

3 May 2022

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Tēnā koe Craig

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 New Plymouth drinking water supply 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 the New Plymouth supply, on:

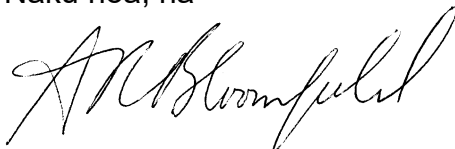
- a) the estimated financial cost of adding fluoride to the drinking water, including any additional costs of ongoing management and monitoring
- b) the date by which your local authority would be able to comply with a direction.

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 – New Plymouth District 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 New Plymouth 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>The New Plymouth water supply is situated within Taranaki District Health Board.</p> <p>2020 District health board data for children aged 0-12 in Taranaki District Health Board shows:</p> <ul style="list-style-type: none"> - overall, 36 percent of children had experienced tooth decay at age five (compared to national average of 43 percent) - on average, children at age five have 1.09 decayed, missing or filled primary teeth, and at school year 8 have on average 0.60 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 Taranaki District Health Board. For example, 59 percent of Māori children had experienced decay at age five compared to 29 percent for all other (non-Māori and non-Pacific) children. <p>The 2017-2020 New Zealand Health Survey results for New Plymouth District Council show:</p> <ul style="list-style-type: none"> - 52.1 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 percent of adults (15+) had one or more teeth removed in the last 12 months due to decay, an abscess, infection or gum disease (compared to the national average of seven percent). <p>Within New Plymouth District Council there are variations in deprivation levels. However, there are some high deprivation areas that are decile 7-10. 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 New Plymouth District Council area is likely to have slightly worse oral health outcomes than the average person in New Zealand. The data shows that there are still significant opportunities for overall improvement. There are inequitable oral health outcomes between Māori and non-Māori in New Plymouth. Approximately 16 percent of the population in New Plymouth District council are Māori. It is likely the deprived communities within New Plymouth District Council have poorer oral health outcomes. These could be better addressed via community water fluoridation.</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												
	New Plymouth		59,072												
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 (ie, 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 New Plymouth District Council</th> <th>Cost saving</th> </tr> </thead> <tbody> <tr> <td>New Plymouth</td> <td>59,072</td> <td>\$250,000</td> <td>Considered to be cost-saving</td> </tr> <tr> <td>Total</td> <td>59,072</td> <td>\$250,000</td> <td></td> </tr> </tbody> </table> <p>It should be noted that New Plymouth water supply was previously fluoridated until 2010. They have inspected the equipment which remains on site and found that it is no longer fit for purpose. They therefore consider that a “new build” solution would be required.</p>				Water Supply	Population size	Estimated cost from New Plymouth District Council	Cost saving	New Plymouth	59,072	\$250,000	Considered to be cost-saving	Total	59,072	\$250,000
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