Draft Annual Plan 2016-17

Volume 3 - Submissions
# DRAFT ANNUAL PLAN 2016
## SUBMISSIONS

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19 April 2016

Dear Sir or Madam

SUBMISSION TO ANNUAL PLAN 2016-17

Thank you for the opportunity to submit to your Council’s Annual Plan 2016-2017.

As you will be aware regional prosperity has been high on the agenda for councils around the region. Collaboration and agreement on this priority among councils resulted in the government commissioning the Manawatu-Whanganui Regional Growth Study launched in July 2015. The study identified eight key opportunities for the region to pursue to help lift regional prosperity. These may be in addition to priorities that individual councils and economic development agencies are already working on.

The region committed to producing a regional action plan as a follow-up to the growth study. The action plan is being produced under the banner of Accelerate>25. Production of the Plan is being funded by Horizons Regional Council, the Ministry of Business, Innovation and Employment, and the Ministry for Primary Industries. It is expected to be launched by Ministers in July / August 2016. The action plan identifies what the region, as a whole, needs to do to take advantage of the opportunities identified in the growth study. The action plan process has been lead by a governance group known as the Lead Team, comprising elected members, business people and iwi from across the region.

I would like to thank your council for its ongoing support for regional prosperity and in particular the Accelerate25 programme and our work with government. On behalf of the Lead Team I seek your ongoing support for the programme in 2016/2017. The Lead Team is not requesting financial support from your Council, rather the Lead Team is seeking your continued active engagement and spirit of regional collaboration. There will be actions arising from the action plan relevant to local government that the Lead Team will be keen to discuss with you.

The Lead Team does not wish to be heard as part of your Annual Plan deliberations. However, the Lead Team would welcome the opportunity to discuss the draft Regional Action Plan and ideas for ongoing regional collaboration with your Council. I suggest that this happen at a suitable workshop time for your Council during May / early June and before Ministers launch the Accelerate25 Action Plan for the region. Karen Winchcombe, Lead Team Administrator (email: karen.winchcombe@horizons.govt.nz) will make contact with your Governance Coordinator in this regard.
I attach the most recent eNewsletter for your interest.

Yours sincerely

Michael McCartney
Lead Team Facilitator
ACCELERATE►25
C/O- Horizons Regional Council
Ph: 06 9522 854
Mob: 021 2277 175
Email: michael.mccartney@horizons.govt.nz

Encl: Copy of March/April 2016 eNewsletter
Members of the Accelerate25 Lead Team met in Feilding on 24 March where they discussed Action Plan progress and the need to look beyond the Plan’s launch to ensure long-term success. The Team was pleased with the programme’s progress and the quality of discussion at workshops being held across the region to determine key actions.
While Programme Directors are currently running ahead of schedule in terms of drafting content for the final Action Plan, there's no time to rest on our laurels. We now need to consider what resources, tools, partnerships and structures will be required for successful implementation. A number of the region’s councils are currently consulting on their Annual Plans for 2016/17. Horizons Regional and Ruapehu District councils in particular have posed questions around their ongoing role in economic development. I encourage you to give some thought to what this should look like and have your say via the submission process.

Achieving the actions set out in our Regional Action Plan will require investment and initiative across the spectrum from independent investors, businesses, local government and central government. This is a major point of consideration for the Accelerate25 Lead Team ahead of the final Plan’s launch. They are very conscious of the need to ensure structures and partnerships are in place to keep up the momentum and this will remain a focus over the coming months. Te Puni Kokiri is also funding work around characterising the Maori economy in the Manawatu–Whanganui region. This is being led by Dr Jason Mika and will continue through to October. The Lead Team noted that it was important to acknowledge this in the creation of the Action Plan and allow room for the findings of this work in its implementation.

Another point discussed at workshops has been around the need to better capture and share our regional story. One Region, One Team has become a catch-cry for the Accelerate25 Programme. So, over the next few weeks we will be working on promotional material to help us better convey the opportunities that exist for people seeking a great place to live, work, play and invest. Thank you to MPI and TPK who have provided funding for this project. We look forward to sharing this with you. Watch this space.

Michael McCartney  
Accelerate25 Lead Team Facilitator
March was a busy month for the region with a number of new businesses opening their doors and huge numbers flocking in for the inaugural Agri Investment Week and Central Districts Field Days. Below are a few highlights from the past month as we look towards completion of the Regional Action Plan in early May.

Prime Minister John Key attended the opening of Speldhurst Country Estate Lifestyle Village on the site of the old Kimberley Centre in late March. The lifestyle village is currently valued at about $160 million and is expected to house more than 600 people. Developer Wayne Bishop studied lifestyle villages, both in New Zealand and overseas, for many years prior to developing Speldhurst and saw the Kimberley Centre site as providing an “awesome living space for older people”.

During his time in the district, the Prime Minister also cut the ribbon to officially open chicken farm, Le Poulet Fabuleux, in Himatangi. This local, family-operated farm has created jobs within the community as well as overseas through export.
The inaugural NZ Agri Investment Week was held 14–19 March with conferences, networking events and demonstrations keeping attendees busy throughout the week. Accelerate25’s John Hutchings hosted a workshop for the Land Use Optimisation opportunity Friday 18 March. Around 60 agri–business leaders attended, with keynotes speakers including Manawatu–based farmer Hew Dalrymple, Lianne Simpkin from Tararua District Council and Nicola Shadbolt from Massey University. In his introduction, Minister for Economic Development Steven Joyce encouraged attendees to think beyond just current usage and consider all opportunities to make the most of the region’s land resources into the future.

Business Process Outsourcing (BPO) and Food Innovation Outsourcing was identified as one opportunity in the Regional Growth Study. Since then, two clear work streams have become apparent within the opportunity, and as such, the focus has been split into two project teams – “Part 1” focusses on the provision of quality Call Centres based in
Closely aligned with Accelerate25’s ongoing Business Process Outsourcing work is the opening of the Proliant Biologics plant in Feilding. In a recent Manawatu Standard article Vision Manawatu Regional Manager Mark Hargreaves says the plant “...further[s] the region’s reputation as a biotechnology and agricultural hub...”

Proliant’s plant produces New Zealand Bovine Serum Albumin (BSA), made from the blood of cattle which is manufactured into products such as diagnostic test kits and vaccines for research, and used in drug production. The opportunity to process blood plasma here in New Zealand, instead of sending unprocessed blood plasma overseas, has been warmly welcomed by many of the region’s leaders as such facilities create job opportunities.
28th April 2016

Councillors
Manawatu District Council
Feilding

Good morning,

Recently the Hiwinui Community formed a Community Committee. The Hiwinui Committee and the community see this as a positive venture and are looking forward to building a relationship with the MDC.

The attendance at our inaugural meeting would suggest the Hiwinui Committee would receive good support from the community.

I am writing to ask if Council would agree to rolling over funds allocated for the Hiwinui Committee Project Fund and add it to next year's funding. The Hiwinui Committee feels, as it has just been newly formed, that it does not want to rush into any decisions at this stage.

Hoping you will be sympathetic and understanding to our request.

Yours faithfully

Arthur Wood

Hiwinui Committee Chairperson
Is your feedback on behalf of an organisation?
(if yes, this confirms you have authority to submit on the organisation's behalf):

Yes

Organisation name (if any):
Waituna West & Districts Community Committee

First name:
Mary-Anne

Last name:
Shannon

Email or Postal Address:

Please note: As required by the Local Government Official Information and Meetings Act 1987, all submissions will be regarded as being publicly available, including placement on the Council’s website, although you may request that your contact details (but not your name) be regarded as confidential. If you want your contact details withheld please let us know by ticking this box:

Yes

Do you want to make your submission in person?:

No

Details of submission:
Waituna West Community Committee request to carry our council funding over to the next financial year for our upgrading of our community hall entranceway. We are waiting on building quotes and if we proceed the work won't be started until after June 2016. Thank you
Allie Dunn

From: seamless@mdc.govt.nz
Sent: Tuesday, 26 April 2016 4:17 p.m.
To: Jeremy Savell; MDC Submissions
Subject: Annual Plan 2016-17 Submission Form Submitted

Is your feedback on behalf of an organisation?
(if yes, this confirms you have authority to submit on the organisation's behalf): No

Organisation name (if any):

First name: Natasha
Last name: Casey
Email or Postal Address: tarshcasey77@gmail.com

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Do you want to make your submission in person?: No

Details of submission:

I would like to request that investigations be done into creating a proper pedestrian crossing over Church Street/Aorangi St at St Paul's Church. It is my belief that this is an unsafe crossing and some action needs to be taken. There currently exists a crossing place, marked out with concrete verges for pedestrians to use. So, pedestrians understand that this is a logical place to cross, particularly as it is at the end of the green spine walkway. However, making the crossing is a dangerous exercise. It is particularly difficult if negotiating the crossing with scooters, bikes, prams and small, unpredictable children as so many people do. Without the restrictions of residential footpaths and driveways, the traffic moves along this stretch at a fair pace. The view of oncoming traffic from town is restricted by the bridge over the Makino Stream, making judgning distances and crossing times difficult. With the intersection of Grey Street very near, it often takes a long time to cross either on foot, or whilst making a right turn from Church Street into Grey Street on a bicycle. This is a major artery into town for pedestrians from north of the railway line. Students from Feilding High School and LJ Wild House frequent the route along with primary school students heading to Manchester Street School and others heading to town. It is a route that becomes very well used on days such as Rural Day, Christmas Carnival Day and Settlers Day also. I am sure I
am not the only person who would appreciate a proper pedestrian crossing at this point to ensure optimum safety for all pedestrians.
Allie Dunn

From: andreaandkent@xtra.co.nz
Sent: Friday, 29 April 2016 3:54 p.m.
To: MDC Submissions
Subject: Accessing information in regard to changes at the library

Andrea Horsfield
andreaandkent@xtra.co.nz

There have been some positive changes made at the library. For example, opening hours have been extended and new technology is being utilized, so that librarians have more time to assist library customers with queries. There is a flipside to this however. I wanted to reference some books on early NZ history which had been in the collection. I assumed, that owing to the changes at the library, staff would need to retrieve them from the stack room. The librarian searched online and physically checked the stack room, but they have been thrown out. The information I required didn’t appear to be online despite both of us trying to track it down.

I attended the information evening for ratepayers. In order to be better informed, I had several questions about the future direction of this community facility, which has served many young families, including my own, so well with holiday programmes and summer reading courses, to name just two activities. I never got past my first query. The councillors who were in attendance, weren’t sure of the answer, so a council staff member attempted to help me. Despite a lengthy reply, I felt I hadn’t received a straightforward answer to a simple question. As a result I emailed the community facilities manager who has responded to some of my queries.

I still want to know:

What criteria are going to be used to measure the success of the new changes, some of which appear to be positive, currently being undertaken at the library?
Will this information be made available to ratepayers in a succinct, easily understood format which deals with key points?
Is it possible to separate rating and other information about the library and Makino Aquatic Centre apart from each other so that councillors and ratepayers are able to see where money is being well spent?

I do not want to speak to my submission.
Is your feedback on behalf of an organisation?
(if yes, this confirms you have authority to submit on the organisation's behalf): No

Organisation name (if any):
First name: Barbara
Last name: Paulus

Email or Postal Address:

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Yes

Do you want to make your submission in person?: No

Details of submission:

Re Awahuri Forest/Kitchener Park: As the council is aware, Kitchener Park is a valuable lowland forest/wetland remnant with few remaining healthy ancient trees. Many of the old trees are clearly in decline, apparently following flood events in 2004 and 2015. I am fully in support of the AFKP Trust who is seeking to find a solution to protecting the remaining forest from further floods. Floods do not only add to the weed load, deposit sediment and gravel but can also represent a potential pathway for devastating plant pathogens such as Phytophthora. The LTP noted that funding in the range of $50,000 will be brought forward from year four to provide for flood protection with the proviso that the Trust will obtain other funding and develop a flooding protection plan. With all due respect, this approach does not recognize the urgency that is required to protect the remaining trees from multiple threats posed by severe flooding events. "Fund raising" by a Trust may take too long to save the remaining forest remnant. Although I recognize competing demands for funds, I suggest that a combined approach be developed between MDC and Horizons Regional Council to funding flood protection for Kitchener Park with some urgency. Ancient trees are taonga that cannot be replaced for many generations once they are gone.
12/12/15
3 Vista Drive
Feilding 4702

Dear Mr Tate,

I would like to request your consideration to an idea of mine. At the park down our road, I would like a basketball hoop and here are some reasons why I think it would be good idea for our street and our community

- It would be good for kids fitness.
- It would encourage young people to get outdoors and off the X box
- It will improve social skills within Feilding youth.
- It will provide a training ground for basketball players in Feilding.
- It is great for hand eye coordination
- Basketball can become a career for people in the future (like my teacher, Mr Turol, who played for the Manawatu Jets and of course Steven Adams who now plays for Oklahoma City, USA)

Basketball is one of the fastest growing sports in Feilding at the moment. During terms two and three there is a basketball tournament for primary and intermediate kids at the Civic Centre. All I am asking for is a basketball hoop and small court space to shoot and play with the basketball on.

Thank you for your consideration.
From Luke Te Whatu. (age 12)

A suggestion:
This is where I practise my shooting at the moment!
Is your feedback on behalf of an organisation?
(if yes, this confirms you have authority to submit on
the organisation's behalf):

Organisation name: Resident
First name: Brian
Last name: Dredge

Email or Postal Address:

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details (but not your name) be regarded as
confidential. If you want your contact details withheld
please let us know by ticking this box:

Do you want to make your submission in person?: No

Details of submission:

Dear sir or madam, my wife and I think that this
subject is rather important. As we live close to
Timona Park, and walk through there on a daily
basis, we are very aware of the number of people
staying there in camper vans etc. Recently I counted
at least 50 of them staying over night and
sometimes longer. The problem is there are not
enough rubbish bins supplied down there. Also we
have noticed for quite a while now that there are no
picnic tables down there like there used to be. We
do think that this is very important for our visitors
to our park, so we would like something done about
it please.
Annual Plan Submission Form

Closing date for submissions: 4pm Friday 29 April, 2016
Postal: Freepost Authority No. 508 Feilding
Email: submissions@mdc.govt.nz
Website: www.haveyoursay.kiwi.nz

Is your feedback on behalf of an organisation (if yes, this confirms you have authority to submit on the organisation’s behalf)? ✔ Yes □ No

Organisation (if any): Kimbolton Community Committee
Name or Contact Person: Esmé Martin
Email or Postal Address: P.O. Box 14 Kimbolton 4744
Postcode

Do you want to make your submission in person? □ Yes ✔ No

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Details of submission

Hauwhiti Place Reserve
Maintenance work is badly needed on this reserve.
A “Great Clean up” is required
Blackberry and wild cherry are taking over in many areas.
We would appreciate “Funding” to be made available in the near future for this project.

Esmé Martin

“Doug Tate” Community Facilities Manager has been notified of our concerns in this matter.

Supporting documents
If you have any supporting documents you wish to add to your submission, please attach them to your email submission submissions@mdc.govt.nz or your submission via website www.haveyoursay.kiwi.nz, or to your written submission.
Annual Plan Submission Form

Closing date for submissions: 4pm Friday 29 April, 2016
Email: submissions@mdc.govt.nz

Is your feedback on behalf of an organisation (if yes, this confirms you have authority to submit on the organisation's behalf)?  
☐ Yes  ☐ No

Organisation (if any):  
Kimbolton Community Committee

Name or Contact Person:  
Rooneft Winton

Email or Postal Address:  
info@crosthills.co.nz

Postcode: 4774

Do you want to make your submission in person?  
☐ Yes  ☑ No

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Details of submission

Supporting documents
If you have any supporting documents you wish to add to your submission, please attach them to your email submission submissions@mdc.govt.nz or your submission via website www.haveyoursay.kiwi.nz, or to your written submission.
Kimbolton Forest Road Native Tree Reserve

It is the wish of the Kimbolton Community Committee to bring to Council’s attention the state of the roadside fence along the entire roadside facing Forest Road. We have inspected the fence and realise replacing the entire fence is not practicable but a compromise would be for the Council to pay for the reinstating of the fence to more stock proof and sound condition as the battens are all loose and rotting. In our assessment a number of posts could be replaced the wires strained up and the whole length rebattened. The committee has access to macrocarpa battens at a reduced cost. The total length is somewhere close to 400 metres and total; battens required would 500 + plus posts or steel standards.

The reason for wanting to upgrade this fence is to safeguard the future of this important stand of native trees, which is at present providing Kimbolton School children with an ideal place to study flora and flora at the same time helping with their Enviro studies. The two hidden gems in the reserve are an enormous and excellent specimen of a Rimu and a Rata vine that is slowly strangling its host. The majority of the rest of the reserve is made up of Tawa and some Miro.

If any further information is required please contact the submitter or Graeme Jensen the unofficial guardian of the forest over the road.

I think several councillors know or have been into the reserve but for those that that haven’t a Sunday drive would be well rewarded.
Annual Plan Submission Form

Closing date for submissions: 4pm Friday 29 April, 2016
Email: submissions@mdc.govt.nz

Is your feedback on behalf of an organisation (if yes, this confirms you have authority to submit on the organisation’s behalf)? Yes ☐ No

Organisation (if any): Feilding and District Steam Rail Society Inc.
Name or Contact Person: Mr Rod Bertram - Chairman
Email or Postal Address: PO Box 197 Feilding
Postcode 4240

Do you want to make your submission in person? ☐ Yes ☑ No

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Details of submission

Feilding Railway Station

All details as for attached.

Supporting documents
If you have any supporting documents you wish to add to your submission, please attach them to your email submission submissions@mdc.govt.nz or your submission via website www.haveyoursay.kiwi.nz, or to your written submission.
Feilding and District Steam Rail Society Incorporated
Mr Rod Bertram – Chairman
P O Box 197 Feilding 4240

PREAMBLE

We have been in Feilding for 20 years serving the Steam Rail interests in Feilding and the wider Community. We make regular train trips to various locations during the year and have a very successful Open Day each November. All these events bring people to Friendly Feilding which has the potential to benefit the Retailers of Feilding. Some passengers even travel to Feilding from as far afield as Napier, Taupo, Wanganui, Wellington and Hawkes Bay for their train experience.

We are a very dedicated band of Volunteers who wish to preserve the New Zealand icon of Steam Rail, not only the engines but the heritage carriages.

We currently rent two rooms in Feilding Railway Station and have received information that the rent is to rise for us to use this facility.

As the Society is run by Volunteers we are unable to continue to rent these rooms at the increased rental from $2,500.00 to $7,5000.00.

SUBMISSION: We, as a Society, would like to recommend that the Manawatu District Council purchase the Feilding Railway Station and perhaps refurbish it or rent it out to avoid the station being closed, becoming derelict and inviting vandalism. Good examples of unattended Railway Stations can be clearly seen at Woodville and Marton and neither of these two stations are centred in the middle of those two towns.
The Feilding Railway Station is a centre piece in town and almost as important at the Civic Centre. Feilding Railway Station has the potential to be the perfect site to become the more exposed centralised Feilding Information Centre and more presentable Bus Stop. Presently there is plenty of parking.

