

Christchurch City Council MINUTES ATTACHMENTS

Date: Wednesday 19 July 2023
Time: 9.30 am
Venue: Council Chambers, Civic Offices,
53 Hereford Street, Christchurch

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Fluoride's Disturbing History

In the past I worked as a school dental nurse and was taught the same "safe and effective" narrative that is being rolled out today. I have since found both history and research tells a different story, namely that fluoride has never been safe nor effective.

It is widely known and well documented that fluoride is toxic, a hazard to humans and the environment. In 1930 the Aluminium industry was the biggest polluter having to pay tens of millions of dollars in lawsuits from their toxic waste of fluoride chemicals. To stop continually being fined and to avoid liability the industry came up with a campaign to promote fluoride as a health benefit.

More recently it's the phosphate fertilizer industry giving us chemicals such as: fluorosilicic acid, sodium silicofluoride and sodium fluoride. The most widely used of these is the fluorosilicic acid a corrosive chemical that will love chewing holes in your hot water tank, similar to the chlorine we currently have. The additional toxicity to this one is its ability to combine with chlorinated compounds and leach lead from brass joints in water pipes, giving rise to high lead levels in our blood, detrimental for young children's development.

Under 3 waters **Ashley Bloomfield** requested all city water in NZ be fluoridated to lower tooth decay and reduce hospital admissions for tooth decay in children. (Ref: MOH – Water Services Regulations 2022).

I am asking **why**, why aren't the MOH spending the cost to put this toxic substance in our water, on promoting good nutritional health to ensure cavity free teeth? Surely education around sugary drinks would be a better start or promoting twice daily teeth cleaning.

There is an overwhelming body of scientific and statistical evidence that doesn't support fluoridation for reducing tooth decay. It doesn't prevent cavities, it is toxic to the body even at what is considered low doses – around 0.5ppm, comparable to lead poisoning. Fluoride is not a nutrient, it is not necessary to human health, it doesn't enhance the water supply, so by putting it in the water it can only be classed as a **supplemented medication** perhaps to subdue the populous as it did in the Russian Gulags and Nazi concentration camps.

"The International Academy of Oral Medicine and Toxicology has classified Fluoride as an unapproved dental Medicament due to its high toxicity." (15 Facts Most People don't know about Fluoride – Dr Marianna Pochelli-13 March 2014. The NZ Journal of Natural Medicine – May-August 2014)

In the USA the Supreme Court Ruled Fluoridation in water supplies is a **'Compulsory Medical Treatment'** taking away **people's free choice. The FDA considers fluoride to be a Drug.**

Here in New Zealand our somewhat trampled on **Bill of Rights - Article 10** - The right not to be subjected to medical or scientific experimentation – Every person has the right not to be subjected to medical or scientific experimentation without that person's consent. **Where is that consent?**

Most at risk are bottle fed babies, kidney patients, athletes, all of whom consume higher amounts of drinking water.

It adversely affects the body's microbiome, interfering with digestion and causing gut issues. It is an endocrine disrupter affecting the thyroid gland and calcifies the pineal gland causing, sleep disturbance, depression, weight gain, cancer and overall brain under development.

It can pass the blood brain barrier causing neurological problems; autism, ADHD, cognitive impairments, brain fog, leading to Alzheimers, Parkinsons and decreased IQ in children whose brains are still forming. (Ref: collective-evolution.com/2014/03/05/Harvard-research-finds-link-between-fluoridation-water-adhd-mental-disorders/.)

A press release by the Fluoride Action Network shows that a team led by Dr. Jayanth V. Kumar, a dental surgeon, member of the American Dental Association, conducted a meta-analysis of the scientific literature on fluoride's neurotoxicity and found a link between fluoride exposure and cognitive health resulting in lowered IQ in children at low levels of exposure, concluding that no level is safe. Kumar et al.'s study was published in the journal 'Public Health'. (Ref. Children's Health Defense News and Views on line 4 June 2023)

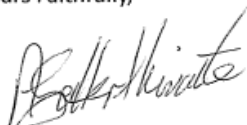
An recent article in the 'The New Zealand Journal of Natural Medicine' – issue 47 (www.naturalmedicine.net.nz) gives 50 valid reasons not to put fluoride in drinking water. It points out that no disease has ever been linked to a fluoride deficiency and millions of humans have perfectly good teeth without having to ingest a poisonous substance.

Fluoridating water has been discontinued in many countries and made an illegal substance in China, Austria, Belgium, Germany, Denmark, Norway, Finland, Japan and the Netherlands. So why would New Zealand want to promote it above giving sound nutritional advice for good bone and teeth health.

The question I shout, once again, to Ashley Bloomfield is – (reminding him that his NZ Government is now a Corporation) "Where is our consent?" "You need our consent".

I, for one, do not consent to having my drinking water poisoned with this toxic substance, how about you?

Yours Faithfully,



Ann Satterthwaite

Ref: attached docs.

History of the Fluoridation of New Zealand Drinking Water – an over-view.

Top 12 Reasons why the Fluoridation experiment should end – on-line research.

'Fifty Reasons to Oppose Fluoride' - Paul Connett, PhD. New Zealand Journal of Natural Medicine, 47.

'Fluoride Now linked to Neurotoxicity Pandemic and Development of the A-Bomb', Christina Sarich - NZ Journal of Natural Medicine Aug-Nov 2016.

'15 Facts Most People Don't Know About Fluoride' – Dr Marianna Rochelli, NZ Journal of Natural Medicine, May-August 2014.

'Peer-reviewed medical journal officially classifies fluoride as a neurotoxin' -Arjun Walia, Collective-evolution.com. NZ Journal of Natural Medicine, May-August 2014.

(Also read - On-line article ref: Fluoridefree.org.nz – safety, efficacy and freedom of choice)

History of the Fluoridation of New Zealand Drinking Water

A Mandatory Fluoridation Law passed November 2021 – Legislation for mandatory fluoridation was introduced by the National govt in 2016 to shift decision making from local councils to District Health Boards, removing input from local authorities. In 2020 the Labour Govt introduced a Supplementary Order paper to shift decision making solely to the Director General of Health. This was in response to the Labour Govt disbanding the District Health Boards in favour of Centralised Control.

In November 2021 the Labour Govt passed the bill into law.

On 27th July 2020 Ashley Bloomfield in his last week as Director General of Health, sent a letter to councils directing them to start fluoridation. The Directives sent to each council explain what steps the Director General took to come to his decision. The information provided was scant, no statistics, no numbers of the actual of fillings reduced, so why force a 'Medication' of the whole population?

His beliefs relied on outdated Information. Even the Cochrane Review of 2015 said the only research it could find on the supposed benefit of fluoridation were all prior to 1975 and may not be relevant today. The other worrying fact was that there was no evidence the Director General took into consideration any potential harmful effects even when back in Feb 2017, the Health Select Committee received 1200 submissions and heard hundreds of people give oral presentations to keep fluoride out of the drinking water due to its toxicity. Do we have to go through this again, only for it to continue to fall on deaf ears?

By shifting the responsibility from the Local Councils to the Director General of Health it makes it virtually impossible to stop fluoridation in currently fluoridated areas, or to keep it out of places that do not have it – even if that community has said no to it in the past. Local Councils will be required to do as the DHB dictates or face a fine of \$200,000 and a further \$10,000 per day of non-compliance.

It is appalling that the Legislation does not allow for the local councils to consult with the community. In a press release back in Dec 2016 Labour also condemned the Maori Party for running a poll to find out what the people thought.

Our Health Department recommendations state: 'It is the duty of local authorities, in respect of public health, to improve, promote and protect public health and if satisfied that any condition is likely to be injurious to health all proper steps are to be taken to secure the abatement of the nuisance or the removal of the condition'.

So, if it is 'likely' that fluoride poses health risks, the council is obliged to cease fluoridation. The standard of 'likely to' has been defined by the courts as 'a real, not fanciful, possibility, but not requiring a greater than 50% probability'.

There is no need for the 110% proof that the Ministry of Health suggests. This has been demonstrated repeatedly in international scientific journals and studies here in New Zealand, the burden of proof has been met and it is the Council's duty to end Fluoridation in compliance with section 23 of the Health Act.

So unless the Ministry of Health can provide scientific evidence, peer-reviewed and accepted by the international scientific community, that every one of these studies is false, councils must stop fluoridation pursuant to section 23. It is irrelevant whether fluoridation reduces tooth decay or not, once a risk to public health has been established as a real possibility, section 23 does not allow for 'trade-offs' of harm with alleged benefit.

Top 12 Reasons why the Fluoridation Experiment Should End

1. **Fluoride does not work by swallowing.** The 1940s theory that fluoride needed to be incorporated into the tooth enamel by swallowing it, has been thoroughly discredited by both supporters and opponents of fluoridation. It is not even touted anymore by those pushing fluoridation today. If there is any benefit it is from contact with the surface of the tooth.
"For many years it was believed that (fluoride) worked systemically. It is now generally accepted that it works topically" – Judge Hansen, High court, New Plymouth 2014.
2. **Too much fluoride causes Dental Fluorosis.** Ministry of Health says 40% of children in NZ have some form of dental fluorosis. Dental fluorosis is the first outward sign of over exposure to fluoride i.e. fluoride poisoning, therefore no amount of dental fluorosis is acceptable. NZ research that has looked specifically at dental health and lifetime fluoride exposure has found twice the rate of dental fluorosis in fluoridated than in non-fluoridated areas (30% compared to 15%). Obviously, fluoride exposure needs to be urgently reduced not extended.
3. **Fluoride is a neurotoxin.** There are now 59 human studies that have looked at fluoride exposure and effects on the brain function. 52 of these show fluoride's damaging effect: lowered IQ, Behavioural deficits, nervous disorders, and memory disruption. One of these studies was funded by the US Government and published in Environmental Perspectives. It shows exposure in utero at the same levels people are exposed to in NZ causing a lowering of IQ.
4. **Dose cannot be guaranteed as safe.** The US Government National Toxicology Programme is now reviewing all of the fluoride brain studies and is conducting its own new animal studies. Dr Linda Birnbaum voiced her concerns, saying "We know nothing about individual vulnerability and susceptibility". She also stated that we do know already that fluoride's effect on the brain could occur as low as 2.7ppm leaving little margin of safety, particularly as individual doses are unmonitored.
5. **Fluoride accumulates in our bones and soft tissue.** In countries with high amounts of naturally occurring fluoride such as China, India and Senegal, fluoride is removed from the drinking water to avoid people developing skeletal fluorosis. The first stage of skeletal fluorosis is identical to arthritis.
6. **Fluoride is an endocrine disruptor.** The US National Research Council's 12 member, three year review of all fluoride science found that extremely low levels of fluoride affect the human thyroid – between 0.05mg/kg/day to 0.13mg/kg/day when iodine is adequate and 0.01mg/kg/day to 0.03mg/kg/day when iodine is inadequate. Many New Zealanders will be exceeding this dose.
7. **Bottle-fed babies receive very dangerous amounts of fluoride.** Human breast milk contains almost no fluoride, New Zealand fluoridated water is normally 0.85ppm which is 212 times more fluoride than breast milk. Any reasonable person can see it is utterly reckless to give this dose to bottle-fed babies.

8. **Fluoridation chemicals are hazardous waste products.** Fluoridation chemicals are scrubbed from the chimneys of the phosphate fertiliser industry. They contain contaminants such as lead, arsenic, mercury and sometimes uranium. Why increase our ingestion of any amount of these substances?
9. **Fluoridation is a violation of the right to Informed Consent to Medical Treatment.** Fluoridation chemicals are added to the drinking water for the sole purpose of providing a claimed therapeutic benefit to teeth. The fact that the Government introduced Legislation to exempt all fluoride chemicals from the Medicines Act if they are added to the drinking water, does not change the fact that fluoridation chemicals are being used to treat people for a medical condition (dental caries). All it does is show that the Government can do whatever it likes by introducing laws whenever it feels like it, no matter how nonsensical that law is. See the article in the Timaru Courier May, 2016 by Tom O'Connor, Grey Power president, which provides the conclusive case explaining this violation.
10. **Less than 5% of the world is still fluoridating water supplies.** With more and more cities stopping every year for the past several decades. 98% of Europe does not have water fluoridation. Their teeth are just as good if not better than ours. Only four countries in Europe have some salt fluoridation. Only 10% of the UK is fluoridated. Only 3 countries in the world have mandatory fluoridation; Ireland, Singapore and Israel. Currently Israel's fluoridation policy is being challenged in the Supreme Court. China and Japan have banned the substance. China, India and Senegal removed fluoride from water supplies with more than 1ppm.
11. **Fluoridation does not reduce dental decay.** The most recent New Zealand study, carried out by pro-fluoride dentists, shows there is no difference in decay rates between non-Maori children in fluoridated and non-fluoridated areas. One of the differences seen with Maori children is likely due to lack of access to dental care, as the study found Maori children less likely to have had a dental examination. The International Cochrane Review published in 2015 also found no modern reliable evidence of fluoridation reducing dental decay. All data received by Fluoride Free New Zealand from NZ District Health Boards on the severity of tooth decay have shown us that the rates of severe tooth decay are the same, if not more prevalent, in children in fluoridated areas versus non-fluoridated areas.
12. **Other countries have successful public dental health policies without fluoridation.** There are successful international dental programmes that put fluoridation to shame in every way, saving money as well as reducing pain and suffering. Countries such as Scotland, Wales and Japan have targeted programmes which include tooth brushing in schools and pre-schools, education for parents and children and ensuring all children are seen every 6 to 12 months by a dental professional. Dental health of children in Scotland now exceeds New Zealand rates.

Special Section: Fluoride: The Silent Killer

Fifty Reasons to Oppose Fluoride

By Paul Connett, PhD
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1) Fluoride is not an essential nutrient (NRC 1993 and IOM 1997). No disease has ever been linked to a fluoride deficiency. Humans can have perfectly good teeth without fluoride.

2) Fluoridation is not necessary. Most Western European countries are not fluoridated and have experienced the same decline in dental decay as the US (See data from World Health Organization in Appendix 1. The reasons given by countries for not fluoridating are presented in Appendix 2.)

3) Fluoridation's role in the decline of tooth decay is in serious doubt. The largest survey ever conducted in the US (over 39,000 children from 84 communities) by the National Institute of Dental Research showed little difference in tooth decay among children in fluoridated and non-fluoridated communities (Hileman 1989). According to NIDR researchers, the study found an average difference of only 0.6 DMFS (Decayed Missing and Filled Surfaces) in the permanent teeth of children aged 5-17 residing in either fluoridated or unfluoridated areas (Brunelle and Carlos, 1990). This difference is less than one tooth surface! There are 128 tooth surfaces in a child's mouth. This result was not shown to be statistically significant. In a review commissioned by the Ontario government, Dr. David Locker concluded: "The magnitude of [fluoridation's] effect is not large in absolute terms, is often not statistically significant and may not be of clinical significance" (Locker 1999).

4) Where fluoridation has been discontinued in communities from Canada, the former East Germany, Cuba and Finland, dental decay has not increased but has actually decreased (Maupome 2001; Kunzel and Fischer, 1997, 2000; Kunzel 2000 and Seppa 2000).

5) There have been numerous recent reports of dental crises in US cities (e.g. Boston, Cincinnati, New York City) which have been fluoridated for over 20 years. There appears to be a far greater (inverse)

relationship between tooth decay and income level than with water fluoride levels.

6) Modern research (e.g. Diesendorf 1986; Colquhoun 1997, and De Liefde, 1998) shows that decay rates were coming down before fluoridation was introduced and have continued to decline even after its benefits would have been maximized. Many other factors influence tooth decay. Some recent studies have found that tooth decay actually increases as the fluoride concentration in the water increases (Olsson 1979; Retief 1979; Mann 1987, 1990; Steelink 1992; Teotia 1994; Grobler 2001; Awadia 2002 and Ekanayake 2002).

7) The Centers for Disease Control and Prevention (CDC 1999, 2001) has now acknowledged the findings of many leading dental researchers, that the mechanism of fluoride's benefits are mainly TOPICAL not SYSTEMIC.

