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Report 01.524

18 July 2001

File: B/4/6/1

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Report to the Wellington Regional Council
from Murray Kennedy, Strategy and Asset Manager

Water Fluoridation Petition

1. Purpose

To provide advice on the petition requesting a referendum at the next local authority elections on fluoridation in the Wellington metropolitan water supply.

2. Background

A petition was presented at the Council Meeting on 10 July 2001. It stated

Believing that the unsolicited addition to our drinking water of the industrial waste sodium silicofluoride is an infringement of democratic liberty, and

Concerned that mass-medication with an uncontrollable dose of a toxic and cumulative substance constitutes a violation of human rights,

We the undersigned, respectfully request that a referendum be held at the forthcoming local body elections to decide whether fluoridation of the Wellington Region's water should continue.

There were 1,003 signatories to the petition from persons living in the areas to which the council supplies bulk water.

Officers have been requested to advise on the practicality and desirability of holding a referendum. A separate report considers the practicality aspect.

3. **Council's Present Fluoridation Policy**

The Council's current policy is to fluoridate the water supply. All water is fluoridated except the supply to Petone, which traditionally has not been fluoridated. Effectively 97 percent of the water supplied to the four metropolitan cities is fluoridated.

A major review was carried out of the Council's fluoridation policy in 1993. This was subsequently endorsed during consideration of the source for the Petone water supply in 1999. [Attachment 1].

4. **New Information**

Since the 1999 review the Council's health advisers, the Ministry of Health and the Public Health Service, have indicated there has been limited new information. The most significant is the York University Report commissioned by the UK Department of Health. The report was published in 2000. The executive summary is attached, together with the reference web page [Attachment 2].

5. **Fluoridation of Drinking Water**

At present fluoride is added to the water which raises the natural concentration of about 0.07 parts per million (ppm) to a target average of 0.85 ppm. Water in the Wellington area, and New Zealand generally, has quite low natural fluoride levels. In parts of Asia for example there are problems with high natural fluoride levels.

Fluoride is added to the water in two forms, sodium fluorosilicate powder at Te Marua, Waterloo and Wainuiomata water treatment plants. At Gear Island hydrofluorosilicic acid is added in liquid form. A standard specification is used for the purchase of the fluoride in both liquid and powder forms. This specification was prepared for the water supply managers of the local authorities and endorsed by the Ministry of Health.

The liquid form currently purchased by the Council is manufactured in Mt Maunganui and the powder comes from Japan. As a result of the presentation by a member of the public at the recent Utility Services Committee meeting further information has been requested on the source of manufacture. Suggestions were made that the fluoride came from the exhaust scrubbers associated with fertiliser and aluminium production.. There was an inference using a product from this source was not a good idea.

It is contended though if the scrubbers produce a by product which can be sold, then they are more likely to be kept in good condition rather than let the by product occasionally discharge into the atmosphere. From an environmental point of view it is better to produce by products which have value than those that have to be disposed of.

Very small amounts of impurities, in the form of heavy metals, are allowed in the fluoride powder and liquid forms. The Drinking Water Standards for New Zealand 2000, published by the Ministry of Health, list the maximum allowable value (MAV) of various elements and chemicals in the treated water. One of the principles in setting the MAVs is:

The Standards define concentrations of health significant determinands which, based on current knowledge, constitute no significant risk to health to a person who consumes 2L of water a day over their lifetime (taken as 70 years). It is usually not possible to define a concentration of contaminant (other than zero) at which there is zero risk because there is always some degree of uncertainty over the magnitude of risk.

The concentration of impurities in the fluoride must be at the level that once diluted into the water supply, they do not exceed 10 percent of any MAV. Fluoride products currently purchased are well below this limit.

Results of the treated water tests for the Te Marua plant, year ended June 2000 are:

Te Marua Treated Water and Impurities

Metal	Maximum allowable value (MAV) Drinking Water Standards mg/L	Te Marua WTP fluoridated water test YE June 2000 mg/L
Arsenic	0.01	<0.001
Cadmium	0.003	<0.003
Chromium	0.05	<0.002
Lead	0.01	<0.0005
Manganese	0.05	<0.001
Mercury	0.002	<0.0002
Nickel	0.02	<0.001
Selenium	0.01	<0.001

All the values in the right column indicate the metal concentration was below the detectable limit of the test.

Fluoride has a MAV of 1.5 milligrams/litre (mg/L). This is to ensure the possibility of fluorosis of the teeth (mottling) is minimised. Petitioners for the referendum have stated that the fluoride added is a toxic substance. At the fluoride concentration in drinking water this view is not supported by the Ministry of Health.

The view of the Ministry of Health is to some extent summed up in a recent media release by the Minister of Health when addressing a fluoridation forum on 13 June 2001. [Attachment 3].

6. Fluoridation Policy Development

A considerable amount of information on fluoridation has been presented to Councillors for the 1993 and 1999 policy reviews.

In 1994 the Public Health Commission published “an Analysis and Monitoring Report” on water fluoridation in New Zealand. It considers three ways citizens can be involved in the decision making process on fluoridation. Namely referenda, citizen’s panels, mixed citizen’s/expert’s panels. The last was used by the Regional Council for its 1993 review. The section on referenda states in part:

The advantages of referenda are that nearly the whole community (excluding children) has an opportunity for voting on the issue and the media may be stimulated into providing information on the issues. The disadvantages are that voter turn out is often low and that the level of debate may be fairly superficial and simplistic. Referenda on fluoridation have often been described as a “political circus” in the United States and this may have been the case in New Zealand (eg, three referenda in Tauranga within five years). Referenda also require a group of concerned citizens to initiate a lengthy petition process and they may also be relatively expensive to run for the local authority or the central government.

Citizens’ views in a referendum will be enhanced if an information process is undertaken first. Because of the complexity of the issue relating to the benefits and risks of fluoridation, this will be expensive. If the objective is to maximise the public response then a referenda should be held in conjunction with the local authority elections. Unfortunately this will increase the cost of the information process as electors will be receiving a considerable amount of material from election candidates at the same time. Providing information to each household and in the print media is likely to cost in excess of \$200,000.

There was a minor change to the Council’s fluoridation policy when it reviewed it in 1999. The fifth point in the 1999 resolution stated:

Notes that if any change to the WRC fluoridation policy, or its implementation, is to be considered by the WRC, the change would need to be at the initiative of, and as a result of, a formal proposal from any one or more of the bulk water supply customers.

As this is now part of the Council policy it would be appropriate to consult with the four city customers before holding a referendum.

7. **Conclusions**

There has been little new information on fluoridation since the Council reviewed its policy two years ago. The main source has been the York University Report. It is apparent that Central Government is giving more active consideration to fluoridation. It may be appropriate for the Council to wait until Central Government takes a more definitive position before reviewing the policy.

8. **Recommendations**

That the report be received and the contents noted.

Report prepared by

Approved for Submission

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