If the Feilding Railway Station were to close it would become considerably more difficult for us as a Society, to run our Train trips and there would be no toilet facilities for our passengers. We can assure you that currently a number of passengers, who often travel sometimes up to an hour and often more to get to Feilding, need to use and do use the toilet facilities as do the Volunteers on the train who have been at the depot close to an hour before the train is brought alongside the platform. The train is often at the platform close to 20 minutes before it departs for its destination.

For all the reasons already explained, we strongly urge the Manawatu District Council to give the future of the Feilding Railway Station one of their priorities for 2016/2017 year.

We look forward to a favourable response in due course.
Feilding and District Steam Rail Society Incorporated

Feilding Steam Rail is an incorporated Society formed in September 1996 to establish a Steam Engine Museum in Feilding and to run excursions using restored steam locomotives for the benefit of all people in the Manawatu.

Since then, the Society has acquired leases on several steam locomotives and has purchased one diesel shunting tractor. It has acquired a large collection of carriages, vans and wagons to ensure that examples of these items of rolling stock are available for the benefit of future generations.

The Society collects other railway paraphernalia to ensure that this railway history is not lost. It has a large collection of tablet machines, one restored and several unrestored jiggers, several trolleys and a large collection of spare seats, lights, doors and other parts needed to restore carriages and wagons.

Wab 794 is one of only two locomotives of its class remaining in New Zealand. The other example is on static display. Built by the NZR workshops in 1927, it was at that time one of the most powerful locomotive operated by NZR. It hauled trains onto the Dunedin - Timaru line before being sent to Wellington to haul suburban trains. When the Hutt Valley line was electrified, the engine spent some years in Wanganui before being sold to the Ohai Coal Board in Southland. The engine was retired from hauling coal trains in the early sixties and was stored at Ferrymead until Feilding Steam Rail obtained a lease for it in 1997. This engine has been fully restored by F.S.R. It is mainline certified and runs excursions and tours throughout New Zealand.

The society owns or leases several carriages, guards vans and a postal van of which a guards van, and four carriages have been fully restored. In addition to this, several water tankers, coal wagons and the remaining carriages are awaiting restoration as well as a sleeping car and a buffet car.

In February 2000 the Society purchased a large property adjacent to the Feilding Goods Yard. This was converted to a storage and repair depot and museum. The Society has installed a turntable and laid tracks throughout the yard and built a large shed. The property also features the Taonui Railway Station, which was rescued from a nearby farmer's paddock.

F163 is a small tank locomotive built by Dubs & Company of Glasgow in 1880. It was shipped to New Zealand and assembled in Auckland in July 1881 where it entered service under the number 63. It was renumbered 163 in 1890. The engine worked in Whanganui from 1885 until 1891 when it was shipped to Bluff and then Christchurch until 1894 before being transferred to the Nelson branch until 1903. It then worked in the Bluff/Invercargill area for 23 years. The engine returned to Christchurch in 1927 and remained there until it was written off in 1964. It was retained by NZR for display purposes and went on display throughout both islands. In 1984, a group of Palmerston North railway men arranged to take the engine under their wing and carry out a full restoration to working order. For the next 12 years or so F163 was operated by the Vintage Rail Group. In 2002 the Vintage Rail Group joined the Feilding and District Steam Rail Society. F163 was brought to Feilding to run excursions in the Lower North Island. Both trains are available for hire as charters.

X442 is the last remaining example of the class of locomotive. Built in 1908 especially for the main trunk between Taihape and Taumarunui it commenced service in 1909. The locomotive was brought from Ferrymead to Feilding by truck to be restored when funds become available.
Feilding and District Steam Rail Society Incorporated

Membership / Donation Form

Yes! I would like to support the Feilding and District Steam Rail Society by becoming a member. Simply complete the subscription form, enclose a cheque and post to the address below.
Or deposit into 03 0626 0659376 00 with name.

Please note this is for a twelve month membership which runs from 1 July to 30 June.

Surname: ..................................................

First Name: .............................................

Address: ..................................................

Telephone: (.........)

Email: ...................................................

Type of membership: (Please tick)

☐ Junior $15  ☐ Adult $30  ☐ Family $40
(up to 18 years)
(2 adults, 2 children)

Or:

I would like to support the Society by making a donation of $.........................

(Amounts of $5 or more are tax rebatable)

All Bequests Gratefully Received.

Signature: ........................................... Date: ........../........../.......

Post to: Feilding and District Steam Rail Society Inc
PO Box 197, Feilding

Contact: secretary@steamrail.org.nz
Depot Ph: (06) 323 5444  Fax: (06) 323 3311

Visit us on our website: www.steamrail.nz
or call in at
26 Gladstone Street
Feilding

Feilding and District Steam Rail Society Incorporated

Wab 794 Cobden Bridge Greymouth 2006

Wab 794 Waikokopu Gisborne 2007

Wab 794 - F163 - X442 - DA1401 - DSA227

Wab 794 - 10th June 2004
Submission to Draft Annual Term Plan Manawatu District Council 2016/17

Name: Toimata Foundation  
Contact person: Kristen Price, Operations Manager

Postal Address: PO Box 4445, Hamilton, 3247  
Physical Address: Lockwood House, 293 Grey Street, Hamilton

Phone: 07 959 7321  
Email: kristen.price@toimata.org.nz  
We do NOT wish to speak to this submission

Recognising your support for the Enviroschools Programme

We would like to acknowledge Manawatu District Council (MDC) for supporting young people in your district to be part of the Enviroschools network since 2013.

The Enviroschools Programme is a nationwide action-based education programme where young people plan, design and implement sustainability projects and become catalysts for change in their communities. Enviroschools was originally developed in the late 1990’s by councils in Waikato as a non-regulatory tool and has now been adopted by 58 councils, including most of the larger councils and 74% of the total sector.

The programme is managed nationally by Toimata Foundation (a charitable trust). Toimata Foundation has funding from Central Government through the Ministry for the Environment and also works closely with the Department of Conservation. Regional implementation of Enviroschools is through partnerships with Local Government and other community agencies. This multi-sector collaboration supports over 1,000 schools and early childhood education (ECE) centres to be involved in Enviroschools – representing 31% of the school sector and 5% of the large early childhood sector.

There are nine Enviroschools in your district, part of a wider network of 40 in the Manawatu-Whanganui region. Regionally 15% of all schools and 3.8% of all early childhood centres are part of Enviroschools.

This submission encourages MDC to maintain its involvement in Enviroschools along with the other regional partner agencies – the Horizons Regional Council, Palmerston North City Council, Whanganui, Tararua and Rangitikei District Councils, as well as Ruahine Kindergarten Association.

Findings from multi-year evaluation project

A period of stable Central Government funding has enabled Toimata Foundation to undertake some significant research and evaluation over the past 3 years. Toimata has worked with external evaluators Kinnect Group and the key reports produced are:

- “Enviroschools: Key Findings from the Nationwide Census”
- “The Enviroschools Programme Return on Investment Scenario Analysis”
- “The Enviroschools Programme: Evaluation report”

Highlights from the research:

- “Enviroschools is a very high-performing programme and achieves this performance through high levels of systemic support from Toimata Foundation.”  
  
  Kinnect Group

- The successes of the Enviroschools Programme are realised through a ‘collective impact’ model. i.e. investment is leveraged to create a larger pool of resources and through engaging additional stakeholders the outcomes achieved are enhanced.

- For every $1 invested by regional partners in Enviroschools, other investors contribute $2.60 in funding and in-kind support.

- The Enviroschools Census (73% response rate) found participating schools and centres were highly engaged in a range of environmental actions and practices.
• Enviroschools participants report a broad range of outcomes in addition to environmental changes.

- Citizenship and ecology such as global connection, connection with nature, interdependence, community responsibility.
- Educational such as curriculum, engagement, motivation, whole person development.
- Social such as healthy eating and physical activity, community, caring, ethics.
- Cultural such as connection with tangata whenua, integrating Māori perspectives, pronunciation.
- Economic such as financial savings, financial literacy, shifting patterns of spending.

• While only a small number of these outcomes can be monetised, the total annual investment in the Enviroschools Programme in 2014 (estimated to be $10.9M) is projected to realise a return of $28 million over ten years (at a 5% discount rate). This creates a benefit cost ratio of approximately $2.50 over ten years for every dollar (or in-kind support) invested in the programme, or a ROI of 11% per annum.
• Depth of practice in Enviroschools increases with time.
• Collaborations with the community are linked deeper levels of practice.
• Enviroschools works for all deciles.

“The Enviroschools Programme is a worthwhile investment, positively impacting students and schools, and providing value at a societal level. The programme is creating an effective intergenerational legacy, empowering young New Zealanders and their communities to create and realise the aspirational vision of a more sustainable world.” *Kinnect Group.*

**Conclusion**

The Enviroschools Programme is a proven and effective approach for engaging schools and communities in environmental and social action.

With the backbone support of Toimata Foundation, and a network of councils around the country, the programme catalyses learning and action among thousands of young people, their families and communities from early childhood to secondary school. By connecting and coordinating resources and people, openly building and sharing knowledge across communities, widespread action is enabled on a broad scale.

As a funder, the partnership with Enviroschools provides MDC with multiple points of leverage across the Manawatu community, extending the possible impact of its funding beyond what might be expected with a more traditional approach.
Is your feedback on behalf of an organisation?
(if yes, this confirms you have authority to submit on the organisation's behalf):
Yes

Organisation name (if any):
Halcombe Community Committee

First name:
Annie

Last name:
O'Fee

Email or Postal Address:
ofleas@xtra.co.nz

Please note: As required by the Local Government Official Information and Meetings Act 1987, all submissions will be regarded as being publicly available, including placement on the Council’s website, although you may request that your contact details (but not your name) be regarded as confidential. If you want your contact details withheld please let us know by ticking this box:

Do you want to make your submission in person?:
No

Details of submission:
I would love to see a recycling centre in Halcombe.
Submission on

MANAWATU DISTRICT COUNCIL

ANNUAL PLAN 2016/17

To: Manawatu District Council
Private Bag 10001
Feilding 4743

Submitter: MidCentral District Health Board
Attn: Reynold Ball
MidCentral Public Health Service

Proposal: MANAWATU DISTRICT COUNCIL
ANNUAL PLAN 2016/17
MANAWATU DISTRICT COUNCIL
ANNUAL PLAN 2016/17

Details of Submitter

1. MidCentral Public Health Service (MCPHS).

2. The MCPHS could not gain an advantage in trade competition through this submission

Details of the Submission

3. The submitter is responsible for promoting the reduction of adverse environmental effects on the health of people and communities and for improving, promoting and protecting their health pursuant to the New Zealand Public Health and Disability Act 2000 and the Health Act 1956. These statutory obligations are the responsibility of the Ministry of Health and, in the MidCentral District are carried out under delegation by the MCPHS.

4. The Ministry of Health requires the submitter to reduce potential health risks by such means as submissions to ensure the public health significance of potential adverse effects are adequately considered during policy development.

5. The MCPHS welcomes the opportunity to comment on the Manawatu District Council Annual Plan 2016-17.

6. Public health is not just reliant on hospitals but on a responsive environment where all sectors work collaboratively. Health is influenced by a wide range of factors beyond the health sector.

7. These influences can be described as the conditions in which people are born, grow, live, work and age, and are impacted by environmental, social and behavioural factors. They are often referred to as the ‘social determinants of health’.
8. The most effective way to maximize people’s wellbeing is to take these factors into account as early as possible during decision making and strategy development. Initiatives to improve health outcomes and overall quality of life must involve organizations and groups beyond the health sector, such as local government if they are to have an impact.

9. The diagram below shows how the various influences on health are complex and interlinked.

![Diagram showing various influences on health](image_url)

*Figure 1* Barton, H and Grant, M (2006) A Health Map for the Local Human Habitat
General Comments

10. The MCPHS supports the opportunity for public submission on the Annual Plan and has several areas of support and two recommendations which MCPHS believes will further improve the health outcomes for the community.

Specific Comments

Feilding Wastewater Treatment Plant

11. MCPHS strongly supports the move to land based irrigation for effluent discharge from the Fielding Wastewater Treatment Plant.

12. MCPHS however opposes the notion the land based irrigation is to “reduce the amount of treated waste water discharged into the Oroua River” and would rather see “eliminate the discharge of treated waste water into the Oroua River”.

13. Recommendation is to move completely to a land based effluent discharge if at all practicable in the future. The protection of our waterways is important for environmental health which impacts on future generations.

Sanson Water Supply

14. MCPHS supports the development of the Sanson drinking-water supply. Moreover, the ambition to produce safe wholesome water meeting the Drinking Water Standards for NZ 2005 (Revised 2008) is commendable; MCPHS looks forward to working together with the Manawatu District Council to demonstrate compliance on this supply. MCPHS encourages Council to work with local residents connected to the reticulation who may need understanding of how water supply or pressure may affect their current system.

Feilding Water Supply

15. Recognition is given for the recent upgrades to the Feilding drinking water treatment plant. It is appreciated the amount of finance required to install the new UV and monitoring systems. MCPHS supports the decision in the Annual Plan to carry forward funding for upgrading to the supply in waiting for the Water Plan to be developed. As understood the Water Plan is assessing assets and deciding the best way forward for the supply.
**Himatangi Beach and Tangimoana Stormwater**

16. MCPHS supports the investigations to improve stormwater drainage in the Himatangi Beach and Tangimoana. With the new potential risks presented by climate change and extreme weather conditions, adequate stormwater infrastructure is an important part of a healthy community.

**Professional Development for Elected Members**

17. With the changing rate of scientific knowledge and the need for those making decisions to keep up with the latest information, MCPHS supports the decision to include funding in the Annual Plan for the professional development of elected members.

**Local Alcohol Policy**

18. The Sale and Supply of Alcohol Act 2012 is intended to give communities more say in how alcohol is made available in their local area. The primary instrument for this is the production by territorial authorities of a Local Alcohol Policy (LAP) for their region. [Part 2 – Subpart 2; sections 75 - 97].

19. The process of developing a LAP would not only clarify the licensing rules for the District, it would also enable the residents to have their say on these often contentious issues. A LAP could set guidelines that balance competing interests; consider local factors, and control the impact of these on the district and its inhabitants. [e.g. location, density, proximity, trading hours, one way doors and other conditions. Section 77.]

20. MCPHS understand the development of a LAP has been put on hold until there is some resolution around the potentially precedent-setting challenges to other LAPs. When these are resolved MCPHS look forward to being involved in the development of a policy that will best serve the Manawatu District Council and its communities.

21. It would be good to see Council taking leadership on this issue, not only giving a voice to its communities but also making management of the alcohol sector easier for officers. MCPHS would be more than willing to be involved in this process.
Tobacco

22. MCPHS recommend that Manawatu District Council develop a Smokefree Outdoor Area Policy. Smoke-free outdoor dining/al fresco areas provide positive smoke-free role modeling for children, prevent exposure to second hand smoke, aid smokers’ efforts to quit and empower non-smokers to be vocal about not wanting to be around smoking. Smoke-free policies for outdoor public places are also a cost-effective means of discouraging smoking, one of the major causes of disease and health inequalities, particularly for Maori. A smoke-free Manawatu would help to decrease litter from cigarette butts/packets and thus reduce costs for the Council and ratepayers.

23. There is clear evidence of harmful exposure of patrons and staff to second-hand smoke in both outdoor dining settings and indoor locations adjacent to outdoor settings. Evidence shows that levels of second-hand smoke have been found in outdoor dining venues at levels comparable to indoor levels when smoking is allowed. Studies concluded that being close to smokers in outdoor situations can result in similar levels of smoke exposure as that experienced in a smoky tavern for the same length of time (Brennan 2010; Edwards 2011; Sureda 2012, Wilson 2011).

24. Council’s policy will be supported by initiatives such as local stop smoking support from Te Ohu Auahi Mutunga, midwives and from May 1 many pharmacies throughout the MidCentral DHB area, including 3 in Feilding, will be providing free Nicotine Replacement Therapy and support to help people quit smoking. There is also a government bill to introduce plain packaging.

25. Other Councils have already introduced similar polices, with Palmerston North City Council and Horowhenua District Council being examples.

26. MCPHS and Tobacco Free can provide:

- Support to develop and implement a Smokefree Outdoor Areas Policy.
- Advice and support to make Council events and events held on Council land Smokefree.
- Workshops with council staff and councillors on the Smokefree Aotearoa 2025 goal
- Assistance with evaluation.
• Up to date tools to implement the project and the latest developments in Smokefree.
• Media through Public Health Services and Tobacco Free Central member’s communications teams.

**Playgrounds**

27. MCPHS support the upgrades of Tangimoana and Timona Playgrounds as playgrounds help children be more physically active and develop new skills.

28. For playgrounds, the relevant standard is Standards New Zealand NZS 5828:2015 which has recently changed from the older standard NZS5828:2004.

29. Falls from playground equipment are a major cause of hospitalisation for children, so MCPHS thank Council for helping to ensure that its playgrounds are fit for purpose.

**Feilding Greenspine**

30. MCPHS support the development of the Feilding Greenspine as this will help encourage physical exercise. MCPHS believe that the Greenspine development has the same potential as the river path in Palmerston North which has attracted large numbers of cyclists (who like being separated from motorists), runners and walkers.

**Conclusion**

31. The MCPHS wishes to be heard in support of this submission.

32. MCPHS recommend that Manawatu prioritizes the development of a Smokefree/Auahi Kore policy for all outdoor public areas and Council events in the district.

33. Thank you for the opportunity to submit on the Manawatu District Council Annual Plan 2016 – 17.
Person making the submission

Dr Rob Weir
Medical Officer of Health

Date: 29 April 2016

Contact details

Reynold Ball
Health Protection Officer
For and on behalf of
MidCentral Public Health Service
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Email: Reynold.Ball@midcentraldhb.govt.nz
References


SUBMISSION on WATER FLUORIDATION from Pat McNair, 15 Ascot Rd, Hamilton (07) 855 8162
TO: Manawatu District Council

The practice of fluoridating your municipal water supply deserves to be seriously reconsidered.

Council members are elected to make the best decisions to benefit your community. We suggest that Council firstly implements an immediate moratorium on water fluoridation. Councillors should not knowingly allow this damaging practice to continue. Contrary to the claims made by fluoridation promoters, no safety studies have ever been conducted in the world. Evidence that fluoridation causes harm is now undeniably serious, and Council needs to take urgent action to call a moratorium until safety can be guaranteed.

It is within your power, and it is your responsibility, to protect your community and suspend this out-dated practice. Applying the precautionary principle to fluoridation justifies its immediate cessation.
It’s time to put your community first, and call for an immediate suspension of fluoridation in your community. Many New Zealand communities have already banned this chemical including Nelson, Blenheim, Napier, Tauranga, Hokitika, Greymouth, Rotorua, New Plymouth, Taumarunui, Southland, Timaru, Wairoa, Christchurch, Balclutha, Bluff, Gore, Kaitaia, Matamata, Twizel, Waipukurau, Whangarei, Otorohanga, Kawarau, Opotiki, Carterton, Wanganui, Queenstown, Ashburton and the Chatham Islands.