Thus, you don't have to swallow fluoride to protect teeth. As the benefits of fluoride (if any exist) are topical, and the risks are systemic, it makes more sense, for those who want to take the risks, to deliver the fluoride directly to the tooth in the form of toothpaste. Since swallowing fluoride is unnecessary, there is no reason to force people (against their will) to drink fluoride in their water supply. This position was recently shared by Dr. Douglas Carnall, the associate editor of the *British Medical Journal*. His editorial appears in Appendix 3.

8) Despite being prescribed by doctors for over 50 years, the US Food and Drug Administration (FDA) has never approved any fluoride product designed for ingestion as safe or effective. Fluoride supplements are designed to deliver the same amount of fluoride as ingested daily from fluoridated water (Kelly 2000).

9) The US fluoridation program has massively failed to achieve one of its key objectives, i.e. to lower dental decay rates while holding down dental fluorosis (mottled and discolored enamel), a condition known to be caused by fluoride. The goal of the early promoters of fluoridation was to limit dental fluorosis (in its mildest form) to 10% of children (NRC 1993, pp. 6-7). A major US survey has found 30% of children in optimally fluoridated areas had

dental fluorosis on at least two teeth (Heller 1997), while smaller studies have found up to 80% of children impacted (Williams 1990; Lalumandier 1995 and Morgan 1998). The York Review estimates that up to 48% of children in optimally fluoridated areas worldwide have dental fluorosis in all forms and 12.5% with symptoms of aesthetic concern (McDonagh, 2000).

10) Dental fluorosis means that a child has been overdosed on fluoride. While the mechanism by which the enamel is damaged is not definitively known, it appears fluorosis may be a result of either inhibited enzymes in the growing teeth (Dan Besten 1999), or through fluoride's interference with G-protein signaling mechanisms (Matsuo 1996). In a study in Mexico, Alarcon-Herrera (2001) has shown a linear correlation between the severity of dental fluorosis and the frequency of bone fractures in children.

11) The level of fluoride put into water (1 ppm) is up to 200 times higher than normally found in mothers' milk (0.005 - 0.01 ppm) (Ekstrand 1981; Institute of Medicine 1997). There are no benefits, only risks, for infants ingesting this heightened level of fluoride at such an early age (this is an age where susceptibility to environmental toxins is particularly high).

12) Fluoride is a cumulative poison. On average, only 50% of the fluoride we ingest each day is excreted through the kidneys. The remainder accumulates in our bones, pineal gland, and other tissues. If the kidney is damaged, fluoride accumulation will increase, and with it, the likelihood of harm.

13) Fluoride is very biologically active even at low concentrations. It interferes with hydrogen bonding (Emsley 1981) and inhibits numerous enzymes (Waldbott 1978).

14) When complexed with aluminum, fluoride interferes with G-proteins (Bigay 1985, 1987). Such interactions give aluminum-fluoride complexes the potential to interfere with many hormonal and some neurochemical signals (Strunecka & Patocka 1999, Li 2003).

15) Fluoride has been shown to be mutagenic, cause chromosome damage and

interfere with the enzymes involved with DNA repair in a variety of cell and tissue studies (Tsutsui 1984; Caspary 1987; Kishi 1993 and Mihashi 1996). Recent studies have also found a correlation between fluoride exposure and chromosome damage in humans (Sheth 1994; Wu 1995; Meng 1997 and Joseph 2000).

16) Fluoride forms complexes with a large number of metal ions, which include metals which are needed in the body (like calcium and magnesium) and metals (like lead and aluminum) which are toxic to the body. This can cause a variety of problems. For example, fluoride interferes with enzymes where magnesium is an important co-factor, and it can help facilitate the uptake of aluminum and lead into tissues where these metals wouldn't otherwise go (Mahaffey 1976; Al-lain 1996; Varner 1998).

17) Rats fed for one year with 1 ppm fluoride in their water, using either sodium fluoride or aluminum fluoride, had morphological changes to their kidneys and brains, an increased uptake of aluminum in the brain, and the formation of beta amyloid deposits which are characteristic of Alzheimers disease (Varner 1998).

18) Aluminum fluoride was recently nominated by the Environmental Protection Agency and National Institute of Environmental Health Sciences for testing by the National Toxicology Program. According to EPA and NIEHS, aluminum fluoride currently has a "high health research priority" due to its "known neurotoxicity" (BNA, 2000). If fluoride is added to water which contains aluminum, then aluminum fluoride complexes will form.

19) Animal experiments show that fluoride accumulates in the brain and exposure alters mental behavior in a manner consistent with a neurotoxic agent (Mullenix 1995). Rats dosed prenatally demonstrated hyperactive behavior. Those dosed postnatally demonstrated hypoactivity (i.e. under activity or "couch potato" syndrome). More recent animal experiments have reported that fluoride can damage the brain (Wang 1997; Guan 1998; Varner 1998; Zhao 1998; Zhang 1999; Lu 2000; Zhao 2000; Sun 2000; Bhatnagar 2002; Chen 2002, 2003; Long 2002; Shivaraashankara 2002a, b; Shashi 2003 and Zhai 2003) and impact learning and behavior (Paul 1998; Zhang, 1999, 2001; Sun 2000; Ekambaram 2001; Bhatnagar 2002).

20) Five studies from China show a lowering of IQ in children associated with fluoride exposure (Lin Fa-Fu 1991; Ji 1995; Zhao 1996; Lu 2000; and Xiang 2003a, b). One of these studies (Lin Fa-Fu 1991) indicates that even just moderate levels of fluoride exposure (e.g. 0.9 ppm in the water) can exacerbate the neurological effects of iodine deficiency.

21) Studies by Jennifer Luke (2001) showed that fluoride accumulates in the human pineal gland to very high levels. In her Ph.D. thesis Luke has also shown in animal studies that fluoride reduces melatonin production and leads to an earlier onset of puberty (Luke 1997).

22) In the first half of the 20th century, fluoride was prescribed by a number of European doctors to reduce the activity of the thyroid gland for those suffering from hyperthyroidism (over active thyroid) (Stecher 1960; Waldbott 1978). With water fluoridation, we are forcing people to drink a thyroid-depressing medication which could, in turn, serve to promote higher levels of hypothyroidism (underactive thyroid) in the population, and all the subsequent problems related to this disorder. Such problems include depression, fatigue, weight gain, muscle and joint pains, increased cholesterol levels, and heart disease.

It bears noting that according to the Department of Health and Human Services (1991) fluoride exposure in fluoridated communities is estimated to range from 1.6 to 6.6 mg/day, which is a range that actually overlaps the dose (2.3 - 4.5 mg/day) shown to decrease the functioning of the human thyroid (Galletti & Joyet 1958). This is a remarkable fact, particularly considering the rampant and increasing problem of hypothyroidism in the United States (in 1999, the second most prescribed drug of the year was Synthroid, which is a hormone replacement drug used to treat an underactive thyroid). In Russia, Bachinskii (1985) found a lowering of thyroid function, among otherwise healthy people, at 2.3 ppm fluoride in water.

23) Some of the early symptoms of skeletal fluorosis, a fluoride-induced bone and joint disease that impacts millions of people in India, China, and Africa, mimic the symptoms of arthritis (Singh 1963; Franke 1975; Teotia 1976; Carnow 1981; Czerwinski 1988; DHHS 1991). According to a review on fluoridation by *Chemical & Engineering News*, "Because some of the clinical symptoms mimic arthritis, the first two clinical phases of skeletal fluorosis could be easily misdiagnosed" (Hileman 1988). Few if any studies have been done to determine the extent of this misdiagnosis, and whether the high prevalence of arthritis in America (1 in 3 Americans have some form of arthritis - CDC, 2002) is related to our growing fluoride exposure, which is highly plausible. The causes of most forms of arthritis (e.g. osteoarthritis) are unknown.

24) In some studies, when high doses of fluoride (average 26 mg per day) were used in trials to treat patients with osteoporosis in an effort to harden their bones and reduce fracture rates, it actually led to

a HIGHER number of fractures, particularly hip fractures (Inkovaara 1975; Gerster 1983; Dambacher 1986; O'Duffy 1986; Hedlund 1989; Bayley 1990; Gutteridge 1990, 2002; Orcel 1990; Riggs 1990 and Schnitzler 1990). The cumulative doses used in these trials are exceeded by the lifetime cumulative doses being experienced by many people living in fluoridated communities.

25) Nineteen studies (three unpublished, including one abstract) since 1990 have examined the possible relationship of fluoride in water and hip fracture among the elderly. Eleven of these studies found an association, eight did not. One study found a dose-related increase in hip fracture as the concentration of fluoride rose from 1 ppm to 8 ppm (Li 2001). Hip fracture is a very serious issue for the elderly, as a quarter of those who have a hip fracture die within a year of the operation, while 50 percent never regain an independent existence.

(All 19 of these studies are referenced as a group in the reference section).

26) The only government-sanctioned animal study to investigate if fluoride causes cancer, found a dose-dependent increase in cancer in the target organ (bone) of the fluoride-treated (male) rats (NTP 1990). The initial review of this study also reported an increase in liver and oral cancers, however, all non-bone cancers were later downgraded - with a questionable rationale - by a government-review panel (Marcus 1990). In light of the importance of this study, EPA Professional Headquarters Union has requested that Congress establish an independent review to examine the study's results (Hirzy 2000).

27) A review of national cancer data in the US by the National Cancer Institute (NCI) revealed a significantly higher rate of bone cancer in young men in fluoridated versus unfluoridated areas (Hoover 1991). While the NCI concluded that fluoridation was not the cause, no explanation was provided to explain the higher rates in the fluoridated areas. A smaller study from New Jersey (Cohn 1992) found bone cancer rates to be up to 6 times higher in young men living in fluoridated versus unfluoridated areas. Other epidemiological studies have failed to find this relationship (Mahoney 1991; Freni 1992).

28) Fluoride administered to animals at high doses wreaks havoc on the male reproductive system - it damages sperm and increases the rate of infertility in a number of different species (Kour 1980; Chinoy 1989; Chinoy 1991; Susheela 1991; Chinoy 1994; Kumar 1994; Narayana 1994a, b; Zhao 1995; Elbetieha 2000; Ghosh 2002 and Zakrzewska 2002). While studies conducted at the FDA have failed

to find reproductive effects in rats (Sperando 1996, 1997, 1998), an epidemiological study from the US has found increased rates of infertility among couples living in areas with 3 or more ppm fluoride in the water (Freni 1994), and 2 studies have found a reduced level of circulating testosterone in males living in high fluoride areas (Susheela 1996 and Barot 1998).

29) The fluoridation program has been very poorly monitored. There has never been a comprehensive analysis of the fluoride levels in the bones, blood, or urine of the American people or the citizens of other fluoridated countries. Based on the sparse data that has become available, however, it is increasingly evident that some people in the population – particularly people with kidney disease – are accumulating fluoride levels that have been associated with harm to both animals and humans, particularly harm to bone (see Connett 2004).

30) Once fluoride is put in the water it is impossible to control the dose each individual receives. This is because 1) some people (e.g. manual laborers, athletes, diabetics, and people with kidney disease) drink more water than others, and 2) we receive fluoride from sources other than the water supply. Other sources of fluoride include food and beverages processed with fluoridated water (Kiritsy 1996 and Heilman 1999), fluoridated dental products (Bentley 1999 and Levy 1999), mechanically deboned meat (Fein 2001), teas (Levy 1999), and pesticide residues on food (Stannard 1991 and Burgstahler 1997).

31) Fluoridation is unethical because individuals are not being asked for their informed consent prior to medication. This is standard practice for all medication, and one of the key reasons why most of western Europe has ruled against fluoridation (see appendix 2).

As one doctor aptly stated, "No physician in his right senses would prescribe for a person he has never met, whose medical history he does not know, a substance which is intended to create bodily change, with the advice: 'Take as much as you like, but you will take it for the rest of your life because some children suffer from tooth decay'." It is a preposterous notion."

32) While referenda are preferential to imposed policies from central government, it still leaves the problem of individual rights versus majority rule. Put another way – does a voter have the right to require that their neighbor ingest a certain medication (even if it's against that neighbor's will)?

33) Some individuals appear to be highly sensitive to fluoride as shown by case studies and double blind studies (Shea 1967, Waldbott 1978 and Moolenburt

1987). In one study, which lasted 13 years, Feltman and Kosel (1961) showed that about 1% of patients given 1 mg of fluoride each day developed negative reactions. Can we as a society force these people to ingest fluoride?

34) According to the Agency for Toxic Substances and Disease Registry (ATSDR 1993), and other researchers (Juncos & Donadio 1972; Marier & Rose 1977 and Johnson 1979), certain subsets of the population may be particularly vulnerable to fluoride's toxic effects; these include: the elderly, diabetics and people with poor kidney function. Again, can we in good conscience force these people to ingest fluoride on a daily basis for their entire lives?

35) Also vulnerable are those who suffer from malnutrition (e.g. calcium, magnesium, vitamin C, vitamin D and iodine deficiencies and protein poor diets) (Massler & Schour 1952; Marier & Rose 1977; Lin Fa-Fu 1991; Chen 1997; Teotia 1998). Those most likely to suffer from poor nutrition are the poor, who are precisely the people being targeted by new fluoridation programs. While being at heightened risk, poor families are less able to afford avoidance measures (e.g. bottled water or removal equipment).

36) Since dental decay is most concentrated in poor communities, we should be spending our efforts trying to increase the access to dental care for poor families. The real "Oral Health Crisis" that exists today in the United States, is not a lack of fluoride but poverty and lack of dental insurance. The Surgeon General has estimated that 80% of dentists in the US do not treat children on Medicaid.

37) Fluoridation has been found to be ineffective at preventing one of the most serious oral health problems facing poor children, namely, baby bottle tooth decay, otherwise known as early childhood caries (Barnes 1992 and Shiboski 2003).

38) The early studies conducted in 1945 -1955 in the US, which helped to launch fluoridation, have been heavily criticized for their poor methodology and poor choice of control communities (De Stefano 1954; Sutton 1959, 1960 and 1996; Ziegelbecker 1970). According to Dr. Hubert Arnold, a statistician from the University of California at Davis, the early fluoridation trials "are especially rich in fallacies, improper design, invalid use of statistical methods, omissions of contrary data, and just plain muddleheadedness and hebetude." In 2000, the British Government's York Review could give no fluoridation trial a grade A classification – despite 50 years of research (McDonagh 2000, see Appendix 3 for commentary).

39) The US Public Health Service first endorsed fluoridation in 1950, before one single trial had been completed (McClure 1970)!

40) Since 1950, it has been found that fluorides do little to prevent pit and fissure tooth decay, a fact that even the dental community has acknowledged (Sehollé 1984; Gray 1987; PHS 1993; and Pinkham 1999). This is significant because pit and fissure tooth decay represents up to 85% of the tooth decay experienced by children today (Sehollé 1984 and Gray 1987).

41) Despite the fact that we are exposed to far more fluoride today than we were in 1945 (when fluoridation began), the "optimal" fluoridation level is still 1 part per million, the same level deemed optimal in 1945! (Marier & Rose 1977; Levy 1999; Rozier 1999 and Fomon 2000).

42) The chemicals used to fluoridate water in the US are not pharmaceutical grade. Instead, they come from the wet scrubbing systems of the superphosphate fertilizer industry. These chemicals (90% of which are sodium fluorosilicate and fluorosilicic acid), are classified hazardous wastes contaminated with various impurities. Recent testing by the National Sanitation Foundation suggest that the levels of arsenic in these chemicals are relatively high (up to 1.6 ppb after dilution into public water) and of potential concern (NSF 2000 and Wang 2000).

43) These hazardous wastes have not been tested comprehensively. The chemical usually tested in animal studies is pharmaceutical grade sodium fluoride, not industrial grade fluorosilicic acid. The assumption being made is that by the time this waste product has been diluted, all the fluorosilicic acid will have been converted into free fluoride ion, and the other toxics and radioactive isotopes will be so dilute that they will not cause any harm, even with lifetime exposure. These assumptions have not been examined carefully by scientists independent of the fluoridation program.

