capital installation costs of the fluoridation systems are significantly higher than the amounts previously supplied. In arriving at the updated estimates, I have used information contained in the preliminary design reports that we had prepared as part of the funding submission for the Rotorua Central and Rotorua Eastern supplies that we sent in early December 2022. The annual operating cost estimates have also used some information from those reports.

Whilst I believe the new estimates should be more accurate, there are still significant areas of assumption that carry some risk such as decisions on the type/method of fluoride dosing, individual site requirements, and changes of scale.

In earlier correspondence, I raised an issue relating to the Ngongotaha supply, which has an official population of 4826, and includes areas of deprivation. The commonly accepted Rotorua “city” or “urban” zone encompasses the Eastern, Central and Ngongotaha areas. The Central and Ngongotaha water supplies are joined by a pipeline which, since my last advice, has recently been recommissioned in preparation for a partial network amalgamation. This will enable a constant small flow of water between the two current networks to balance source demands in peak times, and to provide resilience in the event of a major fault in either network. It also means that the former fixed boundary between the two networks will become fluid, with some current users of the central supply receiving non-fluoridated water from Ngongotaha.

A solution to this problem could be to bring forward the consideration of the funding and direction for the Ngongotaha supply alongside the Rotorua Central and Rotorua East supplies, so that implementation could be done together. We could expedite a preliminary design report for Ngongotaha if this was to be considered. This would result in a consistent level of service for all residents across the Rotorua city.

Yours faithfully



Eric Cawte
Manager – Infrastructure Networks Performance

Information about drinking water supplies for Rotorua Lakes District Council

Local Authority	Reticulated drinking water supply name	Water supply pop	Estimated number of months to fluoridate if a direction is given and funding available	Estimated capital works cost to fluoridate	Estimated ongoing mgmt. & monitoring costs	Additional comments
Rotorua Lakes District Council	Ngongotaha	4826	8	\$588,000	\$45,000	
	Hamurana/Kaharoa	1700	8	\$468,000	\$40,000	
	Reporoa	1060	8	\$670,000	\$40,000	Two dosing plants required
	Mamaku	868	8	\$334,000	\$30,000	
	Rotoiti	880	8	\$334,000	\$30,000	
	Rotoma	500	8	\$334,000	\$30,000	