Are you aware that the environmental impacts of disposing of HFA and SSF (the only two types of fluoride used to fluoridate water supplies) through the water supply into the environment are unknown and untested? So why is this substance able to be disposed of through the water supply with no consideration given to the adverse environmental effects, and with no resource management oversight? This needs to be seriously questioned by Council and pursued until a satisfactorily answer is received.

In the meantime a precautionary approach would require this unnecessary practice to stop. As you are aware most fluoridated water is not drunk but is used for other domestic purposes in kitchens and bathrooms, and for watering gardens, washing cars etc. Most will end up in the environment on the land or in the water.

Failing an immediate moratorium, we suggest a second best option that Council could easily implement. At the very least Council needs to immediately reduce your fluoridation level to be consistent with the USA and more recently with Auckland, Whakatane and Tokoroa. The new single optimal fluoride level of 0.7 mg/L was recommended by the U.S. Federal Department of Health and Human Services in April 2015. 

You have probably heard all your life that fluoridation is a good thing. But fluoridation supporters including medical, dental, and public health advisers have been deceived by a big lie and are trapped and lost in a fluoridation maze. Fluoridation is a maze of half-truths and lies and for some people it is hard to find the exit.

There is a tendency for people to say “I’ll just take the word of the doctors and dentists” when it comes to such scientific subjects. However, if you did even reasonably well in high school maths, chemistry and physics, you should easily understand the health, safety, and effectiveness issues. You just need to do your own reading and thinking – no more than that.

We hope you will honestly study this issue and do the right thing. As you study, bear in mind what Mark Twain said: It is a lot easier to defraud a man than it is to convince him that he has been defrauded.

There are many grounds for opposing fluoridation, but for this submission we are focusing on the information published in 1997 by New Zealander Dr John Colquhoun in his article “Why I Changed My Mind About Water Fluoridation”, attached below. It may have been written twenty years ago but all of it still applies today.

WHY I CHANGED MY MIND ABOUT WATER FLUORIDATION

John Colquhoun* © 1997 University of Chicago Press

Former Advocate

To explain how I came to change my opinion about water fluoridation, I must go back to when I was an ardent advocate of the procedure. I now realize that I had learned, in my training in dentistry, only one side of the scientific controversy over fluoridation. I had been taught, and believed, that there was really no
scientific case against fluoridation, and that only misinformed lay people and a few crackpot professionals were foolish enough to oppose it. I recall how, after I had been elected to a local government in Auckland (New Zealand's largest city, where I practised dentistry for many years and where I eventually became the Principal Dental Officer) I had fiercely — and, I now regret, rather arrogantly — poured scorn on another Council member (a lay person who had heard and accepted the case against fluoridation) and persuaded the Mayor and majority of my fellow councillors to agree to fluoridation of our water supply.

A few years later, when I had become the city's Principal Dental Officer, I published a paper in the *New Zealand Dental Journal* that reported how children's tooth decay had declined in the city following fluoridation of its water, to which I attributed the decline, pointing out that the greatest benefit appeared to be in low-income areas [1]. My duties as a public servant included supervision of the city's school dental clinics, which were part of a national School Dental Service which provided regular six-monthly dental treatment, with strictly enforced uniform diagnostic standards, to almost all (98 percent) school children up to the age of 12 or 13 years. I thus had access to treatment records, and therefore tooth decay rates, of virtually all the city's children. In the study I claimed that such treatment statistics "provide a valid measure of the dental health of our child population" [1]. That claim was accepted by my professional colleagues, and the study is cited in the official history of the New Zealand Dental Association [2].

**INFORMATION CONFIDED**

I was so articulate and successful in my support of water fluoridation that my public service superiors in our capital city, Wellington, approached me and asked me to make fluoridation the subject of a world study tour in 1980 — after which I would become their expert on fluoridation and lead a campaign to promote fluoridation in those parts of New Zealand which had resisted having fluoride put into their drinking water.

Before I left on the tour my superiors confided to me that they were worried about some new evidence which had become available: information they had collected on the amount of treatment children were receiving in our school dental clinics seemed to show that tooth decay was declining just as much in places in New Zealand where fluoride had not been added to the water supply. But they felt sure that, when they had collected more detailed information, on all children (especially the oldest treated, 12-13 year age group) from all fluoridated and all nonfluoridated places [3] — information which they would start to collect while I was away on my tour — it would reveal that the teeth were better in the fluoridated places: not the 50 to 60 percent difference which we had always claimed resulted from fluoridation, but a significant difference nonetheless. They thought that the decline in tooth decay in the nonfluoridated places must have resulted from the use of fluoride toothpastes and fluoride supplements, and from fluoride applications to the children's teeth in dental clinics, which we had started at the same time as fluoridation. Being a keen fluoridationist, I readily accepted their explanation. Previously, of course, we had assured the public that the only really effective way to reduce tooth decay was to add fluoride to the water supply.

**WORLD STUDY TOUR**

My world study tour took me to North America, Britain, Europe, Asia, and Australia [4]. In the United States I discussed fluoridation with Ernest Newbrun in San Francisco, Brian Burt in Ann Arbor, dental scientists and officials like John Small in Bethesda near Washington, DC, and others at the Centers for Disease Control in Atlanta. I then proceeded to Britain, where I met Michael Lennon, John Beale, Andrew Rugg-Gunn, and Neil Jenkins, as well as many other scientists and public health officials in Britain and Europe. Although I visited only pro-fluoridation research centers and scientists, I came across the same situation which concerned my superiors in New Zealand. Tooth decay was declining without water fluoridation. Again I was assured, however, that more extensive and thorough surveys would show that fluoridation was the most effective and efficient way to reduce tooth decay. Such large-scale surveys, on very large numbers of children, were nearing completion in the United States, and the authorities conducting them promised to send me the results.
LESSON FROM HISTORY

I now realize that what my colleagues and I were doing was what the history of science shows all professionals do when their pet theory is confronted by disconcerting new evidence: they bend over backwards to explain away the new evidence. They try very hard to keep their theory intact — especially so if their own professional reputations depend on maintaining that theory. (Some time after I graduated in dentistry almost half a century ago, I also graduated in history studies, my special interest being the history of science — which may partly explain my re-examination of the fluoridation theory ahead of many of my fellow dentists.)

So I returned from my study tour reinforced in my pro-fluoridation beliefs by these reassurances from fluoridationists around the world. I expounded these beliefs to my superiors, and was duly appointed chairman of a national "Fluoridation Promotion Committee." I was instructed to inform the public, and my fellow professionals, that water fluoridation resulted in better children's teeth, when compared with places with no fluoridation.

SURPRISE: TEETH BETTER WITHOUT FLUORIDATION?

Before complying, I looked at the new dental statistics that had been collected while I was away for my own Health District, Auckland. These were for all children attending school dental clinics — virtually the entire child population of Auckland. To my surprise, they showed that fewer fillings had been required in the nonfluoridated part of my district than in the fluoridated part. When I obtained the same statistics from the districts to the north and south of mine — that is, from "Greater Auckland," which contains a quarter of New Zealand's population — the picture was the same: tooth decay had declined, but there was virtually no difference in tooth decay rates between the fluoridated and non fluoridated places. In fact, teeth were slightly better in the nonfluoridated areas. I wondered why I had not been sent the statistics for the rest of New Zealand. When I requested them, they were sent to me with a warning that they were not to be made public. Those for 1981 showed that in most Health Districts the percentage of 12- and 13-year-old children who were free of tooth decay - that is, had perfect teeth - was greater in the non-fluoridated part of the district. Eventually the information was published [4].

Over the next few years these treatment statistics, collected for all children, showed that, when similar fluoridated and non-fluoridated areas were compared, child dental health continued to be slightly better in the non-fluoridated areas [5,6]. My professional colleagues, still strongly defensive of fluoridation, now claimed that treatment statistics did not provide a valid measure of child dental health, thus reversing their previous acceptance of such a measure when it had appeared to support fluoridation.

I did not carry out the instruction to tell people that teeth were better in the fluoridated areas. Instead, I wrote to my American colleagues and asked them for the results of the large-scale surveys they had carried out there. I did not receive an answer. Some years later, Dr John Yiamouyiannis obtained the results by then collected by resorting to the U.S. Freedom of Information Act, which compelled the authorities to release them. The surveys showed that there are little or no differences in tooth decay rates between fluoridated and nonfluoridated places throughout America [7]. Another publication using the same database, apparently intended to counter that finding, reported that when a more precise measurement of decay was used, a small benefit from fluoridation was shown (20 percent fewer decayed tooth surfaces, which is really less than one cavity per child) [8]. Serious errors in that report, acknowledged but not corrected, have been pointed out, including a lack of statistical analysis and a failure to report the percentages of decay-free children in the fluoridated and nonfluoridated areas [7].
Other large-scale surveys from United States, from Missouri and Arizona, have since revealed the same picture: no real benefit to teeth from fluoride in drinking water [9, 10]. For example, Professor Steelink in Tucson, AZ, obtained information on the dental status of all schoolchildren – 26,000 of them – as well as information on the fluoride content of Tucson water [10]. He found: "When we plotted the incidence of tooth decay versus fluoride content in a child's neighborhood drinking water, a positive correlation was revealed. In other words, the more fluoride a child drank, the more cavities appeared in the teeth" [11].

From other lands — Australia, Britain, Canada, Sri Lanka, Greece, Malta, Spain, Hungary, and India — a similar situation has been revealed: either little or no relation between water fluoride and tooth decay, or a positive one (more fluoride, more decay) [12-17]. For example, over 30 years Professor Teotia and his team in India have examined the teeth of some 400,000 children. They found that tooth decay increases as fluoride intake increases. Tooth decay, they decided, results from a deficiency of calcium and an excess of fluoride [17].

**CAUSE OF DECLINE IN TOOTH DECAY**

At first I thought, with my colleagues, that other uses of fluoride must have been the main cause of the decline in tooth decay throughout the western world. But what came to worry me about that argument was the fact that, in the nonfluoridated part of my city, where decay had also declined dramatically, very few children used fluoride toothpaste, many had not received fluoride applications to their teeth, and hardly any had been given fluoride tablets. So I obtained the national figures on tooth decay rates of five-year-olds from our dental clinics which had served large numbers of these children from the 1930s on [18]. They show that tooth decay had started to decline well before we had started to use fluorides (Fig. 1). Also, the decline has continued after all children had received fluoride all their lives, so the continuing decline could not be because of fluoride. The fewer figures available for older children are consistent with the above pattern of decline [18]. So fluorides, while possibly contributing, could not be the main cause of the reduction in tooth decay.

So what did cause this decline, which we find in most industrialized countries? I do not know the answer for sure, but we do know that after the Second World War there was a rise in the standard of living of many people. In my country there has been a tremendous increase in the consumption of fresh fruit and vegetables since the 1930s, assisted by the introduction of household refrigerators [19]. There has also been an eightfold increase in the consumption per head of cheese, which we now know has anti-decay properties [19, 20]. These nutritional changes, accompanied by a continuing decline in tooth decay, started before the introduction of fluorides.

The influence of general nutrition in protection against tooth decay has been well described in the past [21], but is largely ignored by the fluoride enthusiasts, who insist that fluorides have been the main contributor to improved dental health. The increase in tooth decay in third-world countries, much of which has been attributed to worsening nutrition [22], lends support to the argument that improved nutrition in developed countries contributed to improved dental health.

**FLAWED STUDIES**
The studies showing little if any benefit from fluoridation have been published since 1980. Are there contrary findings? Yes: many more studies, published in dental professional journals, claim that there is a benefit to teeth from water fluoride. An example is a recent study from New Zealand [23], carried out in the southernmost area of the country [23]. Throughout New Zealand there is a range of tooth decay rates, from very high to very low, occurring in both fluoridated and nonfluoridated areas. The same situation exists in other countries.

What the pro-fluoride academics at our dental school did was to select from that southern area four communities: one nonfluoridated, two fluoridated, and another which had stopped fluoridation a few years earlier. Although information on decay rates in all these areas was available to them, from the school dental service, they chose for their study the one non-fluoridated community with the highest decay rate and two fluoridated ones with low decay rates, and compared these with the recently stopped fluoridated one, which happened to have medium decay rates (both before and after it had stopped fluoridation). The teeth of randomly selected samples of children from each community were examined. The chosen communities, of course, had not been randomly selected. The results, first published with much publicity in the news media, showed over 50 percent less tooth decay in the fluoridated communities, with the recently defluoridated town in a "middle" position (see left side of Fig. 2). When I obtained the decay rates for all children in all the fluoridated and all the nonfluoridated areas in that part of New Zealand, as well as the decay rates for all children in the recently defluoridated town, they revealed that there are virtually no differences in tooth decay rates related to fluoridation (see right side of Fig. 2).

When I confronted the authors with this information, they retorted that the results of their study were consistent with other studies. And of course it is true that many similar studies have been published in the dental professional literature. It is easy to see how the consistent results are obtained: an appropriate selection of the communities being compared. There is another factor: most pro-fluoridation studies (including this New Zealand one) were not "blind" — that is, the examiners knew which children received fluoride and which did not. Diagnosis of tooth decay is a very subjective exercise, and most of the examiners were keen fluoridationists, so it is easy to see how their bias could affect their results. It is just not possible to find a blind fluoridation study in which the fluoridated and nonfluoridated populations were similar and chosen randomly.

**EARLY FLAWED STUDIES**

One of the early fluoridation studies listed in the textbooks is a New Zealand one, the "Hastings Fluoridation Experiment" (the term "experiment" was later dropped because the locals objected to being experimented on) [24]. I obtained the Health Department's fluoridation files under my own country's "Official Information" legislation. They revealed how a fluoridation trial can, in effect, be rigged [25]. The school dentists in the area of the experiment were instructed to change their method of diagnosing tooth decay; so that they recorded much less decay after fluoridation began. Before the experiment they had filled (and classified as "decayed") teeth with any small catch on the surface, before it had penetrated the outer enamel layer. After the experiment began, they filled (and classified as "decayed") only teeth with cavities which penetrated the outer enamel layer. It is easy to see why a sudden drop in the numbers of "decayed and filled" teeth occurred. This change in method of diagnosis was not reported in any of the published accounts of the experiment.

Another city, Napier, which was not fluoridated but had otherwise identical drinking water, was at first included in the experiment as an "ideal control" — to show how tooth decay did not decline the same as in fluoridated Hastings. But when tooth decay actually declined more in the non-fluoridated control city than in the fluoridated one, in spite of the instructions to find fewer cavities in the fluoridated one, the control...
was dropped and the experiment proceeded with no control. (The claimed excuse was that a previously unknown trace element, molybdenum, had been discovered in some of the soil of the control city, making tooth decay levels there unusually low [26], but this excuse is not supported by available information, from the files or elsewhere, on decay levels throughout New Zealand).

The initial sudden decline in tooth decay in the fluoridated city, plus the continuing decline which we now know was occurring everywhere else in New Zealand, were claimed to prove the success of fluoridation. These revelations from government files were published in the international environmental journal, *The Ecologist*, and presented in 1987 at the 56th Congress of the Australian and New Zealand Association for the Advancement of Science [27].

When I re-examined the classic fluoridation studies, which had been presented to me in the textbooks during my training, I found, as others had before me, that they also contained serious flaws [28-30]. The earliest set, which purported to show an inverse relationship between tooth decay prevalence and naturally occurring water fluoride concentrations, are flawed mainly by their non-random methods of selecting data. The later set, the "fluoridation trials" at Newburgh, Grand Rapids, Evanston, and Brantford, display inadequate baselines, negligible statistical analysis, and especially a failure to recognize large variations in tooth decay prevalence in the control communities. We really cannot know whether or not some of the tooth decay reductions reported in those early studies were due to water fluoride.

I do not believe that the selection and bias that apparently occurred was necessarily deliberate. Enthusiasts for a theory can fool themselves very often, and persuade themselves and others that their activities are genuinely scientific. I am also aware that, after 50 years of widespread acceptance and endorsement of fluoridation, many scholars (including the reviewers of this essay) may find it difficult to accept the claim that the original fluoridation studies were invalid. That is why some of us, who have reached that conclusion, have submitted an invitation to examine and discuss new and old evidence "in the hope that at least some kind of scholarly debate will ensue" [31].

However, whether or not the early studies were valid, new evidence strongly indicates that water fluoridation today is of little if any value. Moreover, it is now widely conceded that the main action of fluoride on teeth is a topical one (at the surface of the teeth), not a systemic one as previously thought, so that there is negligible benefit from swallowing fluoride [32].

**HARM FROM FLUORIDATION**

The other kind of evidence which changed my mind was that of harm from fluoridation. We had always assured the public that there was absolutely no possibility of any harm. We admitted that a small percentage of children would have a slight mottling of their teeth, caused by the fluoride, but this disturbance in the formation of tooth enamel would, we asserted, be very mild and was nothing to worry about. It was, we asserted, not really a sign of toxicity (which was how the early literature on clinical effects of fluoride had described it) but was only at most a slight, purely cosmetic change, and no threat to health. In fact, we claimed that only an expert could ever detect it.

**HARM TO TEETH**
So it came as a shock to me when I discovered that in my own fluoridated city some children had teeth like those in Fig. 3. This kind of mottling answered the description of dental fluorosis (bilateral diffuse opacities along the growth lines of the enamel). Some of the children with these teeth had used fluoride toothpaste and swallowed much of it. But I could not find children with this kind of fluorosis in the nonfluoridated parts of my Health District, except in children who had been given fluoride tablets at the recommended dose of that time.

I published my findings: 25 percent of children had dental fluorosis in fluoridated Auckland and around 3 percent had the severer (discolored or pitted) degree of the condition [33]. At first the authorities vigorously denied that fluoride was causing this unsightly mottling. However, the following year another Auckland study, intended to discount my finding, reported almost identical prevalences and severity, and recommended lowering the water fluoride level to below 1 ppm [34]. Others in New Zealand and the United States have reported similar findings. All these studies were reviewed in the journal of the International Society for Fluoride Research [35]. The same unhappy result of systemic administration of fluoride has been reported in children who received fluoride supplements [36]. As a result, in New Zealand as elsewhere, the doses of fluoride tablets were drastically reduced, and parents were warned to reduce the amount of fluoride toothpaste used by their children, and to caution them not to swallow any. Fluoridationists would not at first admit that fluoridated water contributed to the unsightly mottling — though later, in some countries including New Zealand, they also recommended lowering the level of fluoride in the water. They still insist that the benefit to teeth outweighs any harm.

Figure 3. — Examples of dental fluorosis in 8- and 9-year old children who grew up in fluoridated Auckland, New Zealand

WEAKENED BONES

Common sense should tell us that if a poison circulating in a child's body can damage the tooth-forming cells, then other harm also is likely. We had always admitted that fluoride in excess can damage bones, as well as teeth.