44) Studies by Masters and Coplan (1999, 2000) show an association between the use of fluorosilicic acid (and its sodium salt) to fluoridate water and an increased uptake of lead into children's blood. Because of lead's acknowledged ability to damage the child's developing brain, this is a very serious finding yet it is being largely ignored by fluoridating countries.

45) Sodium fluoride is an extremely toxic substance – just 200 mg of fluoride ion is enough to kill a young child, and just 3-5 grams (e.g. a teaspoon) is enough to kill an adult. Both children (swallowing tablets/gels) and adults (accidents involving fluoridation equipment and filters on dialysis machines) have died from excess

exposure.

46) Some of the earliest opponents of fluoridation were biochemists and at least 14 Nobel Prize winners are among numerous scientists who have expressed their reservations about the practice of fluoridation (see appendix 4).

47) The recent Nobel Laureate in Medicine and Physiology, Dr. Arvid Carlsson (2000), was one of the leading opponents of fluoridation in Sweden, and part of the panel that recommended that the Swedish government reject the practice, which they did in 1971. According to Carlsson: "I am quite convinced that water fluoridation, in a not-too-distant future, will be consigned to medical history... Water fluoridation goes against leading principles of pharmacotherapy, which is progressing from a stereotyped medication – of the type 1 tablet 3 times a day – to a much more individualized therapy as regards both dosage and selection of drugs. The addition of drugs to the drinking water means exactly the opposite of an individualized therapy" (Carlsson 1978).

48) While pro-fluoridation officials continue to promote fluoridation with undiminished fervor, they cannot defend the practice in open public debate – even when challenged to do so by organizations such as the Association for Science in the Public Interest, the American College of Toxicology, or the US Environmental Protection Agency (Bryson 2004). According to Dr. Michael Easley, a prominent lobbyist for fluoridation in the US, "Debates give the illusion that a scientific controversy exists when no credible people support the fluorophobics' view" (See appendix 5).

In light of proponents' refusal to debate this issue, Dr. Edward Groth, a Senior Scientist at Consumers Union, observed that "the political profluoridation stance has evolved into a dogmatic, authoritarian, essentially antiscientific posture, one that discourages open debate of scientific issues" (Martin 1991).

49) Many scientists, doctors and dentists who have spoken out publicly on this issue have been subjected to censorship and intimidation (Martin 1991). Most recently, Dr. Phyllis Mullenix was fired from her position as Chair of Toxicology at Forsythe Dental Center for publishing her findings on fluoride and the brain; and Dr. William Marcus was fired from the EPA for questioning the government's handling of the NTP's fluoride-cancer study (Bryson 2004). Tactics like this would not be necessary if those promoting fluoridation were on secure scientific ground.

50) The Union representing the scientists at US EPA headquarters in Washington DC is now on record as opposing water fluorida-

tion (Hirzy 1999). According to the Union's Senior Vice President, Dr. William Hirzy: "In summary, we hold that fluoridation is an unreasonable risk. That is, the toxicity of fluoride is so great and the purported benefits associated with it are so small – if there are any at all – that requiring every man, woman and child in America to ingest it borders on criminal behavior on the part of governments."

Conclusion

When it comes to controversies surrounding toxic chemicals, vested interests traditionally do their very best to discount animal studies and quibble with epidemiological findings. In the past, political pressures have led government agencies to drag their feet on regulating asbestos, benzene, DDT, PCBs, tetraethyl lead, tobacco and dioxins. With fluoridation we have had a fifty year delay. Unfortunately, because government officials have put so much of their credibility on the line defending fluoridation, and because of the huge liabilities waiting in the wings if they admit that fluoridation has caused an increase in hip fracture, arthritis, bone cancer, brain disorders or thyroid problems, it will be very difficult for them to speak honestly and openly about the issue. But they must, not only to protect millions of people from unnecessary harm, but to protect the notion that, at its core, public health policy must be based on sound science not political expediency.

They have a tool with which to do this: it's called the Precautionary Principle. Simply put, this says: if in doubt leave it out. This is what most European countries have done and their children's teeth have not suffered, while their public's trust has been strengthened.

It is like a question from a Kafka play. Just how much doubt is needed on just one of the health concerns identified above, to override a benefit, which when quantified in the largest survey ever conducted in the US, amounts to less than one tooth surface (out of 128) in a child's mouth?

For those who would call for further studies, I say fine. Take the fluoride out of the water first and then conduct all the studies you want. This folly must end without further delay.

Postscript

Further arguments against fluoridation, can be viewed at <http://www.fluoridealert.org>. Arguments for fluoridation can be found at <http://www.ada.org> and a more systematic presentation of fluoride's toxic effects can be found at <http://www.Siweb.org/bibliography.html>

APPENDIX 1. World Health Organization Data

DMFT (Decayed, Missing & Filled teeth) Status for 12 year olds by Country, MFT's Year Status*

Australia 0.8 1998 More than 50% of water is fluoridated
Zurich, Switzerland 0.84 1998 Water is unfluoridated, but salt is fluoridated
Netherlands 0.9 1992-93 No water fluoridation or salt fluoridation
Sweden 0.9 1999 No water fluoridation or salt fluoridation
Denmark 0.9 2001 No water fluoridation or salt fluoridation
UK (England & Wales) 0.9 1996-97 11% of water supplies are fluoridated
Ireland 1.1 1997 More than 50% of water is fluoridated
Finland 1.1 1997 No water fluoridation or salt fluoridation
Germany 1.2 2000 No water fluoridation, but salt fluoridation is common
US 1.4 1988-91 More than 50% of water is fluoridated
Norway 1.5 1998 No water fluoridation or salt fluoridation
Iceland 1.5 1996 No water fluoridation or salt fluoridation
New Zealand 1.5 1993 More than 50% of water is fluoridated
Belgium 1.6 1998 No water fluoridation, but salt fluoridation is common
Austria 1.7 1997 No water fluoridation, but salt fluoridation is common
France 1.9 1998 No water fluoridation, but salt fluoridation is common
Data from WHO Oral Health Country/Area Profile Programme Department of Noncommunicable Diseases Surveillance/Oral Health WHO Collaborating Centre, Malmö University, Sweden <http://www.whocollab.od.mah.se/euro.html>

APPENDIX 2. Statements on fluoridation by governmental officials from several countries

Germany: "Generally, in Germany fluoridation of drinking water is forbidden. The relevant German law allows exceptions to the fluoridation ban on application. The argumentation of the Federal Ministry of Health against a general permission of fluoridation of drinking water is the problematic nature of compulsory medication." (Gerda Hankel-Khan, Embassy of Federal Republic of Germany, September 16, 1999). www.fluoridealert.org/germany.jpeg
France: "Fluoride chemicals are not included in the list [of "chemicals for drinking water treatment"]. This is due to ethical as well as medical considerations." (Louis Sanchez, Directeur de la Protection de l'Environnement, August 25, 2000).

Belgium: "This water treatment has never been of use in Belgium and will never be (we hope so) into the future. The main reason for that is the fundamental position of the drinking water sector that it is not its task to deliver medicinal treatment to people. This is the sole responsibility of health services." (Chr. Legros, Directeur, Belgaqua, Brussels, Belgium, February 28, 2000).

Luxembourg: "Fluoride has never been added to the public water supplies in Luxembourg. In our views, the drinking water isn't the suitable way for medicinal treatment and that people needing an addition of fluoride can decide by their own to use the most appropriate way, like the intake of fluoride tablets, to cover their [daily] needs." (Jean-Marie

RIES, Head, Water Department, Administration De L'Environnement, May 3, 2000).

Finland: "We do not favor or recommend fluoridation of drinking water. There are better ways of providing the fluoride our teeth need." (Paavo Poteri, Acting Managing Director, Helsinki Water, Finland, February 7, 2000).

"Artificial fluoridation of drinking water supplies has been practiced in Finland only in one town, Kuopio, situated in eastern Finland and with a population of about 80,000 people (1.6% of the Finnish population). Fluoridation started in 1959 and finished in 1992 as a result of the resistance of local population. The most usual grounds for the resistance presented in this context were an individual's right to drinking water without additional chemicals used for the medication of limited population groups. A concept of "force-feeding" was also mentioned.

Drinking water fluoridation is not prohibited in Finland but no municipalities have turned out to be willing to practice it. Water suppliers, naturally, have always been against dosing of fluoride chemicals into water." (Leena Hiisvirta, M.Sc., Chief Engineer, Ministry of Social Affairs and Health, Finland, January 12, 1996.) www.fluoridealert.org/finland.jpeg
Denmark: "We are pleased to inform you that according to the Danish Ministry of Environment and Energy, toxic fluorides have never been added to the public water supplies. Consequently, no Danish city has ever been fluoridated." (Klaus Werner, Royal Danish Embassy, Washington DC, December 22, 1999). www.fluoridation.com/c-denmark.htm

Norway: "In Norway we had a rather intense discussion on this subject some 20 years ago, and the conclusion was that drinking water should not be fluoridated." (Truls Krogh & Toril Hofshagen, Folkehelse Statens institutt for folkeheise (National Institute of Public Health) Oslo, Norway, March 1, 2000). www.fluoridation.com/c-norway.htm

Sweden: "Drinking water fluoridation is not allowed in Sweden...New scientific documentation or changes in dental health situation that could alter the conclusions of the Commission have not been shown." (Gunnar Guzikowski, Chief Government Inspector, Livsmedels Verket - National Food Administration Drinking Water Division, Sweden, February 28, 2000). www.fluoridation.com/c-sweden.htm

Netherlands: "From the end of the 1960s until the beginning of the 1970s drinking water in various places in the Netherlands was fluoridated to prevent caries. However, in its judgement of 22 June 1973 in case No. 10683 (Budding and co. versus the City of Amsterdam) the Supreme Court (Hoge Raad) ruled there was no legal basis for fluoridation. After that judgement, amendment to the Water Supply Act was prepared to provide a legal basis for fluoridation. During the process it became clear that there was not enough support from Parlement [sic] for this amendment and the proposal was withdrawn." (Wilfred Reinhold, Legal Advisor, Directorate Drinking Water, Netherlands, January 15, 2000).

Northern Ireland: "The water supply in Northern Ireland has never been artificially fluoridated except in 2 small localities where fluoride was added to the water for about 30 years up to last year. Fluoridation ceased at these locations for operational reasons. At this time, there are no plans to commence fluoridation of water supplies in Northern Ireland." (C.J. Grimes, Department for Regional Development, Belfast, November 6, 2000).

Austria: "Toxic fluorides have never been added to the public water supplies in Austria." (M. Eisenhut, Head of Water Department, Österreichische Vereinigung für das Gas- und Wasserfach Schuberting 14, A-1015 Wien, Austria, February 17, 2000).

Czech Republic: "Since 1993, drinking water has not been treated with fluoride in public water supplies throughout the Czech Republic. Although fluoridation of drinking water has not actually been proscribed it is not under consideration because this form of supplementation is considered as follows:

- (a) uneconomical (only 0.54% of water suitable for drinking is used as such; the remainder is employed for hygiene etc. Furthermore, an increasing amount of consumers (particularly children) are using bottled water for drinking (underground water usually with fluor)
- (b) unecological (environmental load by a foreign substance)
- (c) unethical ("forced medication")
- (d) toxicologically and physiologically debatable (fluoridation represents an untargeted form of supplementation which disregards actual individual intake and requirements and may lead to excessive health-threatening intake in certain population groups; [and] complexation of fluor in water into non biological active forms of fluor." (Dr. B. Havlik, Ministerstvo Zdravotnictvi Ceske Republiky, October 14, 1999).

APPENDIX 3. Statement of Douglas Carnall, Associate Editor of the *British Medical Journal*, published on the *BMJ* website (<http://www.bmj.com>) on the day that they published the York Review on Fluoridation.

See this review on the web at <http://bmj.bmjjournals.com/cgi/content/full/321/7265/904/a>
British Medical Journal, October 7, 2000, Reviews, Website of the week: Water fluoridation
Fluoridation was a controversial topic even before Kubrick's *Base Commander Ripper* railed against "the international communist conspiracy to sap and impurify all of our precious bodily fluids" in the 1964 film *Dr Strangelove*. This week's *BMJ* shouldn't precipitate a global holocaust, but it does seem that *Base Commander Ripper* may have had a point. The systematic review published this week (p 855) shows that much of the evidence for fluoridation was derived from low quality studies, that its benefits may have been overstated, and that the risk to benefit ratio for the development of the commonest side effect (dental fluorosis, or mottling of the teeth) is rather high.

Supplementary materials are available on the *BMJ*'s website and on that of the review's authors, enhancing the validity of the conclusions through transparency of process. For example, the "frequently asked questions" page of the site explains who comprised the advisory panel and how they were chosen ("balanced to include those for and against, as well as those who are neutral"), and the site includes the minutes of their meetings. You can also pick up all 279 references in Word97 format, and tables of data in PDF. Such transparency is admirable and can only encourage rationality of debate. Professionals who propose compulsory preventive measures for a whole population have a different weight of responsibility on their shoulders than those who respond to the requests of individuals for help. Previously neutral on the issue, I am now persuaded by the arguments that those who wish to take fluoride (like me) had better get it from toothpaste rather than the water supply...

— Douglas Carnall, Associate Editor
British Medical Journal

APPENDIX 4. List of 14 Nobel Prize winners who have opposed or expressed reservations about fluoridation.

- 1) Adolf Butenandt (Chemistry, 1939)
- 2) Arvid Carlsson (Medicine, 2000)
- 3) Hans von Euler-Chelpin (Chemistry, 1929).
- 4) Walter Rudolf Hess (Medicine, 1949)

- 5) Corneille Jean-François Heymans (Medicine, 1938)
- 6) Sir Cyril Norman Hinshelwood (Chemistry, 1956)
- 7) Joshua Lederberg (Medicine, 1958)
- 8) William P. Murphy (Medicine, 1934)
- 8) Giulio Natta (1963 Nobel Prize in Chemistry)
- 10) Sir Robert Robinson (Chemistry, 1947)
- 11) Nikolai Semenov (Chemistry, 1956)
- 12) James B. Sumner (Chemistry, 1946)
- 13) Hugo Theorell (Medicine, 1955)
- 14) Artturi Virtanen (Chemistry, 1945)

APPENDIX 5. Quotes on debating fluoridation from Dr. Michael Easley, Director of the National Center for Fluoridation Policy and Research, and one of the most active proponents of fluoridation in the US (Easley 1999). Easley's quotes typify the historic contempt that proponents have had to scientific debate.

"A favorite tactic of the fluorophobics is to argue for a debate so that 'the people can decide who is right.' Proponents of fluoride are often trapped into consenting to public debates."

"Debates give the illusion that a scientific controversy exists when no credible people support the fluorophobics' view."

"Like parasites, opponents steal undeserved credibility just by sharing the stage with respected scientists who are there to defend fluoridation"; and, "Unfortunately, a most flagrant abuse of the public trust occasionally occurs when a physician or a dentist, for whatever personal reason, uses their professional standing in the community to argue against fluoridation, a clear violation of professional ethics, the principles of science and community standards of practice."

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The 19 studies on the possible association of hip fracture and fluoridated-water

a) Studies Reporting an Association between fluoridated water (1 ppm fluoride) & hip fracture.

1 a) Cooper C, et al. (1990). Water fluoride concentration and fracture of the proximal femur. *Journal of Epidemiology and Community Health* 44: 17-19.

1 b) Cooper C, et al. (1991). Water fluoridation and hip fracture. *JAMA* 266: 513-514 (letter, a reanalysis of data presented in 1990 paper).

2) Danielson C, et al. (1992). Hip fractures and fluo-

ridation in Utah's elderly population. *Journal of the American Medical Association* 268: 746-748.

3) Hegmann KT, et al. (2000). The Effects of Fluoridation on Degenerative Joint Disease (DJD) and Hip Fractures. Abstract #71, of the 33rd Annual Meeting of the Society For Epidemiological research, June 15-17, 2000. Published in a *Supplement of American Journal of Epidemiology* P. S18.

4) Jacobsen SJ, et al. (1992). The association between water fluoridation and hip fracture among white women and men aged 65 years and older; a national ecologic study. *Annals of Epidemiology* 2: 617-626.

5) Jacobsen SJ, et al. (1990). Regional variation in the incidence of hip fracture: US white women aged 65 years and older. *JAMA* 264(4): 500-2.

6 a) Jacqmin-Gadda H, et al. (1995). Fluorine concentration in drinking water and fractures in the elderly. *JAMA* 273: 775-776 (letter).

6 b) Jacqmin-Gadda H, et al. (1998). Risk factors for fractures in the elderly. *Epidemiology* 9(4): 417-423. (An elaboration of the 1995 study referred to in the JAMA letter).

7) Keller C. (1991) Fluorides in drinking water. Unpublished results. Discussed in Gordon, S.L. and Corbin, S.B.(1992) Summary of Workshop on Drinking Water Fluoride Influence on Hip Fracture on Bone Health. *Osteoporosis International* 2: 109-117.

8) Kurtio P, et al. (1999). Exposure to natural fluoride in well water and hip fracture: A cohort analysis in Finland. *American Journal of Epidemiology* 150(8): 817-824.

9) May DS, Wilson MG. (1992). Hip fractures in relation to water fluoridation: an ecologic analysis. Unpublished data, discussed in Gordon SL, and Corbin SB. (1992). Summary of Workshop on Drinking Water Fluoride Influence on Hip Fracture on Bone Health. *Osteoporosis International* 2:109-117.

b) Studies reporting an association between water-fluoride levels higher than fluoridated water (4 ppm+) & hip fracture.

Li Y, et al. (2001). Effect of long-term exposure to fluoride in drinking water on risks of bone fractures. *Journal of Bone and Mineral Research* 16: 932-9.

Sowers M, et al. (1991). A prospective study of bone mineral content and fracture in communities with differential fluoride exposure. *American Journal of Epidemiology* 133: 649-660.

c) Studies Reporting No Association between water fluoride & hip fracture: (Note that in 4 of these 8 studies, an association was actually found between fluoride and some form of fracture – e.g. wrist and hip. See notes and quotes below.)

Cautley J, et al. (1995). Effects of fluoridated drinking water on bone mass and fractures: the study of osteoporotic fractures. *Journal of Bone and Mineral Research* 10: 1076-86.

Feskanich D, et al. (1998). Use of toenail fluoride levels as an indicator for the risk of hip and forearm fractures in women. *Epidemiology* 9: 412-6.

While this study didn't find an association between water fluoride and hip fracture, it did find an association – albeit non-significant 1.6 (0.8-3.1) – between fluoride exposure and elevated rates

of forearm fracture.

Hillier S, et al. (2000). Fluoride in drinking water and risk of hip fracture in the UK: a case control study. *The Lancet* 335: 265-2690.

Jacobsen SJ, et al. (1993). Hip Fracture Incidence Before and After the Fluoridation of the Public Water Supply, Rochester, Minnesota. *American Journal of Public Health* 83: 743-745.

Karagas MR, et al. (1996). Patterns of Fracture among the United States Elderly: Geographic and Fluoride Effects. *Annals of Epidemiology* 6: 209-216.

As with Feskanich (1998) this study didn't find an association between fluoridation & hip fracture, but it did find an association between fluoridation and distal forearm fracture, as well as proximal humerus fracture. "Independent of geographic effects, men in fluoridated areas had modestly higher rates of fractures of the distal forearm and proximal humerus than did men in nonfluoridated areas."

Lehmann R, et al. (1998). Drinking Water Fluoridation: Bone Mineral Density and Hip Fracture Incidence. *Bone* 22: 273-278.

Phipps KR, et al. (2000). Community water fluoridation, bone mineral density and fractures: prospective study of effects in older women. *British Medical Journal* 321: 860-4.

As with Feskanich (1998) and Karagas (1996), this study didn't find an association between water fluoride & hip fracture, but it did find an association between water fluoride and other types of fracture – in this case, wrist fracture. "There was a non-significant trend toward an increased risk of wrist fracture."

Suarez-Almazor M, et al. (1993). The fluoridation of drinking water and hip fracture hospitalization rates in two Canadian communities. *American Journal of Public Health* 83: 689-693.

While the authors of this study conclude there is no association between fluoridation and hip fracture, their own data reveals a statistically significant increase in hip fracture for men living in the fluoridated area. According to the authors, "although a statistically significant increase in the risk of hip fracture was observed among Edmonton men, this increase was relatively small (RR=1.12)."

Fluoride Action Network: fluoridealert.org

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**Fluoridation Action
Network
of New Zealand**

<http://www.fannz.org.nz/>

15 Facts Most People Don't Know About Fluoride

By Dr. Marianna Pochelli
March 13, 2014

Advocates of fluoride say its use in municipal water systems poses no adverse health concerns, however results from investigations clearly state the opposite. There has been considerable research done on fluoride regarding cancer, birth defects, and risks to the respiratory, gastrointestinal, and urinary systems, however, very little has been done on its neurological effects. There are now serious facts and health risks regarding fluoridation which can no longer be ignored and the practice itself is being questioned by most of the world.

1. Fluoride Is A Carcinogen

Fluoride was found to be an equivocal carcinogen by the National Cancer Institute Toxicological Program.[1]

Further studies by the New Jersey Department of Health have now confirmed a 6.9 fold increase in bone cancer in young males.[2]

Earlier studies had found a 5% increase in all types of cancers in fluoridated communities.[3]

"In point of fact, fluoride causes more human cancer death, and causes it faster than any other chemical," stated Dr. Dean Burk PhD who spent over three decades with the national cancer institute.

Researchers suspect a connection to cancer because half of ingested fluoride is deposited in bones, and fluoride stimulates growth in the end of bones, where osteosarcoma often occurs.

2. Most Developed Countries Do Not Fluoridate Their Water

Most developed nations do not fluoridate their water. In western Europe, for example, only 3% of the population consumes fluoridated water. Only 11 countries in the world have more than 50% of their population drinking fluoridated water: Australia (80%), Brunei (95%); Chile (70%), Guyana (62%), Hong Kong (100%), the Irish

Republic (73%), Israel (70%), Malaysia (75%), New Zealand (62%), Singapore (100%), and the United States (64%). In total, 377,655,000 million people worldwide drink artificially fluoridated water. This represents 5% of the world's population.

3. Fluoride Increases Hip Fractures

Drinking fluoridated water will double the number of hip fractures for both older men and women.[4, 5]

Extremely low levels of water fluoridation 0.1 ppm still produced statistically significant increased hip fractures. (Bordeaux Study JAMA 1994)

4. Fluoridated Countries Do Not Have Less Tooth Decay Than Non-Fluoridated Countries

According to the World Health Organization (WHO), there is no discernible difference in tooth decay between developed countries that fluoridate their water and those that do not. The decline in tooth decay the US has experienced over the last 60 years, which is often attributed to fluoridated water, has likewise occurred in all developed countries (most of which do not fluoridate their water).

What the CDC always fails to mention is that tooth decay rates have "precipitously declined" in all western countries, irrespective of whether the country ever fluoridated its water. Indeed, most western countries do not fluoridate their water and yet their tooth decay rates have declined at the same rate as the U.S. and other fluoridated countries.

No correlation was found between the level of fluoride in water and dental caries.[7, 8, 9, 10, 11] There also appears to be a genetically-related increase in tooth decay for Hispanics, Indians, Native Americans and Asians. Decay is largely related to the educational and economic level of the parents. [12]



5. Fluoridated Water Affects IQ and Neurobehavioral Development in Children

Although fluoride has been proven to cause neurotoxicity in animal models, very little published research has elaborated on acute fluoride poisoning and neurotoxicity in adults and children. A study published in the June 2011 issue of *Neurologia* (Jimenez, et al.) reported neurotoxic effects of fluoride.

Researchers Anna L. Choi, Guifan Sun, Ying Zhang and Philippe Grandjean researched the MEDLINE, EMBASE, Water Resources Abstracts, and TOXNET databases through 2011 for eligible studies and published their findings in *Environmental Health Perspectives*. The standardized weighted mean difference in IQ score between exposed and reference populations showed that populations in high fluoride areas had significantly lower IQ scores than those who lived in low fluoride areas.

6. Fluoride Increases Infertility

Infertility in women was found to increase with water fluoridation.

Food and Drug Administration (FDA) scientists reported a close correlation between decreasing total fertility rates in women between ages of 10 and 49, and increasing fluoride levels.

They also reported that a review of all of the animal studies done to date shows that fluoride adversely affects fertility in most animal species.[6]

7. Fluoridation is Not a "Natural" Process and Fluoride is NOT A NUTRIENT

Fluoride is naturally occurring in some areas, leading to high levels in certain water supplies "naturally." Fluoridation advocates often use this fact to support its safety, however naturally occurring substances are not automatically safe (think of arsenic, for instance).

Further, the fluoride added to most water

supplies is not the naturally occurring variety but rather fluorosilicic acid, which is captured in air pollution control devices of the phosphate fertilizer industry. As FAN reported:

"This captured fluoride acid is the most contaminated chemical added to public water supplies, and may impose additional risks to those presented by natural fluorides. These risks include a possible cancer hazard from the acid's elevated arsenic content, and a possible neurotoxic hazard from the acid's ability – under some conditions – to increase the erosion of lead from old pipes."

The term "fluoride supplement" is a misnomer as it implies that the product is a dietary supplement, like calcium and other nutrients. Fluoride, however, is not a nutrient. A nutrient is something the body has a physiological demand for – they're not optional; we need them.

The term "fluoride supplement" is also a misnomer because most dietary supplements can be purchased over the counter (i.e., without a prescription). Fluoride supplements, however, cannot be purchased over the counter; they are only available by prescription from either a licensed dentist or doctor.

8. Fluoride Increases Fluorosis

Fluorosis is a defect of tooth enamel caused by too much fluoride intake during the first eight years of life. Opaque white spots and brown ugly teeth are caused by fluoride. Fluorosis currently affects one out of five or more children in this nation although it is rarely seen in California.

California is the least fluoridated state with less than 16% of the population drinking artificially fluoridated water. Common causes of fluorosis include: fluoridated drinking water (particularly during infancy), ingestion of fluoride toothpaste, use of fluoride tablets, and consumption of processed foods made with fluoridated water.

9. Fluoride Calcifies The Pineal Gland

A British researcher found that the cells in the pineal gland (a gland that contains calcified deposits that accumulate fluoride) were just as susceptible to fluoride-induced toxicity as the tooth-forming cells. Unlike the teeth, however, the pineal gland cannot be seen by the naked eye. As noted by the researcher, "The safety of the use of fluorides ultimately rests on the assumption that the developing enamel organ is most sensitive to the

this study suggest that the pinealocytes may be as susceptible to fluoride as the developing enamel organ." The pineal controls your inner clock, provides good sleep, works with your adrenal glands to handle stress, keeps the thymus gland fed and cared for, and communicates 24/7 with the rest of the endocrine system about how things are going.

10. Fluoride Is NOT APPROVED By The FDA

As the FDA has long recognized, fluoride is not necessary to human health or development. When used to prevent disease, therefore, the FDA considers fluoride to be a drug.

- FDA has never approved a fluoride supplement as safe and effective.
- FDA has rejected two fluoride supplements (Enziflur and prenatal fluoride)
- FDA gave false information to Congress in 2000 by stating FDA "never rejected" a fluoride supplement.

11. Fluoride Is Highly Toxic, Yet It Is The Drug Added To Public Water

Fluoride is added to drinking water to prevent a disease (tooth decay), and as such becomes a medicine by FDA definition. While proponents claim this is no different than adding vitamin D to milk, fluoride is not an essential nutrient. Many European nations have rejected fluoride for the very reason that delivering medication via the water supply would be inappropriate. Water fluoridation is a form of mass medication that denies you the right to informed consent.

The International Academy of Oral Medicine and Toxicology has classified Fluoride as an unapproved dental medicament due to its high toxicity.

12. Most People Are Overexposed to Fluoride Due To The Pesticide Cryolite Found Grape Products

Many juice drinks that are not labeled as "grape juice" use grape juice as a filler ingredient. "White grape juice" made in the USA is a particular risk. The use of the fluoride-containing pesticide cryolite thus contaminates many juices with fluoride.

Cryolite is also allowed to be added to the following products (although it is unclear how many producers actually do so, and what the resulting fluoride levels are):

Apricot, Broccoli, Brussels Sprout, Cab-

Eggplant, Kale, Kiwifruit, Kohlrabi, Lettuce, Melon, Nectarine, Peach, Pepper, Plum, Pumpkin, Squash (summer and winter), Tomato, and a number of Berries (Blackberry, Blueberry (huckleberry), Boysenberry, Cranberry, Dewberry, Loganberry, Raspberry, Strawberry, Youngberry).

The key way to avoid exposure to fluoride from cryolite is to avoid buying non-organic grape products, particularly beverages made out of white grapes.

13. USDA Organic Has Allowed Fluoride To Contaminate The Organic Label

Fluoride is a persistent and non-degradable poison that accumulates in soil, plants, wildlife, and humans. Many organic farmers may be unaware that this highly toxic substance has been allowed for use in the National Organic Standards and is also included in US EPA List 4 Inerts ("Inerts generally regarded as safe, i.e., corn cobs and cookie crumbs," according to EPA.)

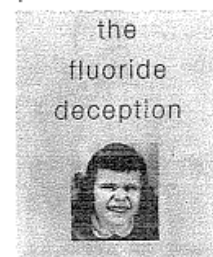
14. Fluoride Is Linked To The Leading Cause of Death

Depending on the country, cardiovascular disease is typically either the number one or two cause of death. A study published in *Nuclear Medicine Communications Journal* has concluded that increased uptake of fluoride in arteries may be associated with an increased cardiovascular risk.

15. Most Teas At Grocery Retailers Contain Toxic Levels of Fluoride

Drinking cheaper tea blends found at major grocery retailers can increase the level of people's fluoride intake to toxic levels and put them at increased risk of skeletal and dental illnesses, a University of Derby study found. The study is published in journal *Food Research International*.

SOURCE: <http://healthydebates.com/15-facts-people-dont-know-fluoride/>



Fluoride Now Linked to Neurotoxicity Pandemic and Development of the A-Bomb

By Christina Sarich
April 18, 2016

Researchers have named fluoride as one of the key causes of a "pandemic of developmental neurotoxicity" in a peer-reviewed paper. This adds to its nefarious history by linking the widely used chemical to the manufacture of the "A" bomb – yet, if you live in many parts of NZ, Australia, the USA or UK, your government is likely still adding fluoride to municipal water supplies.

Fluoride has been named as one of the industrial chemicals causing brain damage to hundreds of thousands of people around the world in an open access scientific review of data examining neuro-behavioral effects including autism, attention deficit hyperactivity disorder (ADHD), dyslexia, and other brain disorders – but this is just confirmation for what many have known for decades.

Fluoride was introduced into municipal drinking water in the 1940s as a "medical" necessity, but its purpose is far from what its promoters have detailed.

Dr. Phillippe Grandjean and Philip J. Landrigan, MD conclude in a paper published in the medical journal, the *Lancet*, that the root causes of the present global pandemic of neurodevelopmental disorders are hidden. They argue that genetic components of our health affect about 30 percent of the cases of neurological disarray, but unnamed environmental exposures are involved in causation, in some cases probably by interacting with genetically inherited predispositions. One of the chemicals which interfaces with our genes that they name is fluoride.

Just a few years ago, Harvard scientists also found that fluoride in very small amounts was lowering children's IQ scores – but when you see the recently declassified documents linking fluoride production to the A bomb, it will really make you question all the propaganda about fluoride being "good" for dental health.

The researchers who conducted the *Lancet* review of data on fluoride came to the conclusion that repeated doses of infinitesimal amounts of fluoride will in time cause slow brain damage, incrementally poisoning and narcotizing certain areas of the brain, causing a number of neurological impairments as fluoride and other chemicals bioaccumulate in the brain. Why, then was fluoride deemed safe for human consumption?

In documents only recently declassified, we also learn that one of the key ingredients for making the Atomic Bomb was fluoride – they needed millions of tons of the stuff.