By 1983 I was thoroughly convinced that fluoridation caused more harm than good. I expressed the opinion that some of these children with dental fluorosis could, just possibly, have also suffered harm to their bones [Letter to Auckland Regional Authority, January 1984]. This opinion brought scorn and derision: there was absolutely no evidence, my dental colleagues asserted, of any other harm from low levels of fluoride intake, other than mottling of the teeth.

Six years later, the first study reporting an association between fluoridated water and hip fractures in the elderly was published [37]. It was a large-scale one. Computerization has made possible the accumulation of vast data banks of information on various diseases. Hip fracture rates have increased dramatically, independently of the increasing age of populations. Seven other studies have now reported this association.
between low water fluoride levels and hip fractures [38-44]. Have there been contrary findings? Yes; but most of the studies claiming no association are of small numbers of cases, over short periods of time, which one would not expect to show any association [45, 46]. Another, comparing a fluoridated and a nonfluoridated Canadian community, also found an association in males but not in females, which hardly proves there is no difference in all cases [47]. Our fluoridationists claim that the studies which do show such an association are only epidemiological ones, not clinical ones, and so are not conclusive evidence.

But in addition to these epidemiological studies, clinical trials have demonstrated that when fluoride was used in an attempt to treat osteoporosis (in the belief it strengthened bones), it actually caused more hip fractures [48-52]. That is, when fluoride accumulates in bones, it weakens them. We have always known that only around half of any fluoride we swallow is excreted in our urine; the rest accumulates in our bones [53, 54]. But we believed that the accumulation would be insignificant at the low fluoride levels of fluoridated water. However, researchers in Finland during the 1980s reported that people who lived 10 years or more in that country's one fluoridated city, Kuopio, had accumulated extremely high levels of fluoride in their bones — thousands of parts per million — especially osteoporosis sufferers and people with impaired kidney function [55, 56]. After this research was published, Finland stopped fluoridation altogether. But that information has been ignored by our fluoridationists.

**BONE CANCER?**

An association with hip fracture is not the only evidence of harm to bones from fluoridation. Five years ago, animal experiments were reported of a fluoride-related incidence of a rare bone cancer, called osteosarcoma, in young male rats [57]. Why only the male animals got the bone cancer is not certain, but another study has reported that fluoride at very low levels can interfere with the male hormone, testosterone [58]. That hormone is involved in bone growth in males but not in females.

This finding was dismissed by fluoridation promoters as only "equivocal evidence," unlikely to be important for humans. But it has now been found that the same rare bone cancer has increased dramatically in young human males — teenage boys aged 9 to 19 — in the fluoridated areas of America but not in the nonfluoridated areas [59]. The New Jersey Department of Health reported osteosarcoma rates were three to seven times higher in its fluoridated areas than in its nonfluoridated areas [60].

Once again, our fluoridationists are claiming that this evidence does not "conclusively" demonstrate that fluoride caused the cancers, and they cite small-scale studies indicating no association. One study claimed that fluoride might even be protective against osteosarcoma [61]; yet it included only 42 males in its 130 cases, which meant the cases were not typical of the disease, because osteosarcoma is routinely found to be more common in males. Also, the case-control method used was quite inappropriate, being based on an assumption that if ingested fluoride was the cause, osteosarcoma victims would require higher fluoride exposure than those without the disease. The possibility that such victims might be more susceptible to equal fluoride exposures was ignored. All these counter-claims have been subjected to critical scrutiny, which suggests they are flawed [62, 63]. Nonetheless, the pro-fluoride lobbyists continue to insist that water fluoridation should continue because, in their view, the benefits to teeth outweigh the possibility of harm. Many dispute that assessment.

**OTHER EVIDENCE OF HARM**
There is much more evidence that tooth mottling is not the only harm caused by fluoridated water. Polish researchers, using a new computerized method of X-ray diagnosis, reported that boys with dental fluorosis also exhibit bone structure disturbances [64]. Even more chilling is the evidence from China that children with dental fluorosis have on average lower intelligence scores [65, 66]. This finding is supported by a recently published animal experiment in America, which showed that fluoride also accumulated in certain areas of the brain, affecting behavior and the ability to learn [67].

ENDORSEMENTS NOT UNIVERSAL

Concerning the oft-repeated observation that fluoridation has enjoyed overwhelming scientific endorsement, one should remember that even strongly supported theories have eventually been revised or replaced. From the outset, distinguished and reputable scientists opposed fluoridation, in spite of considerable intimidation and pressure [68, 69].

Most of the world has rejected fluoridation. Only America where it originated, and countries under strong American influence persist in the practice. Denmark banned fluoridation when its National Agency for Environmental Protection, after consulting the widest possible range of scientific sources, pointed out that the long-term effects of low fluoride intakes on certain groups in the population (for example, persons with reduced kidney function), were insufficiently known [70]. Sweden also rejected fluoridation on the recommendation of a special Fluoride Commission, which included among its reasons that: "The combined and long-term environmental effects of fluoride are insufficiently known" [71]. Holland banned fluoridation after a group of medical practitioners presented evidence that it caused reversible neuromuscular and gastrointestinal harm to some individuals in the population [72].

Environmental scientists, as well as many others, tend to doubt fluoridation. In the United States, scientists employed by the Environmental Protection Agency have publicly disavowed support for their employer's pro-fluoridation policies [73]. The orthodox medical establishment, rather weak or even ignorant on environmental issues, persist in their support, as do most dentists, who tend to be almost fanatical about the subject. In English- speaking countries, unfortunately, the medical profession and its allied pharmaceutical lobby (the people who sell fluoride) seem to have more political influence than environmentalists.

REFERENCES


32. *Journal of Dental Research* 69 (Special Issue):606-613. 1990.


Submission to Annual Plan 2016

Mary Byrne
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30th March 2016

I would like to speak to my submission.

THE DOSE MAKES THE POISON

Dear Mayor and councillors,

As you are responsible for adding fluoridation chemicals to the public drinking water, I request that each member (Mayor and councillors) provide answers to the following questions. The answers need to be made public so residents can be fully informed.

What is the maximum amount of water a fully bottle fed six month old baby can consume to ensure they do not reach a dose that could adversely affect the development of their:

1. teeth
2. thyroid
3. brain?

Background

Teeth
This study by Hong et al (http://www.ncbi.nlm.nih.gov/pubmed/17063020) gives the dose that is likely to cause dental fluorosis. Most parents do not want their baby to develop dental fluorosis because, apart from the damage to the teeth, this is a physical, outward sign that the child has had too much fluoride. It is thought to be caused by fluoride poisoning the enzymes that are required
to form enamel correctly. If fluoride has poisoned the enzymes that are involved in tooth development it begs the question of what other enzymes in the body have been poisoned.

**Thyroid**
The US Government’s National Research Council also determined a dose that is likely to affect the human thyroid. Obviously, parents do not want their baby to receive a dose of fluoride that may affect the thyroid. See the NRC’s Fluorides in Drinking Water chapter on the Endocrine System ([http://www.ncbi.nlm.nih.gov/pubmed/17063020](http://www.ncbi.nlm.nih.gov/pubmed/17063020)). The National Research Council is set up by the National Academy of Science which is the highest scientific body in the US.

**Brain**
In December 2015, the US National Toxicology Program announced that they will be conducting a systematic review on fluoride’s neurotoxic effects. They will also be undertaking their own new studies to determine the level of fluoride that causes neurotoxic impairment. According to Dr Birnbaum, Ph.D. Director, NIEHS & NTP, the reduction to 0.7ppm in “part had to do with the fact that when you reviewed all of the literature there was evidence for effects occurring as low as about 2.5, maybe lower than that and going from 1.2 to 2.5 is only a margin of exposure of about 2 fold. And we know nothing, as I said before about differential susceptibility and vulnerability that occurs within the population. And that was part of the justification for taking it down to .7”. (Watch from 1h7m)

I understand that the New Zealand Ministry of Health, the New Zealand Dental Association, a number of Dental Associations around the world and even the World Health Organisation support fluoridation, although the Health Ministries throughout Europe do not. Regardless, the answers need to be based on science not the endorsements. And please note I am asking you to provide an INDIVIDUAL'S DOSE not a concentration in the water.

Regards
Mary Byrne
Submission on 2016 Annual Plan

This submission is from a group, on behalf of its members in your region. We wish to be heard on this submission.

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Te Aroha

30th March 2016

Dear Mayor and Councillors,

Evidence that fluoridation is causing harm is continuing to mount. To add to that, the theory on which fluoridation was based; that fluoride needed to be ingested while teeth were growing to make them more resistant to decay, has been rejected by everyone including those who still promote it. It is now known to be a surface effect i.e. works on the outside of the tooth not from the inside.
The Basis for our Submission

Our group has been researching this subject for many years, some members even since the inception in the 1950s. We have endeavoured to provide you with the most up-to-date and accurate information possible and provide a reference for the many facets of this issue.

Considering:

• In December last year (2015) the US Government’s National Toxicology Program (NTP) decided to undertake studies looking at the link between fluoride exposure and adverse effects on the developing brain. Results from these studies could mean the end to fluoridation world-wide.

• To date, there have been 314 studies that have investigated fluoride’s effects on the brain and nervous system. This includes 181 animal studies, 112 human studies and 21 cell studies (see http://tinyurl.com/osvqtjs).

• A study published last year in *Epidemiology and Community Health*, one of the main British medicals journals, looked at thyroid disease patient numbers from 99% of GP practices in the UK. It found that women living in fluoridated areas have a 60% increased chance of suffering from underactive thyroid.

• Another study published last month in *Environmental Health* shows that there is a strong correlation between an increase in ADHD in children and increased prevalence of fluoridation in the US.

• “For many years it was believed that it worked systemically. It is now generally accepted that it works topically” Judge Hansen, High Court, New Plymouth March 2014.

• The Ministry of Health no longer recommends fluoride tablets¹.

• According to Dr Robin Whyman, consultant to the National Fluoridation Information service, “It is generally accepted that the principal caries protective effect from fluoride is topical”²

• All large scale studies show there is no significant difference in decay rates between children living in fluoridated areas compared to nonfluoridated areas.

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¹ http://www.stuff.co.nz/taranaki-daily-news/news/5826420/Taranaki-residents-buy-up-fluoride-tabs
² http://www.huttvalleydhb.org.nz/RPH/Resource.aspx?ID=36345 (bottom of page 9 – pdf has now been removed from NFIS site but can be supplied on demand)
• fluoride is linked to a growing number of adverse health effects including:
  • lowered IQ
  • attention deficit and hyperactivity disorder
  • bone cancer in young males
  • an increase in cancer rates generally
  • arthritis
  • thyroid dysfunction
  • heart disease and related death
  • Increased premature births, with associated increased infant mortality
• Dental fluorosis affects around 30% of children in fluoridated areas compared to 15% in unfluoridated areas. Dental fluorosis is the first outward sign of chronic fluoride poisoning.
• A large section of the population does not want any fluoride chemicals added to their water.
• Adding fluoride chemicals to the community water supply removes choice since there are only so many steps people can take to avoid it. For instance people may drink non-fluoridated water but they still have to bathe in it.
• Providing dental health services is not the Council’s responsibility
• There are plenty of effective measures the DHB could do to reduce dental decay in the population
• Dental decay is rampant in the poorer sections of Auckland.

Money spent on fluoridation should be spent on truly helping the families that need it rather than wasting precious resources supposedly trying to help everyone but in effect, not helping anyone.
Our Submission will expand on the following:

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2. Legal Action – Exemption of Fluoridation Chemicals from the Medicines Act  
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3. Risk to Bottle Fed Infants  
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17. Significant Reviews  
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1. Recent Council decisions in New Zealand

Auckland Council has reduced fluoride concentration level to a target of 0.7ppm from 0.85ppm.

Taupo District Council has agreed to have Fluoridation an item for consultation on the 2017 Long Term Plan.

Whakatane District Council voted in January to stop fluoridation with a vote 6 to 4. Unfortunately, Cr Van Beek changed his position and a vote taken two weeks later saw the situation reversed with a vote 5 to 4 to continue fluoridation (one councillor unable to attend as he was in hospital).

Referendum in Coromandel Thames District Council last year saw vote to continue fluoridation.

2. Legal action

New Health NZ has appealed a decision against South Taranaki District council and another decision against Medsafe. Both are due to be heard sometime this year (2016).

Judge Hansen has ruled on the legal challenge that New Health NZ lodged against the South Taranaki District council. The judge has ruled that fluoridation is legal even though it is undertaken for a therapeutic purpose.

Medsafe say “a product is a medicine if a therapeutic purpose is claimed for it”. It does not actually have to be effective; the key element is the claim.

Therefore, New Health New Zealand lodged a Declaratory Judgment against the Ministry of Health about whether or not the fluoridation chemicals, hydrofluorosilicic acid and sodiumsilicofluoride, should come under the auspices of the Medicines Act, considering they are being used for a therapeutic purpose. Judge Collins ruled that the fluoridation chemicals satisfied all the key elements of a medicine. They are used for a therapeutic purpose and they achieve their intended action on the human body by a pharmacological means. However, he ruled they were not medicines since they were added to the public drinking water at a concentration lower than 10mg/L.

The Judge has made a patently obvious error as he referred to a section in the Act that regulates Prescription, Restricted and Pharmacy only medicines. Not meeting the classification for one of these types of medicines does not mean a substance is not a medicine; it just means it is a general sale medicine.

It would seem that Judge Collins was aware that this decision would likely be overturned on Appeal as he advised the Ministry of Health to seek an exemption for fluoridation chemicals.
The Ministry of Health duly did this at the end of last year. They gave the required number of days for public consultation but as this was over the Christmas period many people were unaware of it taking place. However, over 1300 people did lodge an objection. Medafe then took only 11 working days after receiving the public input to write a report to the Minister advising that fluoridation chemicals be exempt from the Act.

The Minister then signed the exemption into law making fluoridation chemicals the only ingested product (except homeopathic remedies) that can be used for a therapeutic purpose that do not have to abide by the rules of the Medicines Act.

3. Risk to Bottle Fed Infants

The New Hampshire State Legislature has mandated that a warning be placed on all residential water billing systems if the water is fluoridated.

“Your public water supply is fluoridated. According to the Centers for Disease Control and Prevention, if your child under the age of 6 months is exclusively consuming infant formula reconstituted with fluoridated water, there may be an increased chance of dental fluorosis. Consult your child’s health care provider for more information”.

Risks to bottle fed infants confirmed by NZ research

Research by Peter Cressey\(^ 4\) of Environmental and Scientific Research estimated that infants up to 6 months old and fed with formula made from water fluoridated at 0.7ppm had a 30% likelihood of exceeding the specified upper limit of 0.7 mg/day. At 1ppm, exceeding this limit was virtually certain.

It should be noted that there is no scientific basis for claiming that 0.7 mg/day is safe for infants as no studies on infants have been done – it is just pro-rata’d from adult levels on a body weight basis, which is invalid as infants are biologically different from adults. In particular, the blood-brain barrier is not fully formed, making infants especially susceptible to neurological/brain damage.

Bottle fed babies receive at least 150 times as much fluoride as their breast fed counterparts, even when the mother is ingesting fluoridated water. Common sense would tell us this is not a sensible. Added to this is that there is not even a claimed benefit for babies when they do have teeth, to take such a risk is reckless and irresponsible.

US Research\(^ 5\) concluded in 2010 also confirms the increased risk of fluorosis from infant formula reconstituted with fluoridated water.

\(^3\) [http://www.gencourt.state.nh.us/legislation/2012/HB1416.html](http://www.gencourt.state.nh.us/legislation/2012/HB1416.html)

\(^4\) Peter Cressey, BSc(Hons), Food Safety Programme, Institute of Environmental Science and Research

\(^5\) Levy SM, Broffitt B, Marshall TA, Eichenberger-Gilmore JM, Warren JJ. 2010. Associations between fluorosis of permanent incisors and fluoride intake from infant formula, other dietary...
Children in fluoridated communities are experiencing twice as much dental fluorosis as children in non-fluoridated communities (roughly 30% compared to 15%). This makes each fluoridating council responsible for causing 15% of the children in the community to develop dental fluorosis.

At the very least, we believe NZ councils should do the same as the New Hampshire Legislature and issue information/warnings with rates notices.

4. Ethnic minority advocates in the USA call for an end to fluoridation.

African Americans and Latin Americans are harmed by fluoridation more than white Americans for the same reasons that Maori and Pacific Peoples are most disadvantaged by fluoridation in NZ:

- Higher incidence of diabetes
- Higher incidence of kidney disease
- Lower average socio-economic status
- Lower Vitamin D levels causing lessened calcium metabolism (calcium protects the body from fluoride’s toxicity).

First, Dr Andrew Young called for an end to fluoridation on behalf of African Americans. Dr Young is a former Mayor of Atlanta, former US ambassador to the UN, highly decorated by many countries, former close associate of the late Dr Martin Luther King Jnr, and leading black civil rights leader. Dr. Young was then joined by fellow civil rights leaders Reverend Dr. Gerald Durley, and Dr. Martin Luther King Jr.’s daughter, Dr. Bernice King, and niece, Dr. Alveda King.

The League of United Latin American Citizens (LULAC) also joined in the chorus. It is worth noting their last demand, as it reflects the situation with the NZ Ministry of Health:

“LULAC demands to know why government agencies entrusted with protecting the public health are more protective of the policy of fluoridation than they are of public health.”

Full LULAC statement attached.

5. Fluoridation Chemicals are classified as Hazardous Waste

The chemicals used to fluoridate the water are not pharmaceutical grade compounds but have been scrubbed from the chimneys of the phosphate fertiliser industry. In New Zealand these compounds are Silicofluorides, either sodium silicofluoride Na$_2$SiF$_6$ (usually imported from Belgium) or Hydrofluorosilicic acid H$_2$SiF$_6$ sourced from Orica, we think from the Waikato.
Both of these substances are classified as hazardous waste with various warnings such as “Avoid contact with skin and eyes”, “Repeated or prolonged exposure may result in fluorosis” and “Avoid contaminating waterways”. Material Safety Data Sheets attached.

These compounds are not the same as naturally occurring fluoride. Naturally occurring fluoride is usually accompanied with high levels of calcium and or magnesium which help to detoxify the fluoride.

It is also noteworthy that the New Plymouth District Council and the Hamilton city Council acknowledged that the only way it could dispose of its remaining fluoride was to feed it into the water supply until expended – it could not legally dump it anywhere else as it is too toxic!\(^6\)

6. Increased lead uptake with silicofluorides

Researchers\(^7\). Sawan et al, in 2010 confirmed findings of previous studies by Masters and Coplan\(^8\), which found that the use of silicofluorides increased the uptake of lead into the blood.

The authors concluded: “These findings show that fluoride consistently increases blood lead and calcified tissues lead concentrations in animals exposed to low levels of lead and suggest that a biological effect not yet recognized may underlie the epidemiological association between increased blood lead levels in children living in water-fluoridated communities.”