Most of the "proof" that fluoride was safe for human consumption, even "good for people," was created by the scientists who helped create the A-bomb. They were ordered to provide "evidence useful in litigation" against defense contractors for fluoride injury to citizens. The first lawsuits against the U.S. A-bomb program were not over radiation, but over fluoride damage. You can see this for yourself in the Deepwater Documents.

Fluoride does not prevent cavities. It calcifies your pineal gland and causes major brain degeneration. <http://www.wakingtimes.com/2015/05/12/us-government-admits-americans-have-been-overdosed-on-fluoride/>

been-overdosed-on-fluoride/ Guess which modern day company was partly responsible for manufacturing all that fluoride which you are still drinking today? DuPont Chemical.

The first lawsuits concerning sodium fluoride were those filed by a group of farmers in southern New Jersey, whose peach orchards were destroyed, and whose animals were made sick, by heavy fluoride emissions from a nearby DuPont factory.

The FDA was even at one time planning on banning the sale of produce from the Deepwater area, because of the excessively high levels of fluoride found in the local fruit and vegetables. Farm workers who ate these fluoride-covered products became so sick they were up all night vomiting. Of course they never acted on it, and the myth of fluoridation being necessary is perpetuated to this day.

In a letter from the Director of the Manhattan Project, General Leslie Groves, explains the importance of the Deepwater lawsuit.

"WAR DEPARTMENT
P.O. BOX 2610
WASHINGTON, D.C.

February 18, 1946

Senator Brian McMahon, Chairman
Special Committee on Atomic Energy
United States Senate
Washington, D.C.

Dear Senator McMahon

I have your letter of 14 February 1946 with enclosures received from Mr. Willard B. Kille of Swedesboro, New Jersey.

The matter discussed in Mr. Kille's letter and in the attached papers has been under investigation by this office for several months as a result of twelve suits filed against du Pont Company by owners of peach orchards in South Jersey. The plaintiffs allege that poisonous gases from the du Pont and other plants in the area caused almost total destruction of their 1944 peach crop and permanent injury to their peach trees. The damage sought aggregate approximately \$400,000.

The Government is interested in the outcome of the suits mentioned above since a nearby plant of the du Pont Company is engaged in manufacturing certain basic materials [fluoride] for use in the Manhattan Project. If the plaintiffs succeed in establishing that all or part of the damage alleged was caused by the du Pont plants operating for the Manhattan Project, the Government would be required under its contract to reimburse that company for the amount of such recovery properly attributable to such operations. The firm of Samuel P. Sadtler, consulting chemists of Philadelphia, whose report was inclosed with Mr. Kille's letter, has been retained by the plaintiffs and will presumably submit expert testimony during the trial on their behalf.

The Department of Justice is cooperating in the defense of these suits. The Department of Agriculture, the Bureau of Standards, the Chemical Warfare Service and a group under Colonel Stafford Warren of this organization have been engaged in extensive investigations and experiments to determine the cause or causes behind the damage complained of. This work is not yet completed but it is hoped that the reports on these studies will be available in the very near future. I do not believe it would be of any value to your committee to have Mr. Kille appear before it.

I was represented at the meeting mentioned by Mr. Kille which was held on February 1, 1946 at Woodbury, New Jersey. I am

(Continued on next page)

(Continued from previous page)

keeping in close personal touch with the matter from day to day in order that I may be personally certain that while the Government's interests are protected no advantage is taken of any injured farmer.

If there is any additional information which you may desire and which is available to me I shall, of course, be very glad to furnish it. The enclosure with your letter are returned herewith.

Sincerely yours,

L.R. GROVES
Major General, USA.

4 Incls.:
1—Ltr dtd 2/6/46 to
Sen McMahon fr W.B. Kille
2—Statement of W.B. Kille (cpy)
3—Report of Fluorine by
S.P. Sadtler & Son, Inc. (cpy)
4—Ltr dtd 1/11/46 to Cong"

Now that a mainstream medical journal, along with Harvard Medical School is telling you the same thing about fluoride as declassified documents from one of the highest ranking government officials involved the Manhattan Project, do you believe you should still drink the water?

ABOUT THE AUTHOR

Christina Sarich is a writer, musician, yogi, and humanitarian with an expansive repertoire. Her thousands of articles can be found all over the Internet, and her insights also appear in magazines as diverse as Weston A. Price, *Nexus*, *Atlantis Rising*, and the Cuyamungue Institute, among others. She was recently a featured author in the Journal, *Wise Traditions in Food, Farming, and Healing Arts*, and her commentary on healing, ascension, and human potential inform a large body of the alternative news lexicon.

She has been invited to appear on numerous radio shows, including Health Conspiracy Radio, Dr. Gregory Smith's Show, and dozens more. The second edition of her book, *Pharma Sutra*, will be released soon.

SOURCE: <http://www.naturalblaze.com/2016/04/fluoride-now-linked-to-neurotoxicity-pandemic-and-development-of-the-a-bomb.html>

READ: 25 Studies Prove Fluoride Reduces Your IQ

<http://www.wakingtimes.com/2012/12/17/25-studies-prove-fluoride-reduces-your-iq/>

Ed note: Please visit the website of Fluoride Free NZ to learn about fluoridation in NZ. www.fluoridefree.org.nz

event, it should be noted that the previous

Given these facts, FNV should

Peer-reviewed medical journal officially classifies fluoride as a neurotoxin

By Arjun Walia
Collective-evolution.com
March 19, 2014

Fluoride awareness is really taking off, it's just another example of what we can do as one collective human race when we come together and create awareness on topics we all feel need more critical examination. Many don't consider information to be significant unless published in a peer-review journal. This simply isn't true; there is plenty of good information that has not been peer reviewed. It is also true that a lot of great independent research by experts goes through a review process only to be ignored by the mainstream.

A ground-breaking publication in one of the top main-stream medical journals has now added six additional substances into its classification of neurotoxins, and one of them is fluoride.⁽¹⁾ Fluoride is commonly used in dental products, and still remains as an additive in the drinking water supply of numerous communities all over the world. Although activism has been successful in removing it in many countries, many cities and communities remain fluoridated, for example, is Auckland and Wellington.

The publications abstract reads as follows:

"Neurodevelopmental disabilities, including autism, attention-deficit hyperactivity disorder, dyslexia and other cognitive impairments, affect millions of children worldwide, and some diagnoses seem to be increasing in frequency. Industrial chemicals that injure the developing brain are among the known causes for this rise in prevalence. In 2006, we did a systematic review and identified five industrial chemicals as developmental neurotoxins: lead, methyl mercury (common in vaccines), polychlorinated biphenyls, arsenic and toluene. Since 2006, epidemiological studies have documented six additional developmental neurotoxins – manganese, fluoride, chlorpyrifos, dichlorodiphenyltrichloroethane, tetrachloroethylene, and the polybrominated dihenyl ethers. We postulate that even more neurotoxins remain undiscovered. To control the pandemic of developmental neurotoxicity, we propose a global prevention strategy. Untested chemicals should not be presumed to be safe to brain development, and chemicals in existing use and all new chemicals must therefore be tested for developmental neurotoxicity. To coordinate these efforts and to accelerate translation of science into prevention, we propose the urgent formation of a new international clearinghouse"⁽¹⁾

It's quickly becoming a known fact that the fluoride in our drinking water is

harmful, it's not even the natural element of fluoride, it's industrial toxic waste. The publication cites research from the Harvard Medical School of Public Health that found links between fluoridated water, ADHD and mental disorders, you can read more about that here at this link <http://www.collective-evolution.com/2014/03/05/harvard-research-finds-link-between-fluoridated-water-adhd-mental-disorders/>.

There's a reason multiple countries and communities all over the world are putting an end to water fluoridation.

"In point of fact, fluoride causes more human cancer deaths than any other chemical. When you have power you don't have to tell the truth. That's a rule that's been working in this world for generations. There are a great many people who don't tell the truth when they are in power in administrative positions. Fluoride amounts to public murder on a grand scale. It is some of the most conclusive scientific and biological evidence that I have come across in my 50 years in the field of cancer research." (2) - Dr. Dean Burk, Biochemist, Founder of Biotin, and Former Chief Chemist at the National Cancer Institute of Health.

Reference: Neurobehavioural effects of developmental toxicity: thelancet.com/neurology Vol 13 March 2014 [PDF]

© fluoridealert.org



SEA CLEANERS



Mid February 23 – Mid May 23
QUARTERLY REPORT





Introduction

During this report period from mid-February 2023- mid-May 2023, the volume of litter recovered from Northland, Waitemata Harbour, Manukau Harbour, the Outer Limits of Auckland and Canterbury was **763,450** litres, 155,050 litres more than the last quarter. This was achieved with the help of **2,745** volunteer hours.

We spent a total of **3,348** hours removing rubbish from the shorelines, and preparing for and attending community events, vessel management and general day to day duties.

Since our clean-up inception during December 2002, we have recovered and removed over **15,388,562** litres of rubbish and have co-ordinated over **169,599** hours of volunteer support for the operation.

This is the enough collected marine litter to fill over **513** shipping containers. Over **25** shipping containers worth, collected every quarter now.







Report prepared by: ___Hayden Smith_____ Date: _26/5/2023_____

Reviewed by: ___Hayden's Harbour Clean Ltd_____

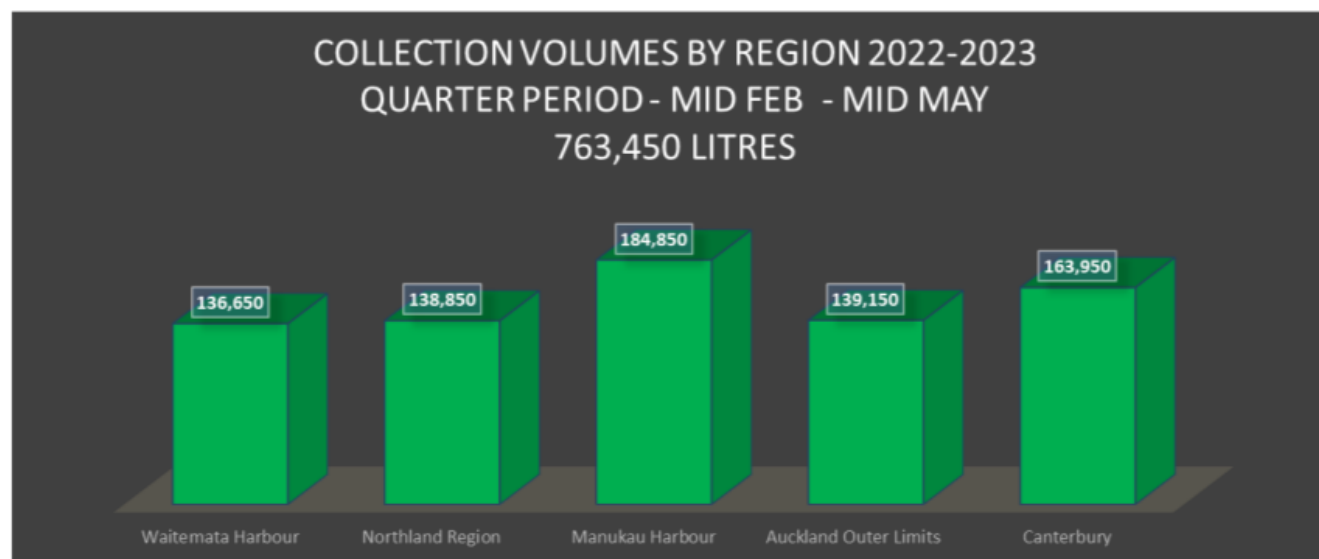
For period beginning: _14/02/2023_____ to _19/05/2023_____

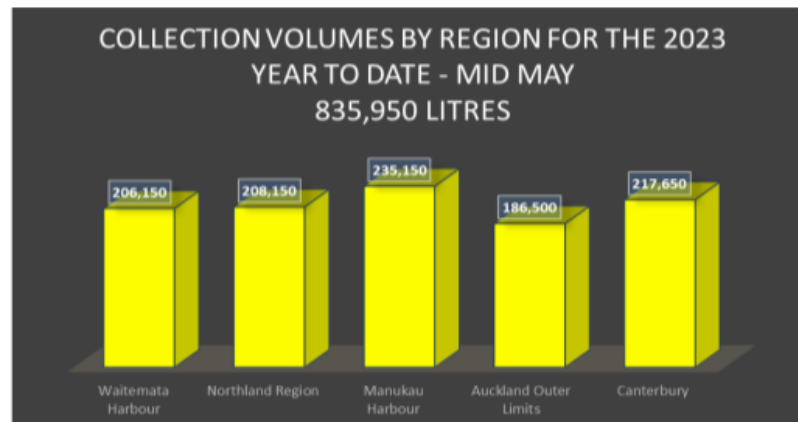
Specification Category	Measure	Results	
Northland Waitemata Manukau Auckland Outer Limits	Weekly record of time allocation by staff (hrs). Includes breakdown by activity type: <ul style="list-style-type: none"> Boat use Boat prep Event planning Meetings Media Liaison Reporting etc <i>Reporting = year to date</i>	<u>Time Allocation (Hours)</u>	
		Contracted Boat use hours:	2,580 Completed
		Boat Prep/Maintenance	1 hour total, prior to, & following use daily
		Event/ Volunteer Planning	40
		Meetings	80
		Media Liaison	8
		Report preparation	40
		Communications (general duty emails)	500
		Health & Safety / MNZ management	100
		Total Hours worked	3,348 Completed
	<ul style="list-style-type: none"> Logs available on request 	<ul style="list-style-type: none"> <i>Weekly logs attached in Appendix 1</i> 	

Specification Category	Measure	Results							
Litter Captured	Litter monitoring data		Waitemata	Northland	Manukau	Auckland Outer Limits	Canterbury	Other	Total
		Volume/litres period	136,650	138,850	184,850	139,150	163,950	0	763,450
		Volume since inception litres	6,674,050	2,628,320	3,368,262	2,283,280	225,650	209,000	15,388,562
		Hour's period	516	516	516	516	516	0	2,580
	Time	Volunteer hours - period	793	344	436	640	532	0	2,745
		Volunteer hours inception	130,868	10,837	9,815	11,890	562	5,587	167,284
		Reported Year to date							

Mid-February 2023 – Mid-May 23 Litter Collection Data Summary

- Monthly litter log (spread sheet) showing detailed information on litter volumes by area and city attached as Appendix I.