Probably anticipating the usual criticism levelled against animal studies of this type, the authors carefully address the issue of the concentrations of both lead and fluoride used in this experiment. They write:

“The concentration of lead was chosen because it produces plasma fluoride levels that are comparable with those commonly found in humans chronically exposed to 8mg/L of fluoride in the drinking water, which is a concentration known to cause severe fluorosis.”

“Since this study was based on a hypothesis derived from epidemiological evidence from thousands of children (that fluoride from the water might increase blood-lead levels), we felt that we had to maximize fluoride concentrations to observe its influence on lead levels in this proof-of-concept animal study. Children are frequently exposed to high levels of fluoride during their first years because of the many sources of fluoride available to them. Therefore, it is likely that young children may experience episodes of exposure to high levels of fluoride, which may cause their blood lead levels to increase and produce more lead toxicity.”

“A reason for major concern is the fact that exposure to increased amounts of lead and fluoride occurs at about the same age (1-3 years).”

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\(^8\) Coplan MJ, Patch SC, Masters RD, Bachman MS. Neurotoxicology. 2007 Sep;28(5):1032-42
\(^9\) Masters RD, Coplan MJ, Hone BT, Dykes JE. Neurotoxicology. 2000 Dec;21(6):1091-100
7. Thyroid Disease

The thyroid gland, which regulates the body’s metabolic rate, plays an exquisitely important role in human health. Because all metabolically active cells require thyroid hormone for proper functioning, thyroid disruption can have a wide range of effects on virtually every system of the body. Chemicals that interfere with thyroid function must be treated with great caution. According to the U.S. National Research Council, and as discussed below, there is substantial evidence that fluoride exposure can impact thyroid function in some individuals. (NRC 2006).

Fluoride Was Once Prescribed as an Anti-Thyroid Drug

When people think of fluoride being prescribed for medicinal purposes, they generally think of fluoride supplementation to reduce tooth decay. Fluoride, however, has also been prescribed as a drug to reduce the activity of the thyroid gland. Up through the 1950s, doctors in Europe and South America prescribed fluoride to reduce thyroid function in patients with over-active thyroids (hyperthyroidism). (Merck Index 1968). Doctors selected fluoride as a thyroid suppressant based on findings linking fluoride to goitre, and, as predicted, fluoride therapy did reduce thyroid activity in the treated patients. (McClaren 1969; Galletti 1958; May 1937). Moreover, according to clinical research the fluoride dose capable of reducing thyroid function was notably low – just 2 to 5 mg per day over several months. (Galletti & Joyet 1958). This dose is well within the range (1.6 to 6.6 mg/day) of what individuals living in fluoridated communities are now estimated to receive on a regular basis. (US Dept Human and Health Services 1991).

Fluoride & Hypothyroidism

Based on fluoride’s anti-thyroid effects in hyperthyroid patients, concerns have arisen about whether current fluoride exposures could be contributing to the increased prevalence of under-active thyroid (clinical and/or subclinical hypothyroidism) in the United States and other nations. In February 2015, British scientists reported that fluoridated water in Britain is associated with elevated rates of hypothyroidism:

“We found that higher levels of fluoride in drinking water provide a useful contribution for predicting prevalence of hypothyroidism. We found that practices located in the West Midlands (a wholly fluoridated area) are nearly twice as likely to report high hypothyroidism prevalence in comparison to Greater Manchester (non-fluoridated area).” (Peckham 2015).

Supporting the fluoride/hypothyroidism connection are a number of studies from China, India, and Russia that have found alterations in thyroid hormones, including reduced T3 and increased TSH, in populations exposed to elevated levels of fluoride in the workplace or in the water. (NRC 2006; Susheela 2005; Mikhailets 1996; Yao 1996; Bachinskii 1985; Yu 1985).
In clinical hypothyroidism, the thyroid gland fails to produce sufficient quantities of the hormones triiodothyronine (T3) and thyroxine (T4). These hormones are required by all metabolically active cells, and their reduced presence can thus produce a range of ill effects, including fatigue, muscle/joint pain, depression, weight gain, menstrual disturbances, impaired fertility, impaired memory, and inability to concentrate. When T3 and T4 levels begin to fall, the pituitary gland responds by increasing production of “Thyroid Stimulating Hormone” (TSH) as a means of getting the thyroid to produce more T3 and T4.

In subclinical hypothyroidism, the TSH level is elevated, but the T3 and T4 hormones are still within the normal range. Although subclinical hypothyroidism used to be regarded as largely inconsequential, it is increasingly considered a “clinically important disorder.” (Gencer 2012). Some studies have found, for example, that subclinical hypothyroidism in pregnant women results in reduced IQ in offspring, (Klein 2001; Haddow 1999), and a recent study in the *Journal of the American Medical Association* found that adults with subclinical hypothyroidism had a significantly higher rate of coronary heart disease. (Rodondi 2010).

Studies investigating fluoride’s impact on thyroid hormone levels have produced divergent findings, but are consistent with fluoride having an anti-thyroid effect under certain circumstances. (NRC 2006). The most common thyroid effect associated with fluoride exposure appears to be an increase in TSH levels, with or without a corresponding effect on T3 or T4. (Susheela 2005). One of the most recent studies, for example, found a trend towards higher TSH in children based on the severity of their dental fluorosis, but without a significant effect on either T3 or T4. (Hosur 2012). These and other findings indicate that fluoride can contribute to a subclinical, if not clinical, hypothyroid condition. It remains difficult to predict the toxic dose, however, as it appears to depend, in part, on genetics and the nutritional and health status of the individual, particularly the adequacy of iodine intake. (NRC 2006).

8. Neurotoxicity

Fluoride’s ability to damage the brain is one of the most active areas of fluoride research today. In the past three decades, over 100 studies have found that fluoride exposure can damage the brain. The latest being the study published in the peer reviewed journal Environmental Health found in February this year that found a strong correlation between an increase in ADHD in children and increased prevalence of fluoridation.

**The research includes:**

- Over 100 animal studies showing that prolonged exposure to varying levels of fluoride can damage the brain, particularly when coupled with an iodine deficiency, or aluminum excess;
• 43 human studies linking moderately high fluoride exposures with reduced intelligence;
• 31 animal studies reporting that mice or rats ingesting fluoride have an impaired capacity to learn and/or remember;
• 12 studies (7 human, 5 animal) linking fluoride with neurobehavioral deficits (e.g., impaired visual-spatial organization);
• 3 human studies linking fluoride exposure with impaired fetal brain development.

Of note:

Based on this accumulating body of research, several prestigious reviews — including a report authored by the U.S. National Research Council and a meta-analysis published by a team of Harvard scientist — have raised red flags about the potential for low levels of fluoride to harm brain development in some members of the population.

An article in the Lancet in 2014 by world renowned epidemiologists Granjean and Landrigan has labelled fluoride a neurotoxin in the same league as lead, methylmercury, polychlorinated biphenyls, arsenic, and toluene.10

In 201111 a study found a direct relationship between dental fluorosis and lowered IQ.

Scientific Consensus Statement on Neurodevelopmental Disorders identified that children are more susceptible to neurotoxic damage as the brain is still developing. It identified fluoride as posing a greater risk than could be justified by claims of reduced tooth decay.

In 2007 the prestigious medical journal Lancet identified fluoride as “an emerging neurotoxin” in this context.

In 2004 Guan et al12 show fluoride reduces the number of nicotinic acetylcholine receptors in the brain. Acetylcholine is the body’s main neurotransmitter. Earlier research showed that this effect resulted in a raft of neurological disorders, including ADD, epilepsy, Parkinson’s, Turette’s Syndrome, lowered IQ, etc.

In 199813 Varner et al show that fluoride increases the incidence of amyloid deposits in the brain, typical of Alzheimer’s Dementia.

In 1995 Mullinex et al14 found that newborn rats exposed to fluoride exhibit either ADD/ADHD symptoms, or lethargy, depending on whether they are exposed to fluoride before or following birth.

The Dunedin IQ study by Broadbent et al

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10 http://www.thelancet.com/journals/laneur/article/PIIS1474-4422(13)2970278-3/abstract
11 http://www.jisppd.com/article.asp?issn=0970-4388;year=2011;volume=29;issue=2;spage=117;epage=120;aulast=Shivaprakash
In 2014 Broadbent et al published a study based on data collected in the Dunedin Multidisciplinary study. The study claimed there was no difference in IQ between the fluoridated and non-fluoridated children in Dunedin/Mosgiel. However there were 891 children in the fluoridated area and only 99 children in non-fluoridated area. As Dr Broadbent has had to admit, 53 of the so-called non-fluoridated children were actually taking fluoride tablets. Consuming fluoridated tablets gives a child a dose similar to what a child would get from drinking fluoridated water.

Therefore there were only 46 children in the whole study that were not being given extra fluoride. Dr Broadbent’s excuse for not including this figure in his published research was that he was looking at fluoridation rather than fluoride intake. So the most obvious confounding factor was excluded from the study’s results.

The study also fails to allow for what may transpire to be the most important confounding factor. That is the mothers’ fluoride intake and other factors like iodine deficiency as the most vulnerable period for IQ damage is in the womb. This important aspect was not controlled for either.

9. Increase in Premature Births

Latest research from one of the world’s leading fluoride researchers, Dr Shusheela, found that reducing fluoride intake during pregnancy reduces premature birth rates and increases birth weights.

The benefits of avoiding fluoride, while taking iron and Folic Acid supplements, during pregnancy were described as “extraordinary” by the research team. The study showed that fluoride inhibits uptake of iron and Folic Acid supplements, presumably because it is known to damage the intestinal tract, reducing nutrient uptake.

The effect of avoiding fluoride, with or without supplements, was to increase haemoglobin levels, thus reducing anaemia, a major cause of premature and underweight births. Low iron anaemia also increases the risk of brain and thyroid damage to the baby, reflected in lowered IQ and increased neurological disorders shown by other studies since 1995.

State University of New York researchers found that fluoridation causes more premature births, one of the top causes of infant death in the USA. It poses the greatest risk to poor non-white mothers and babies. They used data spanning from 1993 to 2002.

A baby born at least 3 weeks early is classified as premature – accounting for about 12 percent of US births.

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16 presentation made at the 2009 American Public Health Association's annual meeting.
To ensure fluoridation was the culprit, and not some other factor, the researchers recorded fluoridation residence status (under or over 1 ppm) and adjusted for age, race/ethnicity, neighbourhood poverty level, hypertension and diabetes.

The data came from the NY Statewide Planning and Research Cooperative System, which collects comprehensive information on patient characteristics and treatment history. The research was conducted within the university’s Department of Epidemiology and Biostatistics, School of Public Health.

Research in Chile in the 1970s also showed fluoridation caused an increase in infant death rates. Chile stopped fluoridation as a result.

10. Fluoride and Heart Disease.

Research published in January 2012 concluded that there was a direct correlation between the fluoride level in arteries, including coronary arteries, and artherosclerosis, such that the scanning for the fluoride level could be used to diagnose the level of disease.

It found a direct relationship between the fluoride level and the patient’s history of heart disease, and concluded that “an increased fluoride uptake in coronary arteries may be associated with an increased cardiovascular risk.”

Research published in February and May 2010 shows fluoride affects the aorta (main artery) and heart in ways that lead to increased heart attacks.

Previous research had shown that the heart beat rate slows, and heart rate abnormalities increase, in direct proportion to increasing fluoride levels. Fluoride accumulates over a period of 20 to 40 years to reach the “Class 1” level (that has this effect), shown in the chart below. Arsenic and fluoride (both high in the water supplies under study) were seen to be able to exert toxic effects independently. Fluoride’s effects were evident at water at levels of 0.2 mg/L or more of fluoride.

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17 Li, Yuxin; Berenji, Gholam R.; Shaba, Wisam F.; Tafti, Bashir; Yevdayev, Ella; Dadparvar, Simin “Association of vascular fluoride uptake with vascular calcification and coronary artery disease” Nuclear Medicine Communications: January 2012, Volume 33, Issue 1; p 14–20
18 Ercan Varol et al, Biological Trace Element Research, Volume 133, Number 2 / February, 2010
19 Ercan Varol et al, Science of the Total Environment, Volume 408, Issue 11, 1 May 2010, Pages 2295-2298
20 Wang et al, “Toxicity From Water Containing Arsenic and Fluoride in Xinjiang” Fluoride Vol. 30 No. 2 81-84 1997
In laboratory studies, cultured myocardial cells of mice were adversely affected by fluoride.\textsuperscript{22} Statistically significant increases in the concentrations of sodium and potassium, and decreases in calcium and phosphorus concentrations were observed in rats given fluoride.\textsuperscript{23}

While many studies quoted here were conducted in areas with high fluoride levels in drinking water, total fluoride exposure today is at a similar level. Further, since fluoride is a cumulative poison, lower levels of fluoride will have a more subtle long-term effect, thus increasing heart problems – still the number one killer in our society.

Japanese researchers found that children with dental fluorosis have a higher incidence of heart damage than those without fluorosis.\textsuperscript{24} Chinese researchers showed an increase in abnormal heart rhythm in patients with dental fluorosis.\textsuperscript{25}

It also unquestionably proves that fluoride does accumulate in soft tissue – something fluoridation promoters had always denied emphatically, claiming it all goes to the bones or teeth, and never the soft tissues.

### 11. Osteosarcoma

Blood-fluoride levels are significantly higher in patients with osteosarcoma (bone cancer), according to research published in \textit{Biological Trace Element Research} (April 2009\textsuperscript{26}).

\textsuperscript{22} Qin CD et al “Effect of fluoride on spontaneous electrical activity of cultured myocardial cells” \textit{Chinese Journal of Endemiology} 7, 1988, (5) 270-273
\textsuperscript{23} R. J. Verma and D. M. Guna Sherlin “Hypocalcaemia in parental and F\textsubscript{1} generation rats treated with sodium fluoride” \textit{Food and Chemical Toxicology} Volume 40, Issue 4, April 2002, Pages 551-554
\textsuperscript{25} Wang et al, "Toxicity From Water Containing Arsenic and Fluoride in Xinjiang" Fluoride Vol. 30 No. 2 81-84 1997
Osteosarcoma patients were compared with those with other types of bone tumours, and patients with musculo-skeletal pain. Those with osteosarcoma specifically showed increased blood-fluoride levels.

The researchers concluded "This report proves a link between raised fluoride levels in serum and osteosarcoma," (our emphasis)

2006 – Bassin\textsuperscript{27} demonstrated that boys, but not girls, exposed to fluoridated water between the ages of 6 and 10 have a 500-700\% increased risk of developing osteosarcoma (a usually fatal form of bone cancer) in their teenage years. This confirmed an earlier study by the New Jersey Department of Health\textsuperscript{28} (1992)

No research has ever contradicted Bassin’s findings.

Approximately six NZ teenage males die each year from osteosarcoma. On the weight of evidence, it appears the majority could easily be due to fluoridation. The Ministry of Health is not concerned since they have not seen a cluster of these cancers. However, the fact that being exposed between ages 6 and 8 is the likely risk time and that diagnosis does not occur until late teens no one would expect to find a cluster unless they found out where these boys living when they were younger. Careful research is needed.

**12. Accumulation in the pineal gland**

In 2001, Luke\textsuperscript{29} showed that fluoride accumulates in the pineal gland (up to 21,000 ppm). She had previously shown, in 1997, that such accumulation reduces melatonin production by the gland, resulting in earlier onset of puberty. For girls, this increases the risk of breast cancer, as the risk is related to the time period between first menstruation and first pregnancy.

Earlier onset of menstruation in girls was also identified in fluoridated Newburgh compared with non-fluoridated Kingston (by 5 months) in the original 1945-1955 trial\textsuperscript{30}.

Melatonin is also involved in sleep cycles. Disrupted sleep causes reduced immunity to disease.

\textsuperscript{26} Serum Fluoride and Sialic Acid Levels in Osteosarcoma. Sandhu R, Lal H, Kundu ZS, Kharb S. Biol Trace Elem Res. 2009 Apr 24.

\textsuperscript{27} Age-specific fluoride exposure in drinking water and osteosarcoma (United States). Bassin EB, Wypij D, Davis RB, Mittleman MA. Cancer Causes Control. 2006 May;17(4):421-8.


\textsuperscript{30} http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1620388/pdf/amjphnation00373-0054.pdf
13. Allergy and Intolerance

It has also been demonstrated that approximately 1 to 3 percent of the population has a chemical intolerance to fluoride. This equates to approximately 527 people in Porirua. A letter to the Kapiti Coast Mayor from an individual so diagnosed by his doctor is attached.

We have also become aware of two Wellington men who have suffered severe chronic fatigue and only recovered once they switched to non-fluoridated Petone water for drinking and cooking. In both of these cases the affect on these men was debilitating and was not recognised by any doctor. See Herald on Sunday for Stephen Hiscock’s story.31

Auckland man Andreas Sturmbauer was reported in the East & Coast Bays Courier32 on the 9th of April 2014 as suffering from gout and artritic symptoms whenever he consumed fluoridated water.

Hamilton chemical engineer, Gus Hastie, also shares his story of fluoride intolerance in a Youtube video.33

How many others in the Council’s territory are still suffering as a result of fluoridation?

Individuals in Australia and the USA have been similarly diagnosed, as has one of FANNZ’ committee members. Typical symptoms have been documented for over 50 years, including in Hastings residents following fluoridation in 1954, and in Windsor, Canada, even though fluoridation had begun without public knowledge.

14. Dental Health

All large scale studies prove fluoridation is ineffective

Children's cavity rates are similar whether water is fluoridated or not, according to data published in the July 2009 Journal of the American Dental Association by dentist J.V. Kumar34 of the New York State Health Department.

The data was from 30,000 children, first analysed in 1990. Kumar confirms the analysis of John Yiammouyanis, who showed then that there was no benefit from fluoridation. Errors in the official Government analysis at the time incorrectly claimed an 18% reduction in tooth decay from fluoridation; errors Yiammouyanis exposed.

The last large scale study was carried out in Australia in 2004, by Armfield and Spencer35. It showed no difference in dental decay between 12-year-old children who had been receiving

33 http://www.youtube.com/watch?v=1N373I1oYOQ
34 “The Association Between Enamel Fluorosis and Dental Caries in U.S. Schoolchildren,” Kumar & Iida Journal of the American Dental Association, July 2009 (Table 1)
35 Consumption of nonpublic water: implications for children's caries experience - Jason M. Armfield and A. John Spencer, Community Dentistry And Oral Epidemiology Volume 32 Issue 4 Page 283 - August 2004
fluoridated water, and those who had not. It also found that even mild dental fluorosis caused embarrassment to children and psychological problems and psychological problems equal to that caused by "overbite" and crooked teeth.

The largest study\textsuperscript{36} ever conducted in the US found no difference in decay rates between fluoridated and non-fluoridated areas.

**Decay rates decline after fluoridation stopped**

- "No increase in caries (cavities) was found in Kuopio (Finland) 3 years after the discontinuation of water fluoridation," according to Caries Research\textsuperscript{37}. In fact, when Kuopio was compared to a similar never fluoridated Finnish town, cavity rates in both towns either remained the same or decreased six years after fluoridation was stopped in Kuopio.
- Seven years after fluoridation ended in LaSalud, Cuba, cavities remained low in 6 to 9 year olds, decreased in 10 to 11 year-olds, significantly decreased in 12 to 13 year olds, while caries-free children increased dramatically, reports Caries Research\textsuperscript{38}.
- East German scientists report, "following the cessation of water fluoridation in the cities Chemnitz (formerly Karl-Marx-Stadt) and Plauen, a significant fall in caries prevalence was observed," according to Community Dentistry and Oral Epidemiology\textsuperscript{39}. Additional surveys in the formerly-fluoridated towns of Spremberg and Zittau found. "Caries levels for the 12-year-olds of both towns significantly decreased... following the cessation of water fluoridation."
- Not only did decay rates remain stable during an 11-month fluoridation break in Durham, NC, between September, 1990, and August, 1991 but dental fluorosis declined in children born during that period, according to the Journal of Dental Research\textsuperscript{40}
- In British Columbia, Canada, "the prevalence of caries decreased over time in the fluoridation-ended community while remaining unchanged in the fluoridated community," reported in Community Dentistry and Oral Epidemiology\textsuperscript{41}.
- In 1973, the Dutch town of Tiel stopped fluoridation. Researchers counted drilled, missing, and filled tooth surfaces (DMFS) of Tiel's 15-year olds, then collected identical data from never-fluoridated Culemborg. DMFS initially increased in Tiel then dipped to

\textsuperscript{38} Caries prevalence after cessation of water fluoridation in LaSalud, Cuba,`` Caries Research Jan-Feb. 2000
\textsuperscript{39} Decline of caries prevalence after the cessation of water fluoridation in the former East Germany,`` Community Dentistry and Oral Epidemiology, October 2000
\textsuperscript{40} The effects of a break in water fluoridation on the development of dental caries and fluorosis,`` Journal of Dental Research, Feb. 2000
\textsuperscript{41} Patterns of dental caries following the cessation of water fluoridation,`` Community Dentistry and Oral Epidemiology, February 2001
11% of baseline from 1968/69 to 1987/88 while never-fluoridated Culemborg's 15-year-olds had 72% less cavities over the same period, reports Caries Research.42

**Dental fluorosis**

Dental fluorosis is a defect in tooth enamel caused by fluoride poisoning of the body cells that make the tooth enamel. It appears as discolouration of the tooth, from white flecks to brown or black staining in advanced cases. It is the first sign of fluoride poisoning of children while their teeth are forming. The US National Research Council's 2006 report identified a number of studies linking dental fluorosis with other more serious adverse health effects.

Three studies have been conducted in NZ since 2004 which found no difference in decay rates between fluoridated and non-fluoridated communities but twice as much dental fluorosis in the fluoridated areas. See NZ Studies below.

A 2006 study43 conducted in Hong Kong records that even small changes in fluoridation levels cause measurable changes in dental fluorosis rates. As levels were dropped from 1ppm to 0.7ppm and then to 0.5ppm, dental fluorosis levels dropped similarly.

**Dental fluorosis and bone abnormality and fracture**

1993 - Polish pediatricians found abnormal bone changes in 11 to 15 year-olds exhibiting dental fluorosis.44

2001 - A Mexican study also links dental fluorosis to increased bone fractures.45

2006 - Wrist x-rays reveal that 96% of Tibetan children with dental fluorosis had “developmental skeletal abnormalities” including carpal bone hardening or thickening46.

The Ministry of Health continue to claim that dental fluorosis is only cosmetic. But that claim highlights a complete lack of serious thought. If the cells in the tooth have been damaged, then any thinking person would wonder what damage had been done to other parts of the body, particularly the bones.

**No benefit to adults.**

2007 - A review by Griffin et al,47 commissioned by the US Centers for Disease Control, found no reliable research to support the claim that fluoridation benefits adults.

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42 Caries experience of 15-year-old children in The Netherlands after discontinuation of water fluoridation,” Caries Research, 1993
45 M Teresa Allarcon-Herrera et al, “Wellwater Fluoride Dental Fluorosis And Bone Fractures In the Guadiana Valley of Mexico” Fluoride 2001 Vol.34 No.2 139-149
46 Jin Cao, Yan Zhao, Yi Li, Hui Jun Deng, Juan Yi and Jian Wei Liu, “Fluoride levels in various black tea commodities:
The review was of the existing (unreliable) research; not research itself. Griffin's opening statement is "To date, no systematic reviews have found fluoride to be effective in preventing dental caries in adults."

Echoing the York Review it continues: "There is a clear need for further well designed studies on the effectiveness of fluoride among adults."

15. Promoters agree – Fluoride’s primary benefit is topical

Featherstone has been one of the world’s leading authorities on fluoride and fluoridation.

His 1999 research published in the Centers for Disease Control’s Mobidity and Mortality 1999 has been a watershed moment for fluoridation as it then became “official” that fluoride does not work by being swallowed.

Fluoridation was based on the theory that fluoride needed to be incorporated into the tooth enamel as a child was growing to make the enamel more resistant to decay.

That theory has now been discredited even by the fluoridation promoters.

Featherstone states “The laboratory and epidemiologic research that has led to the better understanding of how fluoride prevents dental caries indicates that fluoride’s predominant effect is post eruptive and topical” i.e. works when the teeth have come into the mouth so that the fluoride can be applied to the teeth.

On page 11 of his study “The concentration of fluoride in ductal saliva, as it is secreted from salivary glands, is low — approximately 0.016 parts per million (ppm) in areas where drinking water is fluoridated and 0.006 ppm in nonfluoridated areas. This concentration of fluoride is not likely to affect cariogenic activity.”

Likewise, as stated above, Dr Whyman, arguably one of New Zealand’s leading fluoridation promoter’s states. “It is generally accepted that the principal caries protective effect from fluoride is topical”.


In 2010 the MoH published the findings of the 2009 Oral Health Survey in a publication called Our Oral Health. In the publication it states quite clearly "it is important to note that it was not one of the objectives of the 2009 NZOHS to compare the oral health status of people by fluoridation status, and therefore the survey cannot be considered a fluoridation study as such. The following results are for a snapshot in time. As such they do not take into consideration lifetime exposure to fluoridated and non-fluoridated water supplies".

Unfortunately the Ministry of Health and all the District Health Boards are now claiming a 40% reduction in decay rates by citing the figure in this survey. They are also saying there is no difference in decay rates which is contrary to the findings of the proper fluoridation/dental health studies.

The publication goes on to quote four studies to support their claim that water fluoridation reduces dental decay. These were:

1. Enamel defects and dental caries among Southland children 2005
3. Enamel defects and dental caries in 9-year-old children living in fluoridated and non-fluoridated areas of Auckland 2009
4. The Wellington-Canterbury study 2004

However, under closer examination, none of these studies did show that fluoridation reduced dental decay and the three that looked, found twice as much dental fluorosis in fluoridated areas.

**Enamel defects and dental caries among Southland children**\(^{49}\)

Pg 38 shows that 32% of children living all their life in a fluoridated area had diffuse opacities and 19% of children who had lived either none of their life, or some of their life in a fluoridated area had diffuse opacities.

Summary pg 35 – “The benefits of water fluoridation as a public health measure remain, with children continuously exposed to fluoridated water during their life having half the caries experience of those who have not”.

The Summary is in contrast to the detail on pg 39: “There were no significant differences in deciduous caries prevalence or severity (or in permanent caries prevalence) by sociodemographic characteristics or length of residence in fluoridated areas”.

Actual data on Table V page 40 shows that children who lived continuously in a fluoridated area had, on average, 1.22 DMFS and children who never lived in a fluoridated area had 0.70 DMFS – a difference of 0.52 DMFS i.e half a tooth surface.

**Prevalence of enamel defects and dental caries among 9-year-old Auckland children.**\(^{50}\)

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\(^{49}\) Mackay TD, Thomson WM NZ Dent J. 2005 Jun; 101(2):35-43  

\(^{50}\) Schluter, Philip J., Kangaratnam, S., Durward, C.S. and Mahood, R. (2008-12)
Pg. 147: “Children living in fluoridated areas had a higher prevalence of diffuse opacities than their counterparts living in non-fluoridated areas”.

29.1% of children in fluoridated areas had dental fluorosis, compared to 14.7% in non-fluoridated areas.

Pg 149: “While means dmfs scores were lower in fluoridated areas than in non-fluoridated areas, no statistically significant difference was observed (due to the higher variability associated with this measure).”

Pg 150: “In addition, no significant association was found between residential fluoridation history and dental caries in the permanent dentition”.

Enamel defects and dental caries in 9-year-old children living in fluoridated and nonfluoridated areas of Auckland, New Zealand.51

RESULTS:
“…After adjustment for covariates, a strong dose-response relationship between diffuse opacity and fluoridation status was found, with children who lived continuously in fluoridated areas being 4.17 times as likely to have diffuse opacities as children who lived continuously in nonfluoridated areas (P < 0.001). Conversely, a strong protective dose-response relationship between caries experience and fluoridation status was seen, with children who lived continuously in fluoridated areas being 0.42 times as likely to have dental caries as children who lived continuously in nonfluoridated areas (P < 0.001).

CONCLUSIONS:
Reticulated water fluoridation in Auckland reduces the risk of dental caries but increases the risk of diffuse opacities in 9-year-old children. Guidelines and health-promotion strategies that enable children to minimize their risk to diffuse opacities yet reduce their risk of dental caries should be reviewed.

2004 - Wellington-Canterbury study

Lee and Dennison published the “Wellington-Canterbury study”, which claimed to show benefit from fluoridation. However the use of Wellington invalidates the study as Wellington has less decay than any other NZ community, fluoridated or not. The study actually has about 12 critical design flaws, and has never been accepted for publication in an international peer-reviewed journal.


The authors did not use random data, but selected which data they would use, knowing which were from fluoridated or non-fluoridated children. They then destroyed the raw data, so no one can check their analysis. (Note: this was published at the same time as the internationally published Armfield and Spencer study, which showed no benefit).

The Ministry of Health continue to refer to this study as proof that that fluoridation works.

See our site http://www.fannz.org.nz/lee_study.php for full critique of this study.

17. The Two Most Significant Scientific Reviews since 1992

The York Review 2000

The review was funded by the UK Health Department, to “prove once and for all that fluoridation is safe and effective”. It was not allowed to examine laboratory studies or medical case histories – only population studies. It limited its study of adverse health effects to cancer, hip fracture, and dental fluorosis.

It examined over 3000 studies – every fluoridation study that could be found. It rejected over 90% as scientifically worthless. The remainder were of only “moderate reliability”. There were no “A Grade” studies.

It found no evidence that fluoridation improved social equity in dental health.

Of the studies on benefit; 1 showed more decay with fluoridation, 10 showed no difference, and 19 claimed widely varying levels of benefit. The review concluded that to quote the numeric average (of 14.7%) as if it were a proved benefit was scientifically invalid due to the poor quality and wide range of results. Nevertheless, this is exactly what fluoridation proponents continue to do.

The Chair made the following comments:

"The review team was surprised that in spite of the large number of studies carried out over several decades there is a dearth of reliable evidence with which to inform policy. Until high quality studies are undertaken...there will continue to be legitimate scientific controversy over the likely effects and costs of water fluoridation".

“‘The review did not show water fluoridation to be safe. The quality of the research was too poor to establish with confidence whether or not there are potentially important adverse effects in addition to the high levels of fluorosis. The report recommended that more research was needed. The review found water fluoridation to be significantly associated with high levels of dental fluorosis, which was not characterised as just a ’cosmetic issue‘.”

An article in the British Medical Journal stated that fluoridation promoters continue to misrepresent the York Review findings, and to selectively quote unreliable studies in support of their claims.

US National Research Council (NRC) 2006
A 3 year review by the US National Research Council (NRC) could find no level of fluoride exposure that was safe. The panel comprised 12 respected scientists from a range of disciplines including dentistry and toxicology. It was sponsored by the US Public Health Service’s, National Academy of Science.

Its purview was to determine if the maximum contaminant level was safe, so was not designed to look at fluoridation per se, but its comprehensive review of the scientific literature included studies with low levels of fluoride.

The NRC advised that the following groups were at special risk:

- Infants
- Diabetics
- Those on dialysis
- Those with impaired kidney function, including the elderly
- Those with high water consumption, such as outdoor workers and sports people

These ‘high risk’ groups comprised over 40% of the NZ population in the 2006 census. Three of the panel members have since been outspoken in their opposition to fluoridation.

Attachments:

1) Report on the British Medical Journal article
2) Letter from Chairman of York Review (NZ officials cite the York Review as evidence in support of fluoridation)
3) Address by Lord Baldwin, of the advisory committee to the York Review Board
4) Excerpts from “Second Thoughts about Fluoride”, Scientific American, including statement by the Chair of the National Research Council Review Board.
5) Consensus statement on harm to children (summarised).
6) South Island data.
7) “Fluoride-Gate” article – law suits.
8) Dr Kathleen Theissen, NRC Review Panel member, on the applicability of the NRC Review to fluoridation in New Zealand.
10) League of United Latin American Citizens.
11) Christchurch Press article on the “Lift the Lip” programme, reducing tooth decay without fluoridation
12) Letter from Kapiti resident with doctor-certified chemical intolerance to fluoride.
1). Government selectively uses unreliable evidence to promote water fluoridation - senior UK doctors state

**British Medical Journal, October 5, 2007**

In the British Medical Journal, Sir Iain Chalmers, editor of the James Lind Library (set up to help people understand the evidence base of medicine), KK Cheng, professor of epidemiology at Birmingham University, and Dr Trevor Sheldon, professor and pro-vice-chancellor at York University (and Chair of the York Review Board), accuse the government of "one-sided handling of the evidence". They add that "the Department of Health's objectivity is questionable", pointing out that until 2006 it funded the widely reviled British Fluoridation Society, set up in 1969 to politically push for fluoridation.

It should be noted that the NZ Ministry of Health conducts no independent research on fluoridation, and bases its position on that of other pro-fluoridation governments such as the British Government. In fact it sends representatives to meet with such governments to ensure consistent quoting of "supporting" science, and consistent spin in denying opposing science.

In 1999, the Department of Health commissioned a systematic review of the evidence by York University. "The reviewers were surprised by the poor quality of the evidence and the uncertainty surrounding the beneficial and adverse effects," they write.

But the Department of Health used the York findings "selectively", they advise, "to give an over-optimistic assessment of the evidence in favour of fluoridation." The Department commissioned research on the effects of water in which fluoride naturally occurred, but on only 20 people. This, together with the selective use of the York review, formed the basis of the government's safety claims, they say. Even the studies attempting to show benefits to teeth were few and inconsistent. The rate of dental caries caused by tooth decay has dropped substantially both in countries which have added fluoride and those which have not.

Studies on the side-effects of fluoride in water were low-quality and it is hard to estimate how many people would suffer mottled teeth, and not possible to reach conclusions on other alleged harm, such as bladder cancer and bone fracture, they say. "There is no such thing as absolute certainty on safety," they write.

*FANNZ* notes: It is important to note that the York Board was instructed only to examine epidemiological (population) studies. The US National Research Council's 3 year Review, published in 2006, examined laboratory studies also, and established risks from fluoridation to a range of population sub-groups (comprising at least 40% of the population in NZ).

*In 2007* The Lancet the oldest and highly respected independent medical journal, described fluoride as "an emerging neurotoxin" along with the rocket fuel, perchlorate.
2). Chair of York Review

DEPARTMENT OF
HEALTH STUDIES
Innovation Centre
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Professor Trevor A. Sheldon
Head of Department

In my capacity of chair of the Advisory Group for the systematic review on the effects of water fluoridation recently conducted by the NHS Centre for Reviews and Dissemination the University of York and as its founding director, I am concerned that the results of the review have been widely misrepresented. The review was exceptional in this field in that it was conducted by an independent group to the highest international scientific standards and a summary has been published in the British Medical Journal. It is particularly worrying then that statements which mislead the public about the review's findings have been made in press releases and briefings by the British Dental Association, the British Medical Association, the National Alliance for Equity in Dental Health and the British Fluoridation Society. I should like to correct some of these errors.

1 Whilst there is evidence that water fluoridation is effective at reducing caries, the quality of the studies was generally moderate and the size of the estimated benefit, only of the order of 15%, is far from "massive". (Editor's note: This is saying the studies were not classified as “reliable” – see 7 below. Also, the studies did not allow for the 1 year delay in tooth eruption caused by fluoridation, giving a false impression of “benefit”. The 15% difference equates to 1 person in 2 having 1 less filling.)

2 The review found water fluoridation to be significantly associated with high levels of dental fluorosis which was not characterised as "just a cosmetic issue".

3 The review did not show water fluoridation to be safe. The quality of the research was too poor to establish with confidence whether or not there are potentially important adverse effects in addition to the high levels of fluorosis. The report recommended that more research was needed.

4 There was little evidence to show that water fluoridation has reduced social inequalities in dental health.

5 The review could come to no conclusion as to the cost-effectiveness of water fluoridation or whether there are different effects between natural or artificial fluoridation.

6 Probably because of the rigour with which this review was conducted, these findings are more cautious and less conclusive than in most previous reviews.

7 The review team was surprised that in spite of the large number of studies carried out over several decades there is a dearth of reliable evidence with which to inform policy. Until high quality studies are undertaken providing more definite evidence, there will continue to be legitimate scientific controversy over the likely effects and costs of water fluoridation. (Emphasis added – Ed)

(Signed) T.A. Sheldon,
Professor Trevor Sheldon, MSc, MSc, DSc, FMedSci.
3). British Lord Criticizes Dental Authorities for Misinforming Public about York Review

Note: The following transcript can be accessed at http://www.parliament.uk/

House of Lords Debate on the Queen's Speech:


Earl Baldwin of Bewdley: 6.35 p.m. 13 Dec 2000 : Column 427...... I turn lastly to the vexed matter of water fluoridation. In the 1999 White Paper, Saving Lives: Our Healthier Nation, the Government announced that they were setting in motion an "up-to-date expert scientific review of fluoride and health". Possible legislation was foreshadowed. Partly because of the many questions I had tabled on this topic, and the debate in my name in December 1998, I found myself on the advisory board to the review team at the NHS Centre for Reviews and Dissemination at York, in close contact with the scientific process from the summer of 1999 to the publication of the final report on 6th October this year.

The expectation of the dental and medical authorities, and it is fair to say of the Government also, was that the safety and effectiveness of fluoridation would be confirmed. That expectation was disappointed. In addressing the five principal questions that were asked, the report is studded with phrases such as "limited quantity", "moderate quality", "a small number of studies", "needs further clarification", "surprising to find that little high quality research has been undertaken", "insufficient quality to allow confident statements", "not...enough good quality evidence...to reach conclusions". Important gaps in the evidence base were identified.