Specification Category	Measure	Results
Vessel Maintenance	Periodic Maintenance	General Maintenance Standard 100-hour engine services on vessels Winch and bilge pump maintenance across the fleet General trailer maintenance
	Extra Ordinary Maintenance	
Pollution Events (Oil, Effluent spills etc...)	Record of observed pollution events and call outs by pollution teams.	Total # of pollution events observed: 2 Total # of pollution events reported to Council: 2 Illegal Dumping's
Health and Safety	Annual health and safety report to the Trust including all incidents and accidents. AUDITS <i>Reporting = Year to date</i>	List total number of health and safety incidents occurring in this period: 0 Health and Safety. Protocol development for managing the safety of our team has been at the forefront of all our minds. This will continue as we move together into the future. Maritime NZ Audit completed. "Your operation continues to maintain a low risk profile" Ian Howden Senior Specialist Maritime Officer, Maritime New Zealand. Health & Safety/ Safe Ship Management, Hayden's Harbour Clean Ltd Internal Audit, Records updated No defects. System Safe, across all boats. Health and Safety briefing audio file on all boats for consistency of messaging by skippers

Vessels	Bobby Stafford-Bush II		Toroa		Bobby Stafford-Bush		Kakahi		Honu	
763,450										
Total Volume		138,850		136,650		184,850		139,150		163,950
Date	Northland Location	Northland Volume	Waitemata Location	Waitemata Volume	Manukau Location	Manukau Volume	Outer Limits Location	Outer Limits Volume	Canterbury Location	Canterbury Volume
14/02/2023	RUSSELL	2100	DAY OFF CYCLONE		DAY OFF CYCLONE		DAY OFF CYCLONE		RAKAI	4000
15/02/2023	HOREKE/PAHIA	5100	TE ATATU/WHAU RIVER	1500	MILFORD	1500	MILFORD	1500	TEKAPU	3000
16/02/2023	KARIKARI	1000	RANGITOTO/MOTOHU		CLENDON PARK	0	RANGITOTO	1200	WAIMAKARIRI	3000
17/02/2023	WAITANGI	5000	WAIHEKE	1000	MANGERE BRIDGE	1000	WAIHEKE	1500	AVON/HEATHCOTE	3000
20/02/2023	KENT PASSAGE	2100	HENDERSON RIVER	2500	PUHITU ISLAND	3000	HENDERSON	3000	LOTTE AKAROA/OKAINS BAY	1500
21/02/2023	WAITANGI	3000	WHAU RIVER	4000	PUHITU/CLENDON PARK	2500	MIRANDA	2200	LANDBASED	2000
22/02/2023	BAY OF ISLANDS	3000	WHAU RIVER	2000	CREW ON OUTER LIMITS	1500	TAKAKI RIVER	3000	BROOKLANDS/ASHLEY	1500
23/02/2023	KERIKERI	800	TEATATU/POLLEN ISLAND	4000		0	ROTOROA	1500	NORTHERN RIVERS/HAMNER	1000
24/02/2023	BAY OF ISLANDS	3200	WHAU RIVER	3000		0	STAFF AWAY	0	LYTTELTON/PORT LEVY	2500
27/02/2023	WHANGAREI	1900	WHAU RIVER	2000		0	STAFF AWAY	0	LE BONS BAY	550
28/02/2023	MARSDEN	1500	TAMAKI RIVER	1000		0	COROMANDEL	5500	BLIND BAY	2500
1/03/2023	MONTHLY CHECKS	0	MONTHLY CHECKS	0	AWHITU-AWHITU LANDCARE	8000	MONTHLY CHECKS	0	MONTHLY/AVONRIVER	550
2/03/2023	BAY OF ISLANDS	5000	RANGITOTO	1000		0	STAFF ON LEAVE	0	LYTTELTON INNER HARBOUR	2000
3/03/2023	OPITO BAY	2000	DAY OFF	0		0	STAFF ON LEAVE	0	LITTLE PIGEON BAY	2500
5/03/2023	WHANGAREI	3800	TAMAKI RIVER	3000		0	STAFF ON LEAVE	0	ASHBURTON	1500
6/03/2023	WHANGAREI	3100	TAMAKI RIVER/OTARA WARE	3000	PUHITU	3600	COROMANDEL	3500	PIGEON BAY	5500
7/03/2023	BAY OF ISLANDS	4100	RANGITOTO	1500	WEYMOUTH	1800	WAIHEKE	1800	LITTLE AKAROA	2100
8/03/2023	BAY OF ISLANDS	800	MILFORD/TAKAPUNA EASTERN BEACHES	4500	WAIKUKU	2300	PONUI	2300	SOUTHSHORE ESTUARY	5200
9/03/2023	WHANGAREI	1000		2000	TITIRANGI	400	WAIHEKE	400	PILE BAY	2000
11/03/2023	DAY OFF	0	HENDERSON CREEK	4000	HENDERSON	4000	DAY OFF	0	DAY OFF	0
13/03/2023	RUSSELL	2000	HURUHURU	2500	BSB REVIEW/UPDATE MOSS/LAUNCH	0	MOTUTAPU	200		0
14/03/2023	OPUA	0	WESTHAVEN/BOAT REPAIRS	250	BSB TRAINING	250	TANGI	200	DAY OFF	0
15/03/2023	OPUA	2700	WAIHEKE	1500	SPLIT WITH ALEX	1500	WAIHEKE	3000	CORSSAIR BAY	1500
16/03/2023	30 MILE	1000	HALF MOON BAY/HIGHBROOK	2000	HIGHBROOK	2000	WAIHEKE	2000	SAIL GP TRAINING	0
17/03/2023	KARIKARI	2000	ST MARYS BAY/WESTHAVEN VIADUCT	1000	WESTHAVEN	1000		0	SAIL GP RUN THROUGH	0
18/03/2023	DAY OFF	0	DAY OFF	0	DAY OFF	0	DAY OFF	0	SAIL GP	0
19/03/2023	DAY OFF	0	DAY OFF	0	DAY OFF	0	DAY OFF	0	SAIL GP	550
20/03/2023	HOREKE	1800	ORATIA STREAM	2000	HUA/LANGHOLM	1500	WAIHEKE	3000	DAY OFF	0
21/03/2023	TRACEY ON LEAVE	0	PARRS PARK/ORATIA STREAM	4000	PUHITU STREAM/WEYMOUTH	2000	MIRANDA	2000	AVON RIVER	2000
22/03/2023	TRACEY ON LEAVE	0	POLLEN ISLAND TEATATU	2000	ISLAND ROAD	5500	WAIHEKE	1000	WAIMAKARIRI	2500
23/03/2023	PAHI	2000	WHAU RIVER	3000	ISLAND ROAD/AIRPORT ROCK WALL	3000	WAIHEKE	3000	AVON RIVER	3000
24/03/2023	OPUA	2100	TAMAKI RIVER/OTARA WARE	5000	AIRPORT ROAD	3000	COROMANDEL	13000	LYTTELTON HARBOUR	3100
27/03/2023	MOVING VESSELS	0	WHAU RIVER	3500	WEYMOUTH/BOTTLE TOP BAY	2000	POINT VIEW SCHOOL	6000	PIGEON BAY	6000
28/03/2023	HOREKE	4000	TAMAKI RIVER	2500	BOTTLE TOP BAY/ONEHUNGA BEACH	3500	PONUI	3300	ASHLEY RIVER	1000
29/03/2023	WHANGAREI	2000	MILFORD	100	WHANGAREI TO SWAP VESSELS	0	MILFORD	1000	BROOKLANDS FLAT/BROOKLANDS	1000
30/03/2023	KERIKERI	2000	TAMAKI RIVER/MOTOHU	500	ONEHUNGA/LANGHOLM	1500	WAIHEKE	1500	SPENCERVILLE	3500
31/03/2023	OPUA	2000	GULF HARBOUR/STILL WATER/TIRI	1500	MAKO POINT/WEYMOUTH	2500	KAWAU	500	RAKAI RIVER	1500
2/04/2023	STAFF ON LEAVE	0	TAMAKI RIVER	2000	WEYMOUTH/AIRPORT ESTUARY	2000	WAIHEKE	1600	NEW BRIGHTON BEACH	2000
3/04/2023	WHANGAREI	2000	MONTHLY CHECKS	0	MONTHLY CHECKS	0	MONTHLY CHECKS	0	BROOKLANDS LAGOON	12000
4/04/2023	OPUA	2000	RANGITOTO	200	RANGITOTO	200	RANGITOTO	2200	BROOKLANDS LAGOON	10000
5/04/2023	TUTUKAKA	2000	POLLEN ISLAND	1500	COROMANDEL	1500	COROMANDEL	3750	WHITEHEAD BAY	2600
6/04/2023	POUTO/KAIPARA	2000	TAMAKI RIVER	2500	CLARKS BEACH/WAIKUKU	2000	OKAHA/WAIWERA	1500	MARINA/NAVAL POINT	1500
12/04/2023	WHANGAREI	5500	HENDERSON RIVER	3000	WAIKUKU	2000	WAIHEKE	1000	SPENCERVILLE	2000
13/04/2023	HOKIANGA	2000	TAMAKI RIVER	4000	ISLAND ROAD	9000	MIRANDA	2500	WAIMAKARIRI RIVER	2000
14/04/2023	WAITANGI	4000	KOTARE/HENDERSON MALL	6000	ISLAND ROAD	6000	PONUI	1500	WEST WAIMAKARIRI	2500
17/04/2023	WHANGAREI	2800	WORKED WITH OUTER LIMITS	0	WEYMOUTH/PUHITU	3000	KARITAHU	2000	NE WAIMAKARIRI	2000
18/04/2023	30 MILE BEACH	2000	POLLEN ISLAND/TEATATU/VIADUCT PORTS	2000	WAIKUKU CREEK/PUHITU	4000	WAIHEKE	1200	RAKAI	3000
19/04/2023	RUSSELL	4000	CORNWALLIS/ORATIA	1000	WAIKUKU CREEK	5000	WAIHEKE	0	KAIKOURA	500
20/04/2023	STAFF AWAY	0	RECON NAVY EVENT	300	ISLAND ROAD	2000	RECON NAVY EVENT	200	NE WAIMAKARIRI	2000
21/04/2023	STAFF AWAY	0	MANGERE	2000	RENTON RD	2000	MILFORD	3500	ASHLEY RIVER	2000
24/04/2023	STAFF AWAY	0	MIRANDA	1000	RENTON RD/WAIKUKU	4000	MIRANDA	2000	NORTH CANTERBURY RIVERS	2000
26/04/2023	HOKIANGA	2000	EAST TAMAMUKU/PT CHEV	4000	TE ARAROA TRAIL/WEYMOUTH	6000	EAST TAMAKI/PT CHEV	4000	SOUTHSHORE ESTURAY	1000
27/04/2023	GLINKS GULLY	200	SHELLY PARK WHITFORD	1500	IHUMATAO/RENTON RD	4500	STAFF AWAY	0	WAIMAKARIRI GORGE	2000
28/04/2023	WHANGAREI	2000	NAVY EVENT OTAHUHU	6000	TAMAKI RIVER	6000	NAVY EVENT OTAHUHU	6000	PIGEON BAY	1700
1/05/2023	KERIKERI	4000	MONTHLYS/CHINA TOWN		CHINA TOWN		CHINATOWN	1700	BLIND BAY	3000
2/05/2023	MONTHLY/WHANGAREI	1400	PUHITU RESERVE	3300	PUHITU RESERVE	3300	PUHITU RESERVE	3300	MOTULU BEACH	1000
3/05/2023	PICKING UP VESSEL	0	SKIPPER AWAY		ISLAND RD/RENTON RESERVE	6000	CHINATOWN	8000	WAIMAKARIRI BEACH	6000
4/05/2023	TUTUKAKA	2000	SKIPPER AWAY		VIADUCT/CHINATOWN	7000	ROSEBANK RD/PICKAPART	3000	WAIMAKARIRI BEACH	3800
5/05/2023	WAITANGI	1200	SKIPPER AWAY		PUKAKI CREEK	3000	ROSEBANK RDS	1700	SUMNER BEACH	1500
7/05/2023	TUTUKAKA	2000	SKIPPER AWAY		DEVONPORT/HOBSON BAY	1000	WITH MANUKAU CREW	0	DAY OFF	0
8/05/2023	KAIWAKAWA/OPUA RIVER	4000	ISLAND RD WEYMOUTH	2000	ISLAND RD WEYMOUTH	2000	HENDERSON CREEK	2400	DAY OFF	0
9/05/2023	KERIKERI	1000	OTAHUHU	1000	OTAHUHU	1000	CHINATOWN	4000	AVON RIVER	6000
10/05/2023	WHANGAREI	2000	VIADUCT/PORTS	2000	MANGERE BASIN	4000	MARATAI/CHINATOWN	3800	BROOKLANDS LAGOON	2000
11/05/2023	KOHUKOHU	2000	VIADUCT/WAIRAKA	2500	WAIKARAKA PARK	2500	PANMURE/TE ATATU	2400	NORTHERN CHCH	2000
12/05/2023	DAY OFF	0	DAY OFF	0	DAY OFF	0	DAY OFF	0	LYTTELTON HARBOUR	2000
13/05/2023	DAY OFF	0	DAY OFF	0	DAY OFF	0	DAY OFF	0	FERRYMEAD ESTUARY	3500
14/05/2023	DAY OFF	0	DAY OFF	0	DAY OFF	0	DAY OFF	0	DAY OFF	0
15/05/2023	WHANGAREI	2800	TAMAKI RIVER	4000	MANGERE BASIN	15000	CHINATOWN	8500	NE PENINSULA BANKS	2000
16/05/2023	WHANGAREI	2000	RANGITOTO/MOTUTAPU	2000	MANGERE BASIN	10000	MEOLA/PT CHEV	1700	MENZIES BAY	6000
17/05/2023	HOUHORA	3500	WAIHEKE	7000	MANGERE BASIN	6000	PORT WAIKATO	1800	OKAINS BAY	1800
18/05/2023	ARANGA BEACH	350	TAMAKI RIVER	2000	PUKAKI RIVER	3500	PAREMUKA STREAM	1300	AVON RIVER	2000
19/05/2023	KOHUKOHU	6000	LAND BASED WEST AKL/TOROA SERVICE	1500	TAKANINI	4000	LAND BASED WEST AKL	1500	WAIMAKARIRI RIVER	1000

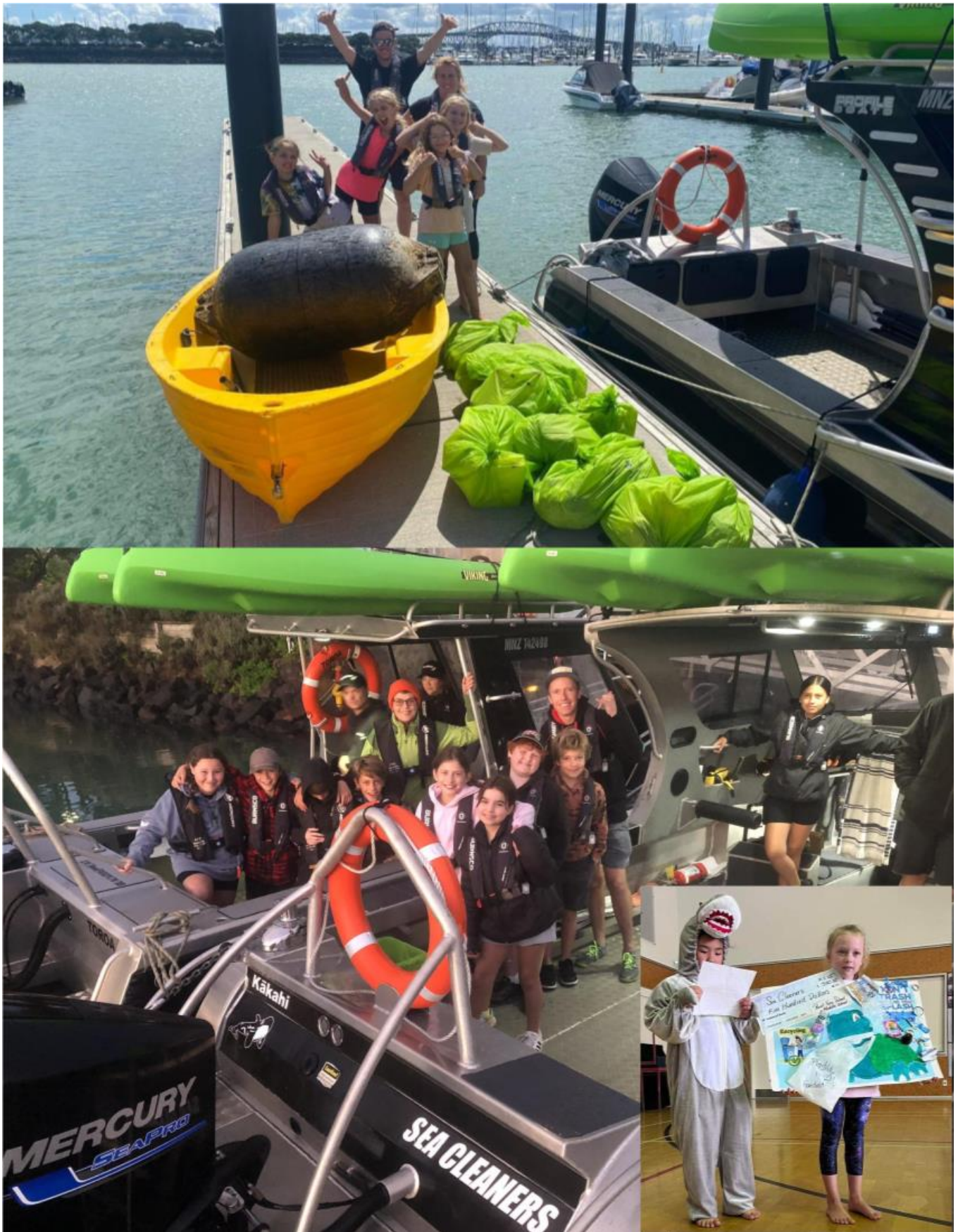
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Our Stories Project Trust

Our
Stories

“Connected communities are
happier, healthier, more productive
and resilient.”