I pay tribute to the Government for having agreed to institute a high-quality scientific review--the first and only systematic, that is unbiased, assessment of the evidence in half a century of water fluoridation. I pay tribute to them for now taking steps, through the Medical Research Council, to put some much-needed research in hand, not before time. I cannot, however, pay tribute to the dental lobby in the aftermath of the York report.

I am aware that many of your Lordships have had briefings from the British Dental Association, the British Fluoridation Society and/or the National Association for Equity in Dental Health. I am aware, as we all are, that briefings by professional bodies, including professors of dentistry, carry weight with the public, are likely to be believed and therefore bear a particular responsibility for accuracy. These briefings and press releases are little short of extraordinary.

I have collated four pages of statements culled from these documents, with alongside them for comparison quotations from the text of the report itself. I can give the flavour of them in two or three short examples. I have placed copies in the Library for those who would like to read more.
The British Dental Association says,

"The report confirms that there is clear evidence that fluoridation reduces [decay]";

the report says,

"To have clear confidence in the ability to answer [this] question...the quality of the evidence would need to be higher".

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The British Dental Association says,

"There is no evidence that...fluoridation is linked to cancer, bone disease or any other adverse effect"; and, "The report confirms that fluoridation reduces dental health inequalities";

the report says,

"The research evidence is of insufficient quality to allow confident statements about other potential harms [than dental fluorosis] or whether there is an impact on social inequalities".

The British Fluoridation Society says,

"If there were any adverse effects...it is inconceivable that the York review would have missed them";

the York review says,

"Some possible adverse effects...may take years to develop and so...the relationship may go undetected", and, "High quality research [into adverse effects]...is needed".

One might have thought, if one did not know that fluoridation had been an article of dental faith for fifty years, that this was simply carelessness. Such a thought is dispelled when one finds a wrong figure quoted for seriously mottled teeth, which could only be cited by the author having read, and misinterpreted, some of the very small print.

This is an important public health issue. It is not the Government who are likely to be misled by such inaccurate statements--at least I hope not--so much as local councils, the public and, dare I say it, Members of Parliament, who have even been urged to put down Questions on this false basis. It is essential to put the record straight. Anyone in doubt about the facts should, as always, go to primary sources. The York report is a long one, but the summary and conclusions are only four pages each and are not hard to understand. I would urge any noble Lord who is thinking of tabling Questions not to rely on briefings, whether from dentists or opponents, but to go to the report itself.

Because I am known to oppose the fluoridation of water, I have taken the greatest care to keep in step with the leading scientists at York and to write and say nothing in interpretation of their report which goes beyond the evidence. I have the permission of Professor Sheldon, the founding director of the NHS Centre for Reviews and Dissemination at York, who chaired the advisory
board which oversaw the whole review process, to quote him as follows.

"It is particularly worrying...that statements which mislead the public about the review's findings have been made in press releases and briefings by the British Dental Association, the National Alliance for Equity in Dental Health and the British Fluoridation Society. I should like to correct some of these errors".

He continues:

"1. Whilst there is evidence that water fluoridation is effective at reducing caries, the quality of the studies was generally moderate and the size of the estimated benefit, only of the order of 15%, is far from 'massive'.

"2. The review found water fluoridation to be significantly associated with high levels of dental fluorosis, which was not characterised as just a 'cosmetic issue'.

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"3. The review did not show water fluoridation to be safe. The quality of the research was too poor to establish with confidence whether or not there are potentially important adverse effects in addition to the high levels of fluorosis. The report recommended that more research was needed.

"4. There was little evidence to show that water fluoridation has reduced social inequalities in dental health".

I shall skip most of what follows and just give Professor Sheldon's final point. He states:

"The review team was surprised that in spite of the large number of studies carried out over several decades there is a dearth of reliable evidence with which to inform policy. Until high quality studies are undertaken...there will continue to be legitimate scientific controversy over the likely effects and costs of water fluoridation".

My only questions to the Minister, in the light of the state of the evidence as set out by one of the two principal scientists involved in the review and of these extraordinary briefing papers, are whether the Government still think it appropriate, first, to go on making financial contributions to the British Fluoridation Society, and, secondly, to encourage certain health authorities, as they have said that they would, to consider water fluoridation schemes. The noble Lord would also do me a good turn if he could secure for me a reply from his colleague the Secretary of State to the personal letter I wrote to him on this matter on 5th August, repeated on 7th October, and reminded again on 14th November. With fluoridation, things tend to take a long time.

Lord Colwyn: 8.47 p.m. Column 459-460 (i.e. much later)

Perhaps I may touch briefly on fluoridation. I am well aware that the noble Earl, Lord Baldwin, will have given an opposite view to mine. The recent York Review has confirmed that fluoridation is safe and effective in reducing levels of tooth decay and is essential in the fight to reduce inequalities in dental health.

“What the committee found is that we’ve gone with the status quo regarding fluoride for many years—for too long, really—and now we need to take a fresh look. In the scientific community, people tend to think this is settled. I mean, when the U.S. surgeon general comes out and says this is one of the 10 greatest achievements of the 20th century, that’s a hard hurdle to get over. But when we looked at the studies that have been done, we found that many of these questions are unsettled and we have much less information than we should, considering how long this [fluoridation] has been going on. I think that’s why fluoridation is still being challenged so many years after it began.”

John Doull, chairman, National Research Council Review Board (pp80-81)

Page 75: Most fluoridated water contains much less fluoride than the EPA limit, but the situation is worrisome because there is so much uncertainty over how much additional fluoride we ingest from food, beverages and dental products. What is more, the NRC panel noted that fluoride may also trigger more serious health problems, including bone cancer and damage to the brain and thyroid gland. Although these effects are still unproved, the panel argued that they deserve further study.

Page 75: **Too Much of a Good Thing:** Fluoride is in many foods, beverages and dental products. The ubiquity of the cavity-fighting chemical can result in overconsumption, particularly among young children.

Page 78: **Scientific Attitudes Toward Fluoridation May Be Starting to Shift in the Country Where the Practice Began.**

Page 79: But enamel fluorosis, except in the severest cases, has no health impact beyond lowered self-esteem: the tooth marks are unattractive and do not go away (although there are masking treatments). The much more important question is whether fluoride’s effects extend beyond altering the biochemistry of tooth enamel formation. Says longtime fluoride researcher Pamela DenBesten of the University of California, San Francisco, School of Dentistry: “We certainly can see that fluoride impacts the way proteins interact with mineralized tissue, so what effect is it having elsewhere at the cellular level? Fluoride is very powerful, and it needs to be treated respectfully.”

Page 80: Clashes over the possible neurological effects of fluoride have been just as intense. Phyllis Mullenix, then at the Forsyth Institute in Boston, set off a firestorm in the early 1990s when she reported that experiments on lab rats showed that sodium fluoride can accumulate in brain tissue and affect animal behavior. Prenatal exposures, she reported, correlated with hyperactivity in young rats, especially males, whereas exposures after birth had the opposite effect, turning female rats into what Mullenix later described as “couch potatoes.” Although her research was eventually published in *Neurotoxicology and Teratology*, it was attacked by other scientists who said that her methodology was flawed and that she had used unrealistically high dosages. Since then, however, a series of epidemiological studies in China have associated high fluoride exposures with lower IQ, and research has also suggested a possible mechanism: the formation of aluminum fluoride complexes—small inorganic molecules that mimic the structure
of phosphates and thus influence enzyme activity in the brain. There is also some evidence that the silicofluorides used in water fluoridation may enhance the uptake of lead into the brain.

*Page 80:* The NRC committee concluded that fluoride can subtly alter endocrine function, especially in the thyroid—the gland that produces hormones regulating growth and metabolism. Although researchers do not know how fluoride consumption can influence the thyroid, the effects appear to be strongly influenced by diet and genetics. Says John Doull, professor emeritus of pharmacology and toxicology at the University of Kansas Medical Center, who chaired the NRC committee: “The thyroid changes do worry me. There are some things there that need to be explored.”
5). Summary of: Scientific Consensus Statement on Environmental Agents Associated with Neurodevelopmental Disorders, November 2007

The consensus statement outlines the current scientific understanding of the links between environmental factors and learning and development disabilities. It was developed by the Collaborative on Health and the Environment’s Learning and Developmental Disabilities Initiative.

The statement concludes:
"Given the serious consequences of learning and developmental disabilities, a precautionary approach is warranted to protect the most vulnerable of our society."

Children at heightened risk

The development of the human brain begins in utero. The long and complex development of the brain and nervous system leaves it susceptible to the adverse effects of chemical exposure.

For their body weight, children eat and breathe more than adults, thus a small exposure translates into a big dose.

Even very low doses of some biologically active contaminants can alter gene expression important to learning and developmental function.

Variations in individual susceptibility

Due to genetic variation people differ in susceptibility to exposures. Not identifying and studying susceptible subgroups can result in failure to protect those at high risk.

Children are often more susceptible than adults to the effects of exposure to environmental agents.

Children lacking certain nutrients are more vulnerable to toxicants. For example iron and/or calcium deficiency affects absorption of heavy metals such as lead and manganese. (Fluoridating agents contain significant levels of heavy metals, including lead.

As our testing methods have become more sophisticated, the recognition of individual sensitivity and, in particular, the sensitivity of the developing nervous system to the effects of environmental agents has grown.
Recent biomonitoring studies reveal the range of compounds we are exposed to and that accumulate in our bodies. Experiments with single chemicals can underestimate the effects of these chemicals in mixtures.
Where science meets the roadblock of policy

“[Despite 2000 years of knowledge that lead affected the mind, it] was added to paint and gasoline, removed only following considerable research that confirmed what was already known.”
(Similarly, fluoride’s toxicity has been known since the 1800s, yet promoters still deny this in the face of overwhelming scientific evidence.)

“Lead is probably the most studied of environmental contaminants. Its effects on development and learning are undisputed. Recent research indicates there is no safe level of lead exposure for children. Lead exposure impairs overall intelligence … and is associated with ADHD, even at minute exposures. Efforts to prevent lead exposure provide an outstanding example of the struggle when science meets policy. The US CDC has not adjusted the blood-lead action level since 1990 despite scientific evidence of behavioural effects well below [this level]” (FANNZ would suggest that fluoridation provides an equally outstanding example, especially in light of the NRC Review findings).

**Low dose effects can differ completely from high dose effects**

The very low-dose effects of endocrine disruptors cannot be predicted from high dose studies, which contradicts the standard “dose makes the poison” rule of toxicology”. (Dr Albert Schatz identified this some decades ago; that low-dose effects can be quite different from high dose effects and begin to appear only below the level where high-dose toxicity reduces to near zero.)

**Fluoride:**

“The question is what level of exposure results in harmful effects to children. The primary concern is that multiple routes of exposure, from drinking water, food and dental care products, may result in a high enough cumulative exposure to fluoride to cause developmental effects. It is not clear that the benefits of adding fluoride to drinking water outweigh risks of neurodevelopment or other effects such as dental fluorosis.” It is important to note here that the consensus is that dental fluorosis is considered an adverse effect to be considered against fluoridation within a toxicological analysis; not just cosmetic as proponents claim.
6). 2001 School Dental Services Data for 5-year-olds (South Island):

An official indicator of the oral health status of NZ 5-year-old children is provided within the table prepared by Sunitha Gowda, (Oral Health Promotion – Fluoridation Advocacy) on behalf of the Ministry of Health (MoH). A copy of this table is enclosed. Please note that “year 8” means the same as “12-year-old”.

This table is very helpful in that it compares decay rates with percentage fluoridated and with socio-economic status (SES). It is impossible to find any convincing benefit of fluoridation from this table. It is even more relevant to compare just the South Island areas as the population mix of the South Island is more coherent. Thus:-

(mft = missing decayed filled deciduous teeth)
(MFT = missing decayed filled permanent teeth)
(SES = socio-economic status)

<table>
<thead>
<tr>
<th>District</th>
<th>Percent of Low SES</th>
<th>Percent Fluoridated</th>
<th>Percent Caries-Free at 5 yrs</th>
<th>Mean mft at 5 yrs</th>
<th>Percent Caries-Free at 12 yrs</th>
<th>Mean MFT at 12 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otago</td>
<td>9</td>
<td>47</td>
<td>60</td>
<td>1.4</td>
<td>39</td>
<td>2.0</td>
</tr>
<tr>
<td>Nelson-Marlb.</td>
<td>11</td>
<td>0</td>
<td>50</td>
<td>2.2</td>
<td>51</td>
<td>1.3</td>
</tr>
<tr>
<td>Canterbury</td>
<td>15</td>
<td>4</td>
<td>49</td>
<td>1.8</td>
<td>39</td>
<td>1.9</td>
</tr>
<tr>
<td>Southland</td>
<td>24</td>
<td>41</td>
<td>48</td>
<td>2.3</td>
<td>29</td>
<td>2.0</td>
</tr>
<tr>
<td>West Coast</td>
<td>13</td>
<td>0</td>
<td>40</td>
<td>2.6</td>
<td>38</td>
<td>1.9</td>
</tr>
</tbody>
</table>

This illustration is revealing. For example:-

- The 2 areas that are highly fluoridated (Otago and Southland) show generally the worst decay results by year 12.
- Otago (fluoridated) shows the best results for 5-year-olds but the worst results for 12-year-olds. Note also that Otago has the lowest percent of children classified as “low socio-economic status”. This data well illustrates the contention that fluoridation temporarily delays decay (by delaying tooth eruption) but that the temporary “benefit” disappears by the time such children become 12-year-olds.
- Nelson-Marlborough area, though totally non-fluoridated and with a slightly poorer socio economic status than Otago, is average in the decay statistics for 5-year-olds, but has the least decay for 12-year-olds for the whole South Island.
- Even the West Coast, though totally non-fluoridated, has less decay (MFT) in 12-year-olds than for fluoridated areas of Otago and Southland.
- The presentation to Ashburton Council by Drs Williams and Lee that claimed an mft (missing filled teeth) figure for Ashburton 6-year-olds of 5.1 for 2004 and 5.21 for 2005 is simply not credible when compared to the official statistics for 5-year-olds (enclosed) as provided by the Sunitha Gowda table.
7). “Fluoride-Gate” article

The article below on the CDC, "Fluoride-Gate," published on January 15 2008 in the Juneau Empire, Alaska, has been picked up by US Water News. U.S. Water News is a monthly publication mailed throughout the country to water and wastewater treatment professionals and organizations. The San Francisco Chronicle has called U.S. Water News "the 'Wall Street Journal' of water publications."

We do not have the Water News version of this article as it is not available online.

Juneau Empire, January 15, 2008

www.juneauempire.com/stories/011508/opi_20080115024.shtml

Fluoride-Gate, naming names at Centers for Disease Control

DANIEL G. STOCKIN

Americans' distrust of societal institutions continues to grow, and now comes evidence of yet another burgeoning scandal: Fluoride-Gate. A torrent of recent bad news about the safety of fluorides has brought key names to the surface from the murky alphabet soup of players in the fluoride game at EPA, CDC, FDA, NIDCR, USDA, ADA, and AMA. The inevitable questions have begun about who knew what, when, and why was certain information kept quiet.

The first ominous drumbeats started in 2006, when a National Research Council committee recommended that the Environmental Protection Agency lower the allowable amount of fluoride in drinking water - to an unspecified level. As if that wasn't unnerving enough, the committee specifically stated that kidney patients, diabetics, seniors, infants, and outdoor workers were susceptible populations especially vulnerable to harm from fluoride ingestion.

Centers for Disease Control officials strove mightily to dismiss NRC's report as irrelevant, but in August of 2007 CDC's ethics committees received a formal ethics complaint about CDC's activities in promoting fluoridation. The complaint circled the globe via the Internet. A Kentucky attorney began assembling a list of "potentially responsible parties." After having been contacted by angry kidney patients, in September he formally notified the National Kidney Foundation that the organization may be held liable for failure to warn its constituents that kidney patients are particularly susceptible to harm from fluorides. The issue was immediately put on the agenda of the next meeting of the foundation's national board and the foundation's former position statement about fluoridated water has been retracted and the issue is now undergoing review.

The ethics complaint became a hot potato. How would CDC explain why its own data showed blacks to be disproportionately harmed by moderate and severe "dental fluorosis"
teeth damage, yet CDC had not felt it necessary to openly show photos of the conditions to the black community? What would be the response of CDC's Chief of Public Health Practice, Dr. Stephanie Bailey, an African American woman who witnessed the presentation of the complaint? The complaint embarrassingly documented that Bailey had acknowledged earlier that a CDC-funded and nationally distributed public health ethics policy was not being implemented internally by CDC.

Apparently Bailey's concern about public health ethics did not extend to fluoridation. A 2007 Tennessee water agency report describes how the Harpeth Valley Utility District had accidentally introduced so much fluoride into its water that the concentration reached 18 times the amount generally in the water. The report describes how HVUD contacted Bailey, who told the district she believed "there was no health threat to HVUD's customers." This statement would be welcome news to a nervous HVUD, but is highly suspect, since Bailey could not possibly know how much of the tainted water individuals had consumed, the body weight of those who drank it (babies, children, etc), or individuals' prior health status (such as end-stage kidney disease). How could such a remarkably convenient statement come from a physician whose job description calls for her to be the "conscience of public health practice" at CDC?

Instead of having its ethics committee comprised of external ethicists look into the matter, CDC decided that the ethics charges against Director Dr. Julie Louise Gerberding and Oral Health Director William Maas would be handled internally by Dr. James Stephens, who works for Chief Science Officer Dr. Popovic, who reports to Dr. Gerberding. Without addressing many of the specifics in the complaint, Dr. Stephens predictably concluded that he had "found no evidence" that CDC managers had acted inappropriately. But the proverbial holes in the fluoridation dike can no longer be contained. This month's edition of the journal Scientific American has an article entitled "Second Thoughts about Fluoride." The cat is out of the bag that the Department of Agriculture has voiced concern about fluoride exposures.

Bailey's job description calls for her to address emerging and cross-cutting issues. Dr. Popovic's job is to ensure timely translation of science into practice by CDC. Citizens, attorneys and political leaders now have these officials' names and job descriptions. They should be the first, but not the only parties brought into court and into congressional hearings. Now that the "Fluoride-Gate" has swung wide open, it's time for names to be named.
8). Dr Kathleen Theissen on NRC Review.

Endorsed by Dr Hardy Limeback, Review Panel member, and former head of Preventative Dentistry, University of Toronto.

“The NRC committee put together a very thorough evaluation of fluoride exposure in the US, much of which would be applicable also for NZ.

The NRC committee said, unanimously, that 4 ppm (4 mg/L) of fluoride is not protective of human health and should be lowered. We did not attempt to provide a recommendation for what a safe level would be. To allow anything resembling a margin of safety, various unofficial estimates of a suitable new standard range from 0-0.4 ppm, depending on several considerations, including how best to handle the question of carcinogenicity.

The NRC committee did not, in any way shape or form, conclude that fluoridation is beneficial or safe.

We did look at several issues that pertain just to fluoridated water, primarily the concerns about silicofluoride usage. There is too much that is not known about the chemistry (water chemistry as well as biochemistry) of silicofluorides to say that they are safe for indiscriminate administration through the water supply.

For some endpoints [showing harm], many or most of the studies already involve fluoridated water [at 0.7 – 1 ppm] (osteosarcoma, Down syndrome, bone fracture).

Although promoters insist that dental fluorosis is not adverse or a health effect, the NRC reviewed at least 8 papers reporting an association between dental fluorosis and an increased risk of several adverse effects.”
9). South Hampshire Council Fluoridation Review Panel

Hampshire County Council
Report of the Water Fluoridation Panel

November 2008

Aim of the Review Panel: To provide an informed, considered opinion to Full Council for debate regarding the suitability of the proposed fluoridation scheme which affects Hampshire residents.

Approach:

- Written evidence was gathered, from national and international sources, regarding the fluoridation issue.
- Key experts and local stakeholders were invited to provide written and oral evidence
- The proposals and how they may impact on the population affected were considered
- The Review Panel weighed up the case and came to a conclusion regarding the suitability/desirability of the scheme

Conclusions:

- Most significantly the Review Panel has been persuaded not to support the proposal [to fluoridate the water supply] by the lack of robust and reliable scientific evidence produced to support this proposal.
- It is clear that scientists and health professionals recognise that there are ‘unknowns’ with regard to the need to understand the effect of fluoride on the body (not just teeth). This work has simply not taken place.
- In the absence of scientific evidence of sufficient quality the Review Panel based its evaluation on the findings of the York Review informed by the work of the Nuffield Council on Bioethics.
- Overall, fluoride (as opposed to fluoridation) does have a beneficial impact on the prevalence of caries and improves oral health. In particular there is wide ranging evidence that the topical (surface) application of fluoride is beneficial (but that ingested fluoride is not particularly effective in controlling decay on all tooth surfaces, such as pits and fissures).
- The Review Panel is not however of the view that the case put forward in the SHA consultation document is convincing in its argument that adding fluoride to drinking water is the only way to improve the oral health of.. communities in
- Southampton City. In particular the Review Panel is concerned that:
  - There is little evidence of suitable quality to support the assertion that this action will reduce health inequalities.
  - Alternatives exist that are less intrusive and coercive.
  - The total exposure to fluoride in the population has not been evaluated and taken into account. The importance of this point has been emphasised by all the authoritative reference documents identified by the Review Panel as well as the WHO.
  - The introduction of fluoride to drinking water will result in some children within the population that have otherwise healthy teeth experiencing fluorosis. The
extent to which this would be severe enough to be of aesthetic concern is disputed in the evidence, but [the number could be significant]

- The balance of benefit and risk has not been presented in accordance with the findings of authoritative reports such as the York Review and MRC.
- Other less coercive interventions are available to achieve the same goals.
- The availability of other interventions and the inconclusive evidence relating to the impact of fluoridation on individual health requires that a precautionary approach be adopted.
- Adding fluoride to drinking water has the potential to result in an increase in moderate to severe fluorosis in the communities affected.
- The plausibility of other serious health impacts [as well as dental fluorosis] from the fluoridation of water reinforces the view of the Review Panel that a precautionary approach is needed until such time as additional research has been done. It is of serious concern that, despite this point being made repeatedly in the literature, credible research is still not available.
- Effective alternatives to adding fluoride to water do exist, with the potential to target those affected rather than the population as a whole.
- Evidence has not been provided to demonstrate that adding fluoride to water at 1ppm equates to individuals receiving an optimal therapeutic dose. Current daily intake of fluoride from other sources may already exceed the equivalent of 1 ppm in water.
- Individual exposure will be affected by the addition of fluoride to drinking water at 1ppm as well as other sources.
- The conflicting information about using fluoridated water to reconstitute infant formula reinforces previous conclusions about the need to adopt a precautionary approach.
- There is not sufficient evidence to show how individuals vary in the way in which they retain and excrete fluoride, or the impact that hard or soft water may have on this.
- There is not sufficient evidence to show that artificial fluoride acts in the same way as natural fluoride.
- The conflicting evidence received makes it difficult to determine if there are additional legal issues that need to be taken into account.
- Overall it is not clear what impact the addition of fluoride to the water will have on people living in Hampshire.
- Other options exist for targeting the most vulnerable populations to improve the oral health of children and experience elsewhere has shown these to be effective.
- The goal of eradicating poor oral health, particularly for children who may suffer significant pain and distress, is laudable. The Review Panel would also agree that the most vulnerable in our society should be protected and understands the notion that, in order to achieve the greatest good for the community as a whole, preferences of individuals may be set to one side in some circumstances. However, where the evidence is unclear or equivocal about the impact of an action on individuals or communities, then those individuals and communities should be able to contribute to the discussion about the way forward in an informed and participative manner.

Summary

The Panel considered the York Review the most authoritative review to date. It also referenced the Australian NHMRC Review 2007, as supporting the conclusions of the York Review, and the 2002 UK Medical Research Council Review as confirming continuing uncertainty surrounding fluoridation, in line with the York findings. The Panel also referred to the US National Research Council Review, though in our view gave it inadequate weight, as it is the only authoritative
review on adverse health effects. The lack of emphasis is perhaps due to the Panel mistakenly believing the NRC Review only applied to higher (4ppm) levels than that proposed, and would only become relevant if total fluoride intake were at this level.

On the question of ethics, the Panel considered the report of the Nuffield Council on Bioethics.

It found the British Medical Journal article by Sheldon, Cheng, and Chalmers (October 2007) helpful in identifying discrepancies in the science around fluoridation, providing an update on progress since the York Review, and in identifying issues that need to be considered when assessing fluoridation.

The Panel noted the dangers of being convinced of fluoridation’s effectiveness based on personal observations in fluoridated and non-fluoridated areas as this does not allow for consideration of other factors that may be influencing dental health.

The one low point of the Panel’s assessment is that the Panel dismisses the Bassin study (on osteosarcoma) on the weight of a hearsay claims by those who have tried to suppress the Bassin study, and are funded by fluoride promoters.

The Panel’s report identifies significant reduction in tooth decay (up to 50%) by a number of available means other than fluoridation.

**Oral evidence by the Director of the Nuffield Council.**

This was the first time the UK Water Act 2003, which required water companies (these are private companies in the UK, unlike NZ) to comply with a request from a Strategic Health Authority (SHA) to fluoridate the water supply, had been used to force fluoridation on a community. The Act required a defined standard of consultation by the SHA, to determine local support, before making such a request, and for the SHA to indemnify the water company against any legal liability resulting from harm to individuals from fluoridation. Consequently, the Council considered it appropriate to conduct as thorough review as possible in the time available to it.

The proposal to fluoridate was based on an average differential of 0.29 dmft in 5 year olds (1.47 national average against 1.76 in Southampton); that is, a theoretical saving of between ¼ and 1/3 of a filling! Figures for 12 year olds were not mentioned.

The Panel relied heavily on the York Review as the most authoritative information available, and noted the continuing misrepresentation of the York Review by the British Fluoridation Society and the Strategic Health Authority (similar to NZ’s DHBs).

The Panel received submissions and oral presentations from both promoters and opponents of fluoridation. In particular, the Panel was fortunate in having input from Dr Iain Chalmers, former director of the UK Cochrane Institute for Evidence-based Medicine.

The Panel was concerned at the dismissive attitude of promoters when confronted with real health issues, such as the risk of use of fluoridated water in infant formula. It noted the statement of Dr John Doull, Chair of the US National Research Council Review Panel, that there was much that was still unknown about fluoride’s health effects. In fact Panel considered the extent of “known unknowns” was considered the most striking aspect of the debate.
The Panel particularly noted that in relation to the NRC Review, “the dismissive way in which questions related to this research were dealt with by the SHA … was cavalier and inappropriate”.

Reflecting the practice in Clutha and Central Otago by Public Health South, the Panel expressed concern that the SHA’s public consultation document lack balanced information. It was particularly concerned about reference to old studies considered of such poor quality as to be rejected by the York Review, and that similar concerns had been raised by Lord Edward Baldwin, a member of the York Review Advisory Panel.

The Panel was also concerned that promotional information focused on 5 year olds. It did not include figures for 8, 12, or 15 year olds which, the Panel observed, gave a very different picture. It also omitted discussion of oral health problems not affected by fluoridated water, such as pit and fissure tooth decay.

The Panel noted the increase in total fluoride intake since the early days of fluoridation, when fluoridated water was the primary source of fluoride. It also m

The Panel noted that individual exposure varies significantly from the average, such that some individuals received excessive doses of fluoride in so-called “optimally fluoridated” communities. Indeed, it noted that the term “optimally fluoridated” is meaningless when total exposure is considered.

It noted especially:

- Estimates of the impact of water fluoridation on total exposure to fluoride may otherwise be inaccurate or misleading
- The effects of water fluoridation might be confounded or modified by exposure to fluoride from other sources.
10). League of United Latin American Citizens

WHEREAS, the League of United Latin American Citizens is this nation’s oldest and largest Latino organization, founded in Corpus Christi, Texas on February 17, 1929; and

WHEREAS, LULAC throughout its history has committed itself to the principles that Latinos have equal access to opportunities in employment, education, housing and healthcare; and

WHEREAS, LULAC advocates for the well-being of, but not exclusively of, Hispanics throughout our country; and

WHEREAS, safe drinking water is a necessity for life; and

WHEREAS, the purpose of a public water supply is to supply water to the entire community which is composed of people with varying health conditions, in varying stages of life, and of varying economic status; not to forcibly mass medicate the population which is a civil rights violation; and

WHEREAS, fluoridation is mass medication of the public through the public water supply; and

WHEREAS, current science shows that fluoridation chemicals pose increased risk to sensitive subpopulations, including infants, the elderly, diabetics, kidney patients, and people with poor nutritional status; and

WHEREAS, minority communities are more highly impacted by fluorides as they historically experience more diabetes and kidney disease; and

WHEREAS, minorities are disproportionately harmed by fluorides as documented by increased rates of dental fluorosis (disfiguration and discoloration of the teeth); and

WHEREAS, the National Research Council in 2006 established that there are large gaps in the research on fluoride’s effects on the whole body; a fact that contradicts previous assurances made by public health officials and by elected officials, that fluorides and fluoridation have been exhaustively researched; and

WHEREAS, a growing number of cities and health professionals have rejected fluoridation based on current science and the recognition of a person’s right to choose what goes into his/her body; and

WHEREAS, the CDC now recommends that non-fluoridated water be used for infant formula (if parents want to avoid dental fluorosis – a permanent mottling and staining of teeth), which creates an economic hardship for large numbers of families, minority and otherwise; and

WHEREAS, the League of United Latin American Citizens (LULAC), founded in 1929, has historically been a champion of the disenfranchised and a leader in the fight for social and environmental justice; and

WHEREAS, City Council Districts I-6 of San Antonio (predominantly minority districts) voted overwhelmingly that the public water supply should not be contaminated with fluoridation chemicals; and
WHEREAS, the election to fluoridate the water, essentially disenfranchised the right of these minority Districts to safe drinking water for all; and

WHEREAS, the U.S. Health and Human Services and the EPA (January 2011) have recently affirmed the NRC Study results that citizens may be ingesting too much fluoride and that the exposure is primarily from drinking water; and

WHEREAS, the proponents of fluoridation promised a safe and effective dental health additive, but the San Antonio Water System’s (SAWS) contract for fluoridation chemicals proves a “bait and switch”; as SAWS is adding the toxic waste by-product of the phosphate fertilizer industry, that has no warranty for its safety and effectiveness for any purpose from the supplier (PENCCO, Inc.) or the source (Mosaic Chemical); and

THEREFORE, BE IT RESOLVED, that LULAC commends efforts by organizations that oppose forced mass medication of the public drinking supplies using fluorides that are industrial grade, toxic waste by-products which contain contaminants (arsenic, lead, mercury) which further endanger life; and

BE IT FURTHER RESOLVED, that LULAC supports efforts by all citizens working to stop forced medication through the public water system because it violates civil rights; and

BE IT FURTHER RESOLVED, that LULAC opposes the public policy of fluoridation because it fails to meet legislative intent; and

BE IT FURTHER RESOLVED, that LULAC demands to know why government agencies entrusted with protecting the public health are more protective of the policy of fluoridation than they are of public health.

Approved this 1st day of July 2011.

Margaret Moran
LULAC National President
A campaign to get Canterbury preschoolers to the dental nurse has led to a big drop in the number of toddlers with cavities.
A new report from the Canterbury District Health Board's community dental service shows the number of five-year-olds without cavities has increased 14 per cent over the past nine years.
In 2000, about 50 per cent of five-year-olds had at least one cavity, but only 36 per cent now have holes in their teeth. Nationally, about 50 per cent of five-year-olds have cavities.
The Lift the Lip campaign was launched in 2000 by Pegasus Health family practices and the health board's community dental service. It involves GPs enrolling children into dental services at their 15-month immunization check.
Parents are encouraged to take their children for yearly dental checks until they are five.
The programme was the first of its type in New Zealand and is being copied in other parts of the country.
The clinical director of the dental programme, Dr Martin Lee, said the results were fantastic.
"This is great news for the long-term oral health of our community. If you have crummy teeth as a child, you are usually doomed to crummy teeth for the rest of your life," he said.
"By seeing children when they are very young we can pick up problems early and talk to parents or caregivers about how best to look after young teeth." The number of preschoolers accessing oral health services had increased from 12,000, or 53 per cent of that population, to 19,500, or 84 per cent, of one to four-year-olds in the district, he said.
"Increased contact with preschoolers and their parents seems to be paying dividends," he said.
First-time mother Marina Rawiri said her son, Kingston, 16 months, had his teeth checked for the first time a month ago. "I started brushing his teeth as soon as he got them. Lots of my family's children have heaps of fillings and I didn't want Kingston to get them," she said.
Rawiri said it was convenient to combine immunisations with dental checks.

Note: Canterbury is non-fluoridated apart from the small township of Methven.
12). Letter to the Kapiti Mayor by a constituent.

The Mayor Jenny Rowan
Kapiti Coast District Council

9/1/2009

Dear Ms Rowan

A local GP specialising in workplace toxins and allergies has recently confirmed that I have a chemical sensitivity to fluoride. My symptoms of intermittent but persistent eczema, troubling digestive disorders, back pain, muscle soreness and more recently severely itching skin are all consistent with chemical sensitivity. They have been intensifying slowly over the past twenty or so years but have abated completely since the cause was identified three months ago and fluoride ingestion avoided. I do not know how badly my health would eventually have become compromised if I had not made the discovery of my chemical sensitivity but I suspect that I would have succumbed to Chronic Fatigue Syndrome or worse.

In urging the KCDC to reconsider the fluoridation of our tap water, I ask you to consider the following points:

It has been shown that 1% of the population is sensitive to fluoride.¹

The population of the Kapiti Coast is roughly 46,500. Therefore 460 plus residents are likely to be having their health compromised by their water supply. Many may be receiving inappropriate or unnecessary medication through incorrect diagnosis of their symptoms, as I had been for some time.²

Dental and other health authorities claim that the amount of fluoride specified as safe when introduced into the water supply is too small to have any detrimental effects. (This is despite their ready assertion that the dose administered directly modifies the toughest and most durable parts of the human body, the teeth.) However

- Fluoride cannot be removed by conventional filtering
- Fluoride is intensified – not removed – by boiling and cooking
- Therefore fluoride accumulates in every domestic and commercial process of food and beverage preparation
- Some foods and beverages, especially black and green tea, naturally contain high levels of fluoride, which is enhanced when prepared using fluoridated water.
- While the body gets rid of roughly half the fluoride ingested daily, the rest is stored in the skeleton, tissues, organs and brain.
- Fluoride is the most volatile element. It readily combines with other chemicals to form new compounds which may or may not be safe or advisable for human consumption.³
Health authorities cannot therefore give any meaningful assurances that the exposure to fluoride of the population through lacing of the water supply is without risk for all individuals.\textsuperscript{iv, v}

Fluoride persists in sewage, from which it may infiltrate the air, soil and ground water. It is a component of acid rain.\textsuperscript{vi}

Rising levels of obesity, diabetes, cancer, asthma, allergies and chemical sensitivity, including Chronic Fatigue Syndrome, are making many health professionals and the population at large increasingly aware and concerned about the nature and levels of environmental chemical contaminants in the food chain.

Many local authorities are currently changing the chlorination of swimming pools to safer alternative systems. This is because chlorine has a powerful irritant effect on the human mucus membrane and so is linked to asthma and other related conditions. Chlorine is the second most potent and corrosive irritant on the table of elements. The most potent is fluoride.

It is very unlikely that any local authority today would accept the lacing of the public water supply with fluoride on the grounds that a corporate consortium claimed a marginal health benefit, as happened in the US in the 1940’s.\textsuperscript{vii}

With respect, KCDC is currently mass medicating the local population with fluoride – a highly toxic and volatile element - without reference to the age, body weight, health status, or the medication regimes of individuals and without their fully informed consent. This is ethically highly questionable.

The issue of the safety as well as the efficacy of fluoridated public water supplies is a controversial one. However, my own experience has shown me that there really are serious, negative health implications for at least a section of the community. Whether or not the ingestion of fluoride significantly protects teeth from decay, tooth decay is a non-life threatening condition and fluoride can readily be obtained and applied topically through toothpaste and gels.

Surely we should err on the side of caution, as do most of the countries of Western Europe. Fluoride is more poisonous than lead and more corrosive than chlorine. Deliberately putting it in the public water supply simply adds unnecessarily to the burden of environmental chemical exposure we daily face.

Yours sincerely

(Name withheld)

\textsuperscript{2} US Agency for Toxic Substances and Disease Registry, (1993) page 112 statement:
"POPULATIONS THAT ARE UNUSUALLY SUSCEPTIBLE. Existing data indicate that subsets of the population may be unusually susceptible to the effects of fluoride and its compounds. These populations
include the elderly, people with deficiencies of calcium, magnesium and vitamin C, and people with cardiovascular and kidney problems . . . Poor nutrition increases the incidence and severity of dental fluorosis and skeletal fluorosis."

Fluorine is the most reactive element. It combines easily with every other element except helium, neon, and argon. It reacts with most compounds, often violently. For example, when mixed with water, it reacts explosively. For these reasons, it must be handled with extreme care in the laboratory.

Even supposing that low concentrations are safe, there is no way to control how much fluoride different people consume, as some take in a lot more than others. For example, labourers, athletes, diabetics, and those living in hot or dry regions can all be expected to drink more water, and therefore more fluoride (in fluoridated areas) than others.

Due to such wide variations in water consumption, it is impossible to scientifically control what dosage of fluoride a person receives via the water supply. U S Federal Register, 12/24/75.

Environmental fate Hydrogen fluoride may enter the air during production, use and transportation. The gas dissolves in clouds, fog, rain or snow. This enters the environment as wet acid deposition ('acid rain').


"We would not purposely add arsenic to the water supply. And we would not purposely add lead. But we do add fluoride. The fact is that fluoride is more toxic than lead and just slightly less toxic than arsenic."