Our Stories is a registered charity with a mission to connect communities through storytelling and to make local history accessible.

*Our
Stories*

Connecting communities through
storytelling.

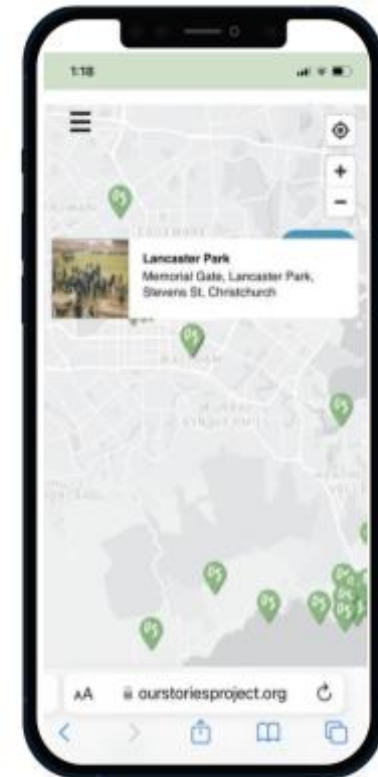
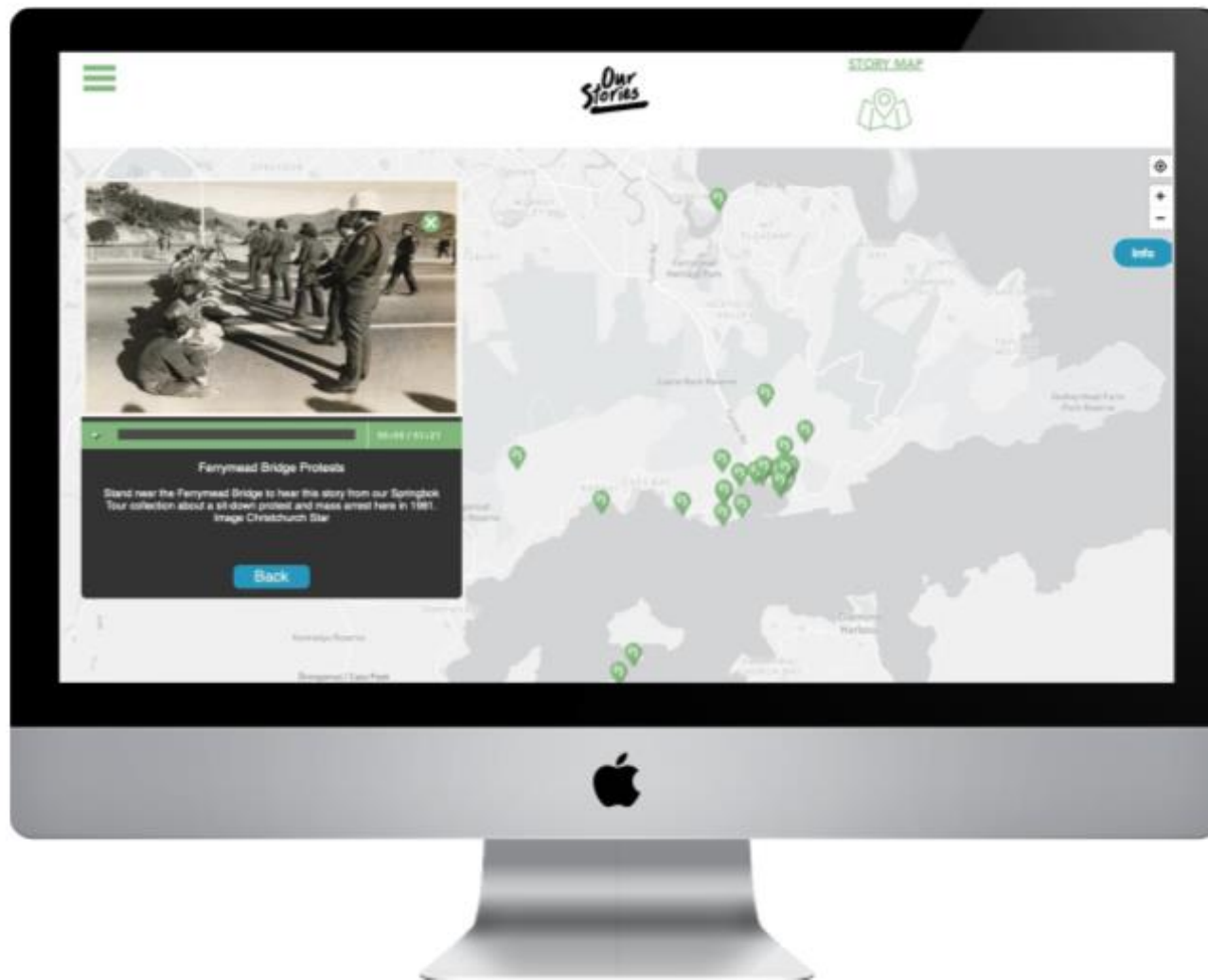
*Our
Stories*

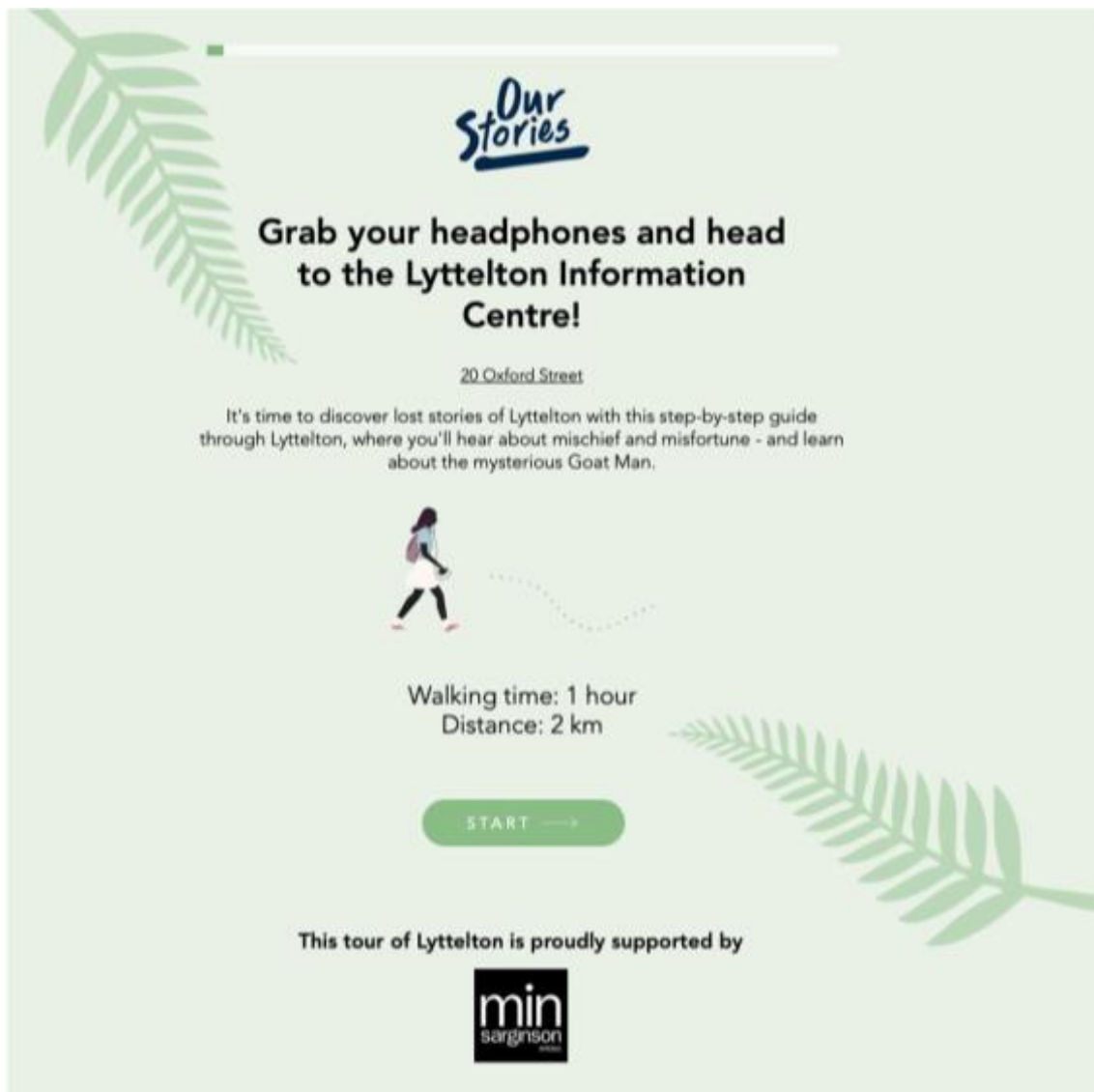
Making local history
accessible.

*Our
Stories*

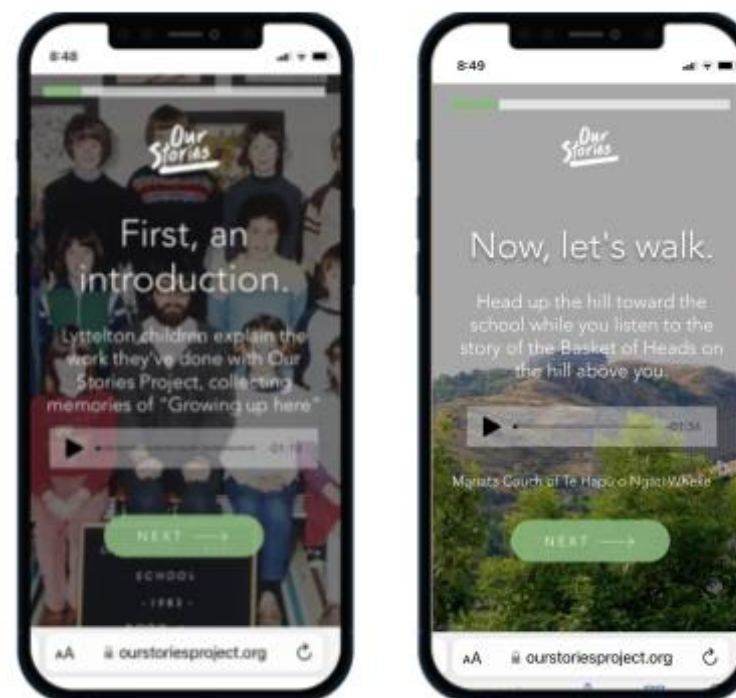
Making local history
accessible.







Self-guided audio walking tours bring the stories to life.



*Our
Stories*

“Connected communities are
happier, healthier, more productive
and resilient.”



Thank you.

kris@ourstoriesproject.org
www.ourstoriesproject.org

Community Patrols in Christchurch

WORKING WITH OTHERS TO KEEP OUR COMMUNITY SAFE

Who we are

- ▶ A group of volunteers trained to work closely with the police in pursuit of a common goal
- ▶ Part of a national organisation, CPNZ, which oversees the activities of all patrols
- ▶ In Christchurch, there are seven metro patrols-
 - Burwood-Pegasus
 - Christchurch North
 - Christchurch South
 - City Park
 - City to Sumner
 - Hornby
 - Riccarton
- ▶ The patrols have roughly designated areas and cooperate to best serve the community



What we do

- ▶ Carry out planned patrols seven days a week, acting as the 'eyes and ears' of the police
- ▶ Key functions-
 - Observe, record, report
 - Provide community assurance
 - Work with the police on crime reduction initiatives
- ▶ Assist at special events A & P Show
Festivals, Santa Parade
- ▶ Assist in emergencies









Towards a safer community

What patrols are able to do depends on a number of key factors

- ▶ Maintaining and growing the number of volunteers
- ▶ On going training
- ▶ Access to funding for vehicles, equipment, uniforms, running expenses
- ▶ A close relationship with key agencies

What would make the greatest difference

- ▶ Financial support
- ▶ Closer liaison with key players such as the council

The Canterbury Cancer Centre.



**MORE
PRECIOUS
THAN YOU
THINK**





**MORE
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THAN YOU
THINK**

**A place to go
is more precious
than you
think.**

Our Why

The Cancer Society Canterbury West-Coast division's mission is to lessen the impact of cancer within our communities locally here in Ōtautahi and across the South Island Te Wai Pounamu.

An estimated 9,000 people will visit or stay in the new Canterbury Cancer Centre each year.



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Background

- Former Cancer Society facilities were damaged in 2011 Christchurch earthquakes.
- Continued to provide services from leased premises and accommodation from former motels (Riccarton Rd & Papanui Rd).
- Growing need for support. 40% of Cantabrians are expected to develop cancer before age 74.
- Imperative to address inequities in cancer outcomes e.g. rural, Māori, Pasifika, low-income families



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We support all cancers.

The centre will be a place of support for people with any kind of cancer.



Cancer Society
Te Kāhui Matepukupuku o Aotearoa

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Breast

Other

Skin

Lung

Oesophageal

Gynaecological

Bladder

Head & Neck

Lymphoma

Myeloma

Colorectal

Stomach

Prostate

Brain

Leukaemia

Liver

Pancreatic

The new Canterbury Cancer Centre will offer:

- A new support hub available to everyone in Waitaha impacted by cancer
- A 'park and ride' service available for those needing easy access to cancer treatment
- Specialised day programmes, support groups and services such as psychosocial support, rongoā Māori, exercise rehabilitation, and oncology massage
- 50 accommodation rooms for patients and their whānau to stay in when they travel to Christchurch for cancer treatment
- Space for other cancer organisations and their teams to use as a base to provide their critical cancer services
- Culturally appropriate support for Māori and Pasifika



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The new and innovative Canterbury Cancer Centre has been designed to meet the community's changing needs for cancer care now and in the future.

Benefits

- Free cancer support services for Christchurch residents, helping alleviate pressure from the health system and ensuring comprehensive care for cancer patients and their whānau.
- More than 800 individual patients, plus their carers or family members, stay in our accommodation facilities each year. These patients and their families will support local businesses during their stay, which may be up to 5 weeks at a time.
- Volunteer driving service & shuttle service is highly valued by patients and clinicians reducing parking stress and congestion.
- Long-standing partnership with CCC on improving community health outcomes e.g. SunSmart, Smokefree, and Fresh Air Project.



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Our People

The Cancer Society Canterbury West Coast division relies heavily on our large volunteer base to provide the services we do. For every 1 paid staff member, we have 16 volunteers helping us deliver our free community-based services.

300 volunteer drivers commit their time to make sure patients have free transport to treatment; volunteers provide cooked meals and other practical support and enable us to run our fundraising events.



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Funding

The new Canterbury Cancer Centre is currently under construction and is due to open its doors in September 2023. While the completion date has been slightly delayed the project is on budget.

This vital facility has been funded by the communities of Te Wai Pounamu along with the one-off contribution from the Government Shovel Ready Project Fund.

We are continuing to seek sponsorship and donations to ensure the ongoing sustainability of the new centre through our More Precious fundraising campaign.



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Our Registry/Rārangi

Here is an illustration of our online fundraising campaign to support the new facility www.moreprecious.co.nz



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Blanket

Fund a cosy blanket to keep a cancer patient warm.



Crockery Set

Fund a crockery set for a cancer patient's room.



Bedside Lamp

Help light up a cancer patient's room.



Tree

Purchase a tree for our building's garden.



Questions?



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THINK**

Thank you.





Why support the charity BrainTree?

- Very grateful to Council for your support to date
- **1st of it's kind wellness centre for brain health in NZ & AUS**
- Community driven facility for most neurological conditions
- **Fills the growing gap between hospitals and residential care**
- Helps people with neurological conditions, and carers/whanau, to **live well** in their communities & make good **lifestyle changes**
- **Total wellness focus: sleep, nutrition, exercise, social contact, cognitive stimulation, education & specialist therapies**
- There has been **no government support** to date?
- Operational funding now required to survive and thrive!
- Cancer Society to open next door will create a **“health hub”**



What does the facility offer?

- A welcoming, positive, non-judging & fulfilling experience
- A collective of brain health organisations, all under one roof
- A NZ/AU first, multi-purpose high quality community facility
- A multi-tenant environment with public & private spaces
- A central relaxed commercial **café** with outdoor decking space
- A retail shop, studio, gym, meeting/seminar & consult rooms
- **Conference, function & event capability** for wider community
- Multiple bathroom options with disabled options & showers
- Plenty of tenant, visitor & disabled parking onsite
- Papanui natural reserve/wetland & walkway next door



The numbers so far...

Funds raised for BrainTree building	\$6.1m
Long term loans yet to pay back	\$1.0m

Annual rental income	\$263k
Annual operating expenses	\$546k

Annual balance to fundraise	\$283k
-----------------------------	--------

June 2022

June 2023

July 2023

BrainTree
opens

1st Year of
Operations

Funding for
annual
operations

What ongoing support do we need?

Annual balance to fundraise \$283k

Community grants to source \$100k

DC remission requested from Council \$ 57k

Balance to fundraise/donations \$126k

June 2022

June 2023

July 2023

BrainTree
opens

1st Year of
Operations

Funding for
annual
operations

“

In my experience the people
who live the best with these conditions eat
super healthy,
challenge themselves physically and
mentally, keep up the social contact
and get good sleep...

”

Professor John Nutt

Professor of neurology and physiology/pharmacology,
Oregon Health and Science University



1:2



1:3

Preventative strategies can reduce the
risk by up to half



“

The Collective’s joint focus on helping folks to ‘live well’ is vital and it is not being tackled by any other part of the system.

”

Dr Matthew Croucher

CDHB Clinical Lead, South Island Dementia Initiative
Chair, New Zealand Dementia Cooperative



A huge thank you to our Community Supporters





Council Briefing

Long Term Plan 2024-2034

19th July 2023

Introduction and Purpose

- Set the scene for the Mayor and Councillors ahead of developing the 2024 – 2034 Long Term Plan.
- Drawing on learnings from past LTP and Annual Plan processes
- Socialise some key questions
- Provide brief updates on key workstreams
- Outline the briefings/workshop programme

Environmental Scan summary

A little context

- Focus of the scan is to set the scene for the Mayor, Councillors & Staff ahead of developing the 2024 – 2034 Long Term Plan.
- Designed to sit alongside the scan delivered at the start of the current triennium.
- A lot has changed! Even in the past 6 months. Things are shifting quickly, and we need to be agile and ready to respond.
- We're experiencing ongoing change and global unpredictability on many fronts, from inflation and supply chain issues to climate change.
- Traditional models and theories are less relevant as economic predictors, and there's no clear pathway or timeframe towards returning to a sense of 'normal'.

Top 10 things to consider

We are operating in an environment underpinned by uncertainty

- External influences are likely to have more of an impact throughout the development and life of this LTP.
- While we cannot control external influences/factors, we can control our approach to managing the risk that arises from them.
- We shouldn't assume that we continue to do what we have always done.
- Need to be responsive, decisive and agile. LTP needs to position us to respond to things outside of our control.
- Mixed predictions from economic commentators and experts about what the short and medium term might look like – a high level of uncertainty.

Significant global, national and local economic challenges.

- Global economic conditions having more of an impact on New Zealand than normal.
- Unlikely that NZ will be shielded from further deterioration to global economic conditions; highly dependent on trade.
- Reserve Bank has already indicated that current economic conditions are likely to lead to higher interest rates over coming years.
- Households are facing growing financial pressures on all fronts & we are seeing record low consumer confidence.

Top 10 things to consider

Climate change is a global issue that goes beyond national borders.

- To reach our emissions reduction targets we need to do things differently.
- Need to lead by example, doing our part by taking climate action as an organisation & supporting our communities to do the same.
- Need to build a shared understanding with our communities of key climate risks and our preferred pathways for change.
- We need an agile and adaptive response, keeping up to date with new scientific information, government policies and opportunities.

We will likely face supply chain and labour force challenges.

- Likely implications for capital programme delivery. Need to be realistic about what we can deliver.
- Need to be prepared for more frequent shocks outside of our control.
- Additional demand in the construction sector driven by Cyclone Gabrielle recovery.
- Research suggests New Zealand could face a shortfall of 250,000 workers by 2048.
- Migration has a key role to play in managing workforce/labour market challenges.

Top things to consider

Households are facing growing financial pressure.

- Changes to monetary policy to curb inflation is having significant impacts on households.
- As the challenges associated with record high inflation continue, we are likely to see households and businesses being more cautious with their spending.
- Need to balance increasing community expectations, growing costs, financial pressure on households with ensuring we continue to make progress on important projects and issues.
- We have an ageing population, a growing proportion of households in the city will be on fixed incomes.

The future for local government in New Zealand is uncertain.

- High level of uncertainty surrounding the future of the current government's reform programme.
- A number of limitations with the current funding model for local government in NZ.
- Are we at peak rate? Can our communities withstand future rates increases?
- Three waters reform will have wide ranging impacts, but particularly on our debt levels and ability to borrow.
- We need to be ready, agile, strategic and responsive, including the ability to revise our Long-Term Planning accordingly.

Top things to consider

Our population will grow, but slower than previously expected.

- We should be planning for growth of around 66,000 people and 32,500 households between 2024 – 2054.
- Over the next 30 years, the proportion of our population over the age of 65 years is expected to grow from 15% to around 21%.
- The proportion of the population under the age of 24 years is expected to decrease from 31% - 25%.
- Population growth in Christchurch is projected to remain conservative, but government policy directs us to plan for growth above and beyond what is currently planned for.

We are seeing increasing expectations from our communities & residents.

- Resident dissatisfaction is highest for services that require the most capital to address.
- Annual Plan submissions highlighted that on some issues residents are extremely divided in their opinions, perceptions and preferences.
- Managing these expectations in line with what we can realistically deliver will require us to have some brave conversations with our communities.
- Need to find the right balance between keeping rates affordable, delivering the services that our residents value and making the improvements that they want to see.

Top things to consider

We need to focus on our ability to deliver.

- Our residents have conflicting views on what we should be focusing on, LTP pre-engagement will shed some light on what matters most.
- Tight labour market has put pressure on our ability to deliver on a range of programmes and projects.
- We have struggled to fully deliver the planned capital programme as set in the LTP.
- Achieving a capital programme in this LTP that is deliverable is going to require us to have some honest conversations both as an organisation and with our residents.
- Residents have clearly told us that they don't want to see cuts to services that they value and use regularly.

'The workplace has the power to be the retention tool'.

- Similar to others, we have experienced staff turnover the past few years. There has been strong demand for talent across both the public and private sectors.
- Cost of addressing wage growth challenges need to be balanced with the risk of not addressing them - impacts on our ability to continue delivering services.
- Recent research suggests that workers in New Zealand are more likely to suffer burnout than in any other country (70% versus the global average of 59%). This may relate to lower levels of productivity as a country.
- Prospective employees will likely expect more flexible ways of working. Research suggests that company culture has a significant impact on employees accepting jobs.

What is important to us?

Our Strategic Framework is a big picture view of what the Council is aiming to achieve for our community

Our focus this Council term 2022–2025

Strategic Priorities

-  Be an inclusive and equitable city which puts people at the centre of developing our city and district, prioritising wellbeing, accessibility and connection.
-  Champion Ōtautahi-Christchurch and collaborate to build our role as a leading New Zealand city.
-  Build trust and confidence in the Council through meaningful partnerships and communication, listening to and working with residents.
-  Reduce emissions as a Council and as a city, and invest in adaptation and resilience, leading a city-wide response to climate change while protecting our indigenous biodiversity, water bodies and tree canopy.
-  Manage ratepayers' money wisely, delivering quality core services to the whole community and addressing the issues that are important to our residents.
-  Actively balance the needs of today's residents with the needs of future generations, with the aim of leaving no one behind.

Adopted by the Council on 5 April 2023

Our goals for this Long Term Plan 2024–2034

Draft Community Outcomes

-  Collaborative and confident
Our residents have the opportunity to actively participate in community and city life, have a strong sense of belonging and identity, and feel safe.
-  Green and liveable
Our neighbourhoods and communities are accessible and well connected, supporting our goals to reduce emissions, build climate resilience and protect and regenerate the environment, especially our biodiversity, water bodies and tree canopy.
-  A cultural powerhouse
Our diverse communities are supported to understand and protect their heritage, pursue their arts, cultural and sporting interests, and contribute to making our city a creative, cultural and events 'powerhouse'.
-  Thriving and prosperous
Our city is a great place for people, business and investment where we can all grow our potential, where enterprises are innovative and smart, and where together we raise productivity and reduce emissions.

To be adopted by the Council as part of the Long Term Plan 2024–2034

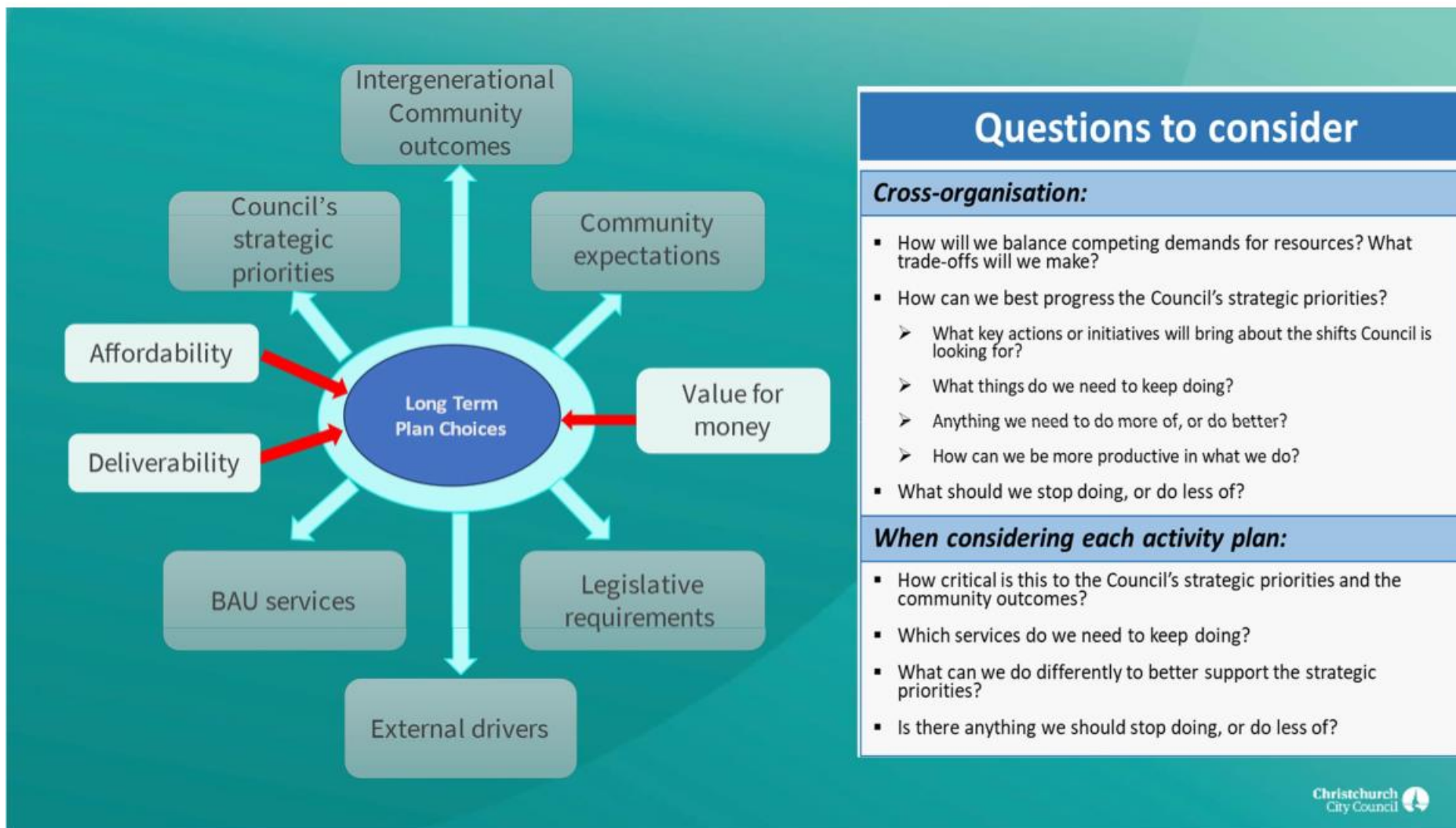
Our intergenerational vision

A place of opportunity
for all.

Open to new ideas, new
people, new investment
and new ways of doing
things – a place where
anything is possible.



Ngāi Tahu has rangatiratanga over its takiwā – the Council is committed to partnering with Ngāi Tahu to achieve meaningful outcomes that benefit the whole community



Likely Discussion Points for Joint Development

1. How will we balance competing demands for resources? What trade-offs will we make and how?
 2. How can we best progress the Council's strategic priorities?
 - What key actions or initiatives will bring about the shifts Council is looking for?
 - What things do we need to keep doing? do more of, do better, do less or simply stop
 - How can we be more productive in what we do?
 3. How can we balance residents' expectations with ability to pay?
 4. How can we shift our thinking to consider climate impacts?
-

Climate resilience

- Guided by Letter of Expectation – ‘include meaningful actions’
 - Embedding climate resilience in LTP – templates, guidance to identify:
 - Main sources of greenhouse gas emissions, and options to reduce those
 - How climate change will affect assets and activities, and options for managing climate risks
 - Projects and Levels of Service
 - Progress
 - Climate resilience in a large, diverse organisation is complex – following national guidance, best practice
 - Staff have built climate resilience into draft plans
 - Ready to work together to plan and resource meaningful actions
 - How do we provide leadership in managing climate impacts?
 - What are the key opportunities in our low carbon transition?
-

Challenges Facing all Capital Programme Activities

- **Affordability** – projected per annum rates increases
- **Deliverability** – all forward plans will be judged on past performance, large jumps lack credibility
- **Productivity** – we have to deliver to 100% going forward, improved procurement, more efficient delivery processes, value for money
- **Predictability** – budget certainty, scope control, sufficient contingency/inflation provisions, forecasting

Financial Challenges: Summary

- Reforms uncertainty
 - Affordable Waters effective timing
 - Ongoing inflation and labour market constraints (NI rebuild)
 - Projected Rates too high
 - Proposed Capex Programme not yet deliverable
 - Opex challenges relative to customer and Councillor expectation, demands and levels of service
 - Dividend streams flat to declining
-

Financial Strategy - Themes and Direction

- How Council funds its Services, Programmes and Projects
- Supports Strategic Priorities
- Hand in glove with Infrastructure Strategy and Strategic Framework
 - Deliverable and Affordable programme
 - Maintain Level of Service
 - Deliver New Assets to meet community needs
- Balance financial resilience with Rates affordability
 - Ensure flexibility for future ratepayers
 - Set Debt Cap
 - Set Financial benchmarks/covenants/ratios
- Reliance on, and use of, Investment income
- Affordable Waters impact
- Future for Local Government – New funding options

Status of Engagement processes so far

- Papatipu Rūnanga
- Community Boards
- Early Engagement Campaign

Early engagement on the Long Term Plan

What matters most?

- We're keen to understand what are the core services that matter most to our residents – help us sort the 'must haves' from the 'nice to haves'.
- A mix of online and face-to-face engagement – we're out and about in the community over the next few weeks.
- The key tactic: a participatory budgeting exercise where people allocate 100 points or tokens to 17 of our core services.
- **ccc.govt.nz/whatmattersmost**



Next Steps

- Activity plans presented to Council in workshops starting 1 August (Libraries Nga Kete Wananga o Ōtautahi, and Community Housing)
- Budget setting Aug-Early Oct
- Consensus on key elements - Christmas
- Consultation Feb 2024
- Adoption June 2